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DEPARTMENTS OF LABOR AND HEALTH, EDUCATION, AND WELFARE APPROPRIATIONS FOR 1978

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HEARINGS

BEFORE A

SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS HOUSE OF REPRESENTATIVES

NINETY-FIFTH CONGRESS

FIRST SESSION

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PART 2

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Testimony of the Secretary
Special Reports

Printed for the use of the Committee on Appropriations

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DEPARTMENTS OF LABOR AND HEALTH, EDUCATION, AND WELFARE APPROPRIATIONS FOR FISCAL YEAR 1978

TUESDAY, MARCH 1, 1977.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

TESTIMONY OF THE SECRETARY

WITNESSES

JOSEPH A. CALIFANO, JR., SECRETARY
JOHN D. YOUNG, ASSISTANT SECRETARY, COMPTROLLER
CHARLES MILLER, DEPUTY ASSISTANT SECRETARY, COMPTROLLER

Mr. FLOOD. We now have the Department of Health, Education, and Welfare, and the statement will be made by Mr. Joseph A. Califano, Jr., Secretary of Health, Education, and Welfare. This will be on the 1978 HEW budget.

Mr. Secretary, I see we have a biographical sketch of you which we will place in the record at this point.

JOSEPH A. CALIFANO, JR.

Mr. Califano was born in Brooklyn, N.Y., on May 15, 1931. He attended St. Gregory's Elementary School and Brooklyn Preparatory School in Brooklyn, N.Y.

Mr. Califano received his bachelor of arts degree from Holy Cross College in Worcester, Mass., in 1952 and his LL.B., *magna cum laude*, from Harvard Law School in 1955. In law school, he was an editor of the Harvard Law Review.

In 1955, Mr. Califano enlisted in the Navy as an officer candidate. He was commissioned an ensign in November 1955, served 3 years in the Office of the Judge Adovcate General in Washington, D.C., and was released to inactive duty in October 1958 as a lieutenant. In October 1958, he associated with the law firm of Dewey, Ballantine, Bushby, Palmer & Wood in New York City until April 1961.

In April 1961, Mr. Califano became Special Assistant to the General Counsel of the Department of Defense. In July 1962, he was appointed Special Assistant to the Secretary of the Army. On July 1, 1963, he was appointed General Counsel of the Department of the Army. While General Counsel of the Army, he also served as Special Assistant to the Secretary of the Army for Civil Functions, supervising the Corps of Engineers' $1 billion civil works program. As such, he served as a member of the President's Appalachian Regional Commission.

In early 1964, Mr. Califano was selected to serve as the principal legal adviser to the U.S. Delegation on the Panama riots of January 1964. Subsequently, he was also selected to present the U.S. case before the International Commission on Jurists during hearings held in Panama dealing with those riots.

In recognition of his work as General Counsel of the Department of the Army, Mr. Califano was awarded the Distinguished Civilian Service Medal, the highest civilian award of the Army.

On April 1, 1964, Mr. Califano was appointed Special Assistant to the Secretary and Deputy Secretary of Defense. He had special responsibilities for De-

partment of Defense liaison with the Office of the President of the United States. He also acted as Executive Secretary of the President's Advisory Committee on Supersonic Transport, as the Department of Defense representative on the President's Committee on the Economic Impact of Defense and Disarmament and as a member of the Federal Radiation Council.

In recognition of his work as the Special Assistant to the Secretary and Deputy Secretary of Defense, Mr. Califano was awarded the Distinguished Service Medal of the Department of Defense.

Mr. Califano was appointed Special Assistant to President Lyndon B. Johnson on July 26, 1965. In this position, Mr. Califano was charged with developing the President's legislative program and coordinating its preparation and presentation to the Congress, as well as helping coordinate economic policies. He also worked on a variety of domestic problems, including the Northeast power failure, the water drought in the Northeast, labor-management relations, balance of payments and urban issues. He served in this position until January 20, 1969.

In early 1969, Mr. Califano traveled around the world on a study of the "student youth and establishment" problem under a Ford Foundation grant. Mr. Califano wrote about those travels in his book, entitled "The Student Revolution: A Global Confrontation," published by W. W. Norton in November 1969. His second book, "A Presidential Nation," was published by W. W. Norton in September 1975. His third book, "The Media and the Law," was published by Praeger Special Studies early in 1976 and was coauthored and coedited with Mr. Howard Simons, managing editor of the Washington Post. Mr. Califano has also written articles for the New York Times, the Washington Post, the New Republic and other publications.

Mr. Califano was a member of the Washington law firm of Arnold & Porter from March 1969 until May 1971. Since June 1971 Mr. Califano has been a member of the Washington law firm of Williams, Connolly & Califano.

Mr. Califano is admitted to practice before the Supreme Court of the United States and is a member of the bars of the State of New York and the District of Columbia. He is a member of the American Bar Association, the Federal Bar Association, the Bar Association of the City of New York and the American Judicature Society.

Mr. Califano is a Democrat and served from 1969 to 1971 as cochairman of the Committee on National Priorities of the Democratic Policy Council, from March 1971 until August 1972 as general counsel to the Democratic National Committee and from 1972 to 1974 as a member of the Democratic Party's National Charter Commission.

Mr. Califano is married to the former Trudy Zawacki of Taunton, Mass. Mr. and Mrs. Califano have two sons, Mark Gerard, 14, and Joseph A., III, 13, and a daughter, Claudia Frances, 6.

Mr. FLOOD. You have somebody with you you would like us to meet, I suppose.

Mr. CALIFANO. Yes; I do: Jack Young, the Assistant Secretary, Comptroller, and Charles Miller, who is the Deputy Assistant Secretary, Comptroller for Health, Education, and Welfare.

PREPARED STATEMENT OF THE SECRETARY

Mr. FLOOD. Now, Mr. Secretary, I see you have a prepared statement. How do you want to handle this?

Mr. CALIFANO. Mr. Chairman, I might just briefly summarize it and insert the entire statement in the record, if that is all right.

Mr. FLOOD. All right. Without objection, we will do that.

[The full statement follows:]

Mr. Chairman and members of the committee, I am delighted that this, my first appearance before a congressional committee since my confirmation, should be to discuss with you the HEW budget request for fiscal 1978 as amended by President Carter.

These amendments demonstrate the desire and the determination of this administration to be both responsive to people's needs and efficient in spending the taxpayer's dollar.

Our basic objective in this budget has been to develop, as best we could in the limited time available, both the new initiatives and the spending reductions that are necessary if we are to keep the President's pledge that we will have a Government that is both compassionate and cost conscious.

An overview

Our total HEW budget is some $162 billion. About one-third of that amount—approximately $53 billion—is within the jurisdiction of this subcommittee. Social security benefits, which are paid from trust funds and do not require appropriations, account for most of the remaining $109 billion.

Of the $53 billion you do consider, only about $17 billion are in items over which you or we have much choice. The other $36 billion includes such programs as aid to families with dependent children, medicaid, social services, supplemental security income, and black lung benefits. The beneficiaries of these programs are entitled by law to the benefits for which they are eligible.

In deciding how best to spend the remaining $17 billion, our choices are restricted by such factors as inflation, growth of beneficiary populations, greater utilization of services and advanced and more costly technology.

Despite all this, however, we do have important choices to make. The so-called "controllable" programs provide important benefits to the American people. They loom large in people's lives, even if they do not dominate the total HEW budget. They include important programs in education, medical research, rehabilitation services, services to the aging population and many more.

Let me briefly touch on the highlights of the amended HEW budget and the objectives we have sought to highlight in the month we have been in office. Obviously, President Carter's HEW budget amendments are an indication of our major and urgent concerns and are not a complete map of our priorities and proposals.

The needs of poor and disadvantaged children and youth

For every child we can reach today, we can help prevent damaged lives that add to, rather than ease, our vast national agenda in health, education, and welfare. For that reason, we have placed special emphasis on the needs of the children of America—our most precious national asset and our best investment for the future.

We will propose legislation to the Congress for a new program which we are calling CHAPS—comprehensive health assessment and primary care for children. It will expand and reform the current early and periodic screening, detection and treatment program under medicaid. Federal matching will be increased from an average of 55 percent to 75 percent for continuing health care for children. If the legislation passes, we will be asking this subcommittee for supplemental appropriations of approximately $180 million.

In a companion measure, we are seeking a $6 million increase in the funds appropriated to the Center for Disease control to carry out an immunization initiative, which will be targeted on poor children (even if the new CHAPS legislation is not enacted). Under this initiative, eligibility will be extended to more children who need protection against childhood diseases.

We are also asking for an additional $350 million, above both the 1977 appropriation and the Ford budget, for title I of the Elementary and Secondary Education Act. Since 1968, spending for disadvantaged children under this act has grown at only three quarters of the rate at which per pupil spending for all children grew. The increase we are requesting will make up nearly half the $800 million gap this has created.

This $350 million is not an add-on to the budget. We are asking that you trade off a roughly equivalent amount below last year's appropriation in impact aid funds. I know that reductions in impact aid are not popular with the Congress. But I must continue to urge—as all preceding administrations since President Eisenhower's have urged—that education funds not be distributed through the impact aid formulas, except for those children whose parents live and work on Federal property. I strongly believe that title I is a more effective and equitable mechanism for achieving impact aid's educational goals.

As part of our objective to target funds to poor children who need them we will submit legislation to extend the $200 million temporary increase in the title XX social services program. Funds would—as is the case for the current fiscal

year—be focused on upgrading day care services and would not require State matching.

We are also asking for a $10 million increase in Head Start funding for experiments to determine the most effective approaches to preschool education for the disadvantaged. There is some evidence that Head Start activities are most effective when they involve the entire family as an integral part of the project. We would like to explore this hypothesis further.

Rising medical costs

The Carter administration is proposing a major new approach to containing medical costs not just for Federal health financing programs—medicare and medicaid—but for the entire public and private health sector. We will seek legislation which sets up a process for negotiating an annual limit on hospital cost increases. If we could achieve a 9-percent limit on hospital costs in fiscal year 1978, medicare and medicaid spending would be $829 million less than under current law and non-Federal spending would be $1.6 billion less. Success in restraining hospital costs will have a major impact on the HEW budget in the future.

In health, I believe there is no more urgent priority than to rein in runaway health costs. Not only will this ease the enormous financial burden such costs impose upon the Federal budget and the pocketbook of the ordinary citizen, but cost control will prepare the way for comprehensive national health insurance. Two years ago, a whole month's wages of the average Chrysler worker in Michigan went to pay for private health insurance. Today, that health insurance consumes 6 weeks of that same average worker's wages. For the country as a whole, Americans work approximately 1 month of the year to pay for their overall health care. The average American worker spent almost 2 weeks in the job last year to pay for hospital charges alone.

We must take strong steps now to bring the rise in health costs down to reasonable levels.

An increase in funds directed toward minorities

We are asking for an increase of $20 million for "Emergency school assistance" aimed at:

Heading off community crises as a result of school desegregation;

Helping to insure that if a student is transferred to another school as part of a desegregation plan, funds "follow the student" so that he or she can continue to receive any necessary special education;

Supporting innovative school desegregation methods such as magnet schools, pairing of schools with colleges and businesses, and neutral site schools.

We are proposing that a new program be started with $4 million to attract and train minorities in the professions. In the few weeks I have served as HEW Secretary. I have been disheartened by the fact that almost every time I meet with the Nation's experts on a particular subject, I look around and see white, male faces. When I leave HEW, I hope that significant steps will have been taken to change that race and sex composition. The new program proposed in the budget seeks to identify promising minority individuals and provide them with scholarships and counseling so as to increase their representation in the professions.

We hope to add more people to the staff of the Office for Civil Rights. Many of these new people will work on sex discrimination issues raised by title IX.

And finally, we are asking for a $20 million increase over current levels for the bilingual education program ($45 million over the Ford budget). This is a program which must keep better pace than it has in the past with the educational needs for non-English-speaking children.

Student assistance

This budget requests more than $3 billion in aid to students who want education beyond high school. This increases the Ford budget by $852 million.

The $3 billion would:

Fund the Basic Educational Opportunity Grants Program at a maximum award level of $1,600, and

Restore the work study and supplemental grant programs to their current levels.

We are asking the Congress, however, to make one tradeoff by not making additional capital contributions to the direct student loan program. It is our view that the guaranteed student loan program covers a much larger population,

and that colleges and universities can reuse the direct loan funds they collect from students. We estimate, for example, that about $275 million from prior year loans will be available in academic year 1977–78 for relending by institutions. Further Federal capital contributions are not necessary.

Other significant health objectives

In addition to our special legislation to contain medical costs and to provide additional health screening of poor children, we plan to target $35 million above the Ford budget to activities which will provide alternatives to abortion.

We are adding $14 million to our budget for Community Health Centers which will be used to expand family planning services to areas where they are not presently available and to teenagers.

Ten million dollars will be added to Family Planning project grants for more counseling and provision of contraceptive devices—with priority given to low-income families.

We are earmarking $2 million in our health education request for the Center for Disease Control for sex education.

Five million would be added for "healthy child research" at the National Institute of Child Health and Human Development on reproductive biology and improving the health of the fetus and the newborn child.

We would increase the request for the Office of Human Development by $2 million for demonstration and research projects on foster care and adoption.

This budget continues the $40-million increase in the Ford budget for NIH to conduct research in the field of immunization, virology, cell biology, and genetics.

We are, however, requesting $100 million over the Ford budget to encourage the health professions. We want to insure proper geographic distribution of doctors, not an increase in absolute numbers, and we hope to increase the supply of certain scarce specialties such as practitioners of family medicine and physician extenders.

Considerable emphasis is being placed on the improved delivery of rural health services.

First, we are submitting legislation to permit clinics in underserved areas to be reimbursed for the cost of medicare services provided by nurse practitioners and physician assistants even when a doctor is not actually present.

Second, the National Health Service Corps request is $12 million higher than 1977, permitting us to place 274 more health professionals in underserved areas.

Third, under the community health centers, migrant health and medicaid programs, we have earmarked $44.7 million—an increase of $5 million over 1977 and $22 million over 1976—for rural primary health care projects. These include the projects originally funded as part of the rural health initiative in medicaid, sponsored by the two appropriations committees.

Under the new Budget Act we have had less than 1 month to develop our budget amendments. As a result, this is essentially an inherited budget, with revisions that the Carter administration was able to make in certain major areas, like education, child health care, hospital cost containment, and certain other initiatives. I have not been able to scrutinize every line item in the Ford budget, and we may have additional views on specific budget items as the Congress and the new team at HEW continue to review the fiscal 1978 budget. Over the next 2 years, I do intend to examine each and every HEW program from the ground up. As I do so, I intend to consult closely with the Congress as we move in new directions. Members of the Congress are, as you know, actively involved in our efforts to recommend reforms in the welfare system and to plan for national health insurance.

The budget recommendations we make today are only a start, but a good start, toward putting together a set of programs that amply and efficiently meet the needs of those Americans most in need.

Mr. Chairman, I will be glad to respond to your questions.

Summary Statement

Secretary Califano. Briefly, to hit the highlights of the HEW budget amendments, I first want to indicate that this is essentially a series of amendments President Carter has made to what is still basically President Ford's budget.

The time within which we had to make amendments in order to comply with the new budget law was so severely restricted that we were

unable to review every line item in this budget. We did the best we could on the major issues.

The budget totals approximately $162 billion; social security benefits account for most of the budget, $53 billion is within the jurisdiction of this committee.

Of that $53 billion only about $17 billion is in the so-called controllable area in the sense that the remaining $36 billion is to fund programs with automatic payouts, entitlement programs such as aid for dependent children, medicaid, supplemental security income, black lung benefits, and the like.

COMPREHENSIVE HEALTH ASSESSMENT FOR CHILDREN

The emphasis in our budget has been first and foremost on children. The President includes in this appropriation request funds for legislation we will propose to the Congress for a new program, Comprehensive Health Assessment and Primary Care for Children.

For this program, we would like to provide 75 percent of the cost of early screening, diagnosis, and ambulatory medical treatment for children where the Government is now paying only an average of about 50 to 55 percent.

IMMUNIZATION

Second, related to this, there is an increase requested of $6 million for immunization programs. The $6 million would be used to immunize each child identified and treated under the new program. We estimate roughly 3 million children should be identified and treated. We estimate that we can pay the full cost of immunization of $2 per child.

The second item directed at children is an increase of $350 million in title I funds targeted at disadvantaged children which will go a good part of the way toward decreasing the gap in per-pupil expenditures in school funds spent on children in disadvantaged areas versus school funds spent on children in other areas in the country.

We are also requesting an additional $200 million as a temporary increase in the title XX social services program as part of our objective to target funds to poor children in need. Most of these funds are directed at upgrading day care services, as you know.

Finally, just to highlight some of the remaining points, we are asking for a $10 million increase in the Head Start program, not to run more Head Start programs, but to examine closely some recent evidence that Head Start programs work best when they are closely associated with the family. When the family becomes involved in these programs, they work distinctly better than otherwise.

MEDICAL COST CONTAINMENT

Addressing rising medical costs is a central theme of the President's program, and of course HEW's.

Our major initiative in this area is a proposal to put a cap on hospital charges that would reduce the rate of increase of hospital charges from the current galloping 15 percent to something less than that.

We plugged in, as a tentative figure in our budget, a 9 percent rate of increase because we thought that was ample, and also because we thought that it would give an indication to this committee and the Congress as to the tremendous savings available here.

If hospital costs rise in fiscal 1978 at a rate of 9 percent rather than the current rate of 15 percent, the Federal budget alone in medicare and medicaid will be reduced by $829 million. Three and a half years out that reduction will be over $3 billion.

Three and a half years out the State budgets will be reduced by about $500 million.

There are other initiatives in the health area designed to deal either with improving health services or containing health costs. We have included $25 million for a program which would extend medicare coverage to clinics in under-served areas which are staffed by nurses and paramedical health workers. This would largely be in rural areas. It would be the first time that medicare is covering nonphysician services. We think it is an important initiative and an important breakthrough in principle.

INCREASES DIRECTED TOWARDS MINORITIES

Another initiative in this budget is to target funds at minorities. We are asking for an increase of $20 million in the Emergency School Assistance Act aimed at heading off crises, so we can avoid these confrontations and direct resources at supporting innovative school desegregation programs such as the Magnet schools that some of our cities are now testing out.

There are funds requested for a new program designed to increase the flow of minorities through our graduate schools into the professions.

There has always been the CLEO program for which we are requesting about $1 million to train minority attorneys, but there is an additional $3 million in this budget—two of this was already in the Ford budget, and we added one more—designed to try to identify minority students at an early level, upper high school, for example; trace them through college and provide them with the funds so that they can enter the power elite of this country, whether it is in nuclear physics or high technology medicine or some of the other very highly skilled areas.

Without doing that, we do not think we can increase the pool from which a minority individual can come for an important leadership position in our Nation.

We have also requested some additional funds to add additional staff to the Office of Civil Rights. The staff would largely be devoted to enforcement of title IX, a title that has not been vigorously enforced in recent years.

We have added $45 million to the Ford budget for additional funds for bilingual education. We think this is a program that is working. It is a program important to many center cities in terms of their own desegregation and equal opportunity and education efforts for non-English speaking children.

STUDENT ASSISTANCE

As far as student assistance for education beyond high school, we have added $852 million to the Ford budget in our request. We have substantially increased the BEOG's program; we have restored the work-study and supplemental grant programs to their current levels.

We have proposed that the direct student loan program revolving fund be held at its current level of about $275 million and we to propose no additional funds for that program at this time.

A couple of final points:

ALTERNATIVES TO ABORTION

The budget contains several specific items directed to fulfill the President's commitment to provide alternatives to abortion. They range from expanded family planning services to research directed at healthy children, research directed at the prenatal and natal stage so that we can find out why some children are either deformed or retarded in the womb. There are also additional funds for sex education and some funds for demonstration projects in the foster care and adoption areas.

I think that pretty much summarizes the major thrusts of the revised budget and I will put the rest of the statement in the record and take your questions.

Mr. FLOOD. Without objection, we will do that.

Mr. Secretary, I want to welcome you on behalf of the subcommittee. You are an old, old friend of many of us; we are very pleased that the President has chosen such an outstanding person to head this very, very important department.

In case you do not know it already, you have one of the most responsible positions in the entire Federal Government, exclamation mark, and no one knows that better than the members of this subcommittee; you can be sure about that.

Now we want to help you in any way that we can, I think you know that. We hope you and your staff—a lot of them we know—will help us in this very complicated matter of reviewing this budget of yours for fiscal 1978. You have been around and I am sure you are aware that the appropriation for your Department has certainly not been free from controversy around here, if I can understate the case.

LABOR-HEW BILL VETOES

Since 1969 Labor-HEW appropriations have been vetoed seven times; seven times. I think Charlie Miller might remember that.

Mr. MILLER. All seven.

Mr. FLOOD. Four of the vetoes were overridden. Two of them were sustained; one was a pocket veto, and under the circumstances, of course Congress did not have an opportunity to act on it. In one instance the actual veto took place on national television in prime time. The result is that we have fallen into a regular annual pattern:

First, the President proposes to cut back on the HEW budget, that is act 1. Then this committee, of course, we add funds to restore the programs to the current level and to permit some expansion in certain special kinds of programs. All right.

Then when the bill reaches the floor of the House, bang, bang, bang, amendments, and that adds more money. All right.

Then the next step, the Senate. Up she goes again over in the Senate, and the next step is the conference. They ought to sell tickets for that. A conference between the House and the Senate on the Labor-HEW bill, they ought to hold that in Yankee Stadium, I am telling you.

Now that we have open meetings, you simply cannot get in—SRO.

So a compromise is then worked out in the conference, as you know. Then what next? Veto. The President vetoes the bill. Congress overrides the veto.

Now there you have it.

Is there anything in this scenario that you think might change this year?

Secretary CALIFANO. I would doubt that there would be a veto this year. That part of the scenario I think and hope we are over with, whatever the Congress does.

I would think, Mr. Chairman, that the philosophy of the Congress and the President at this point in time is close enough so that even though there may be disagreements as to where money is placed or the precise amount of money that is placed, it would seem to me it would be the most extraordinary circumstance if the President would be inclined to veto this legislation.

Mr. FLOOD. Well, I suppose, with the way I set up that script, that would be the only point you could address yourself to. The rest is congressional procedure. But that is an important element of the whole thing and a very, very important answer.

Now, after we finish the hearings with all of your people, beginning with you and all of your Department, then we receive oral testimony from—there will be over 200 so-called public witnesses, over 200 of them. Then we get written statements from countless others, as I am sure you are aware.

Now, all of them are advocates of additional appropriations for some program that is funded in this bill—all very sincere, very dedicated people. They will come in and say: Now look, balance the budget. Do not raise taxes: "But." That is the "but" that you wait for. What about our program? If past experience is any guide their proposals in the aggregate will probably exceed the entire gross national product. Here is a copy of last year's hearings. We want you to look through this. It will give you some idea what we at the committee are up against.

All right, that sets the stage, the curtain is still up. Now, can you think of any good reasons, plural, why Congress should not add $2 or $3 billion more to the budget again this year? I say that very quietly.

Secretary CALIFANO. Mr. Chairman, I think we have taken a fairly good shot in the short time we have had. I cannot pretend to know every part of this budget, but we have already increased this budget by about $3 billion over the budget that President Ford proposed as he left office.

So I would hope that this committee would be able to agree with us on the whole, certainly within the range of the amount that we have proposed. We now have the budget up to $162 billion. That is from $159 billion as Mr. Ford recommended it. So it is different in

that sense, it is quite different than the budget President Ford recommended.

In addition, the budget would be even higher if certain social security changes—I realize it is not relevant to this committee but they are relevant to the global budget picture—are not made by the Congress and if our cost containment proposals fall short of our projections.

Mr. FLOOD. Now if after careful consideration Congress does increase your budget say by $2 or $3 billion, would you advise the President to veto the bill?

Secretary CALIFANO. I think it would depend, Mr. Chairman, where those increases are. I would think any Secretary of HEW would not be likely to recommend veto of this legislation. Most of the claimants for the services of HEW are essentially claimants in need, and the task is the difficult task of balancing those needs.

The second point I guess I would make is that I think that we expect to find efficiencies which we will be able to identify and make tradeoffs. Where this committee feels there are additional services that must be provided. I think we would like an opportunity to the extent possible to provide them without increasing the total amounts involved.

CUTS IN CONGRESSIONAL FAVORITES

Mr. FLOOD. Now, you asked for this one. You are proposing to cut back some programs which are sacred cows up here in Congress.

For example, impacted area aid is cut $398 million; the national direct student loans are cut $321 million; nurse training programs are cut $110 million.

One thing we have learned the hard way; never turn your back on the nurse.

Now, you do not seriously think that Congress is going to accept those proposals, do you?

Secretary CALIFANO. Mr. Chairman, maybe I can just take them one by one.

Mr. FLOOD. Yes.

Secretary CALIFANO. The impacted aid program is a program that every President, I guess, since Eisenhower has recommended cutting in one way or another. We tried to go after it with some surgical skill. It is still very tough to cut.

What we did was, when we increased title I funds by $350 million, we reduced the public housing component of impact aid, which would have been $68 million. So there is a tremendous amout of additional money going into those same areas because, as you know, Mr. Chairman, public housing money under impact aid goes through the title I people in the States and must be used in effect in title I areas. So we are giving $350 million for $68 million.

Second, the next part we cut out was the part that provided funds in those areas where the family works but does not live on Federal property.

We left the full $395 million for impact aid where the family both works and lives on Federal property. So in the area in which there is a true tax burden on the community, we left it as it was, unlike, as I well recall, the Johnson years when it was all cut out.

So I think what is really here from President Carter is an olive branch to the Congress saying: Look, let's go after this inch by inch, and why do you not try a few inches with me in 1978?

Mr. FLOOD. All right.

Secretary CALIFANO. Do you want me to go to direct student loans?

Mr. FLOOD. Yes.

Secretary CALIFANO. The student loan programs need——

Mr. FLOOD. The direct loans.

Secretary CALIFANO. I understand that the large student loan programs in HEW need a hard look legislatively.

I think it would be fair to say that it is one of the most disorganized and ineffective segments of the Department.

One of the pieces of the student aid program is the direct student loans, which are funds that are given to universities.

We have not proposed to provide any new funds for that program. There happen to be in that arena over $3 billion worth of Federal money which is outstanding and that has aided 3.7 million students since the beginning of the program; there is $275 million in the revolving fund available for loans this year.

We think if the universities and colleges of this country would administer those funds even moderately better than they now do, they would get somewhere between $100 million and $150 million more by collecting student loans.

If the Congress and the Executive are not going to give the universities that are administering these programs any incentive to try to collect any of the funds that students borrow under these programs, they are never going to do it. They have a lot of other important things to do.

Mr. FLOOD. All right. What about the nurses? Nurses training program?

Secretary CALIFANO. Yes.

Mr. FLOOD. I want you to tell us briefly about that, because we are working under a new time schedule here and I have one more question before I pass to the next member.

Secretary CALIFANO. It is basically that we feel we are able to get an adequate number of nurses without the Federal funds for these training programs.

Mr. FLOOD. Let me ask you this: Are you personally in favor of the cuts of these programs we are talking about?

Secretary CALIFANO. Mr. Chairman, I have been in favor of cutting impact aid for a long time, that portion of it which we have proposed cutting. As far as the direct student loan program is concerned, I think that the money can be much better spent in the BEOG's program where we put it; much more of those funds go to the needier children.

I think, for example, that 67 percent of the BEOG funds go to children whose families have incomes of under $7,500. Only 48 percent of the direct loan fund go to families in that category.

Now, I do not deny the problem of the middle class in sending their children to college. I simply say that this is a not very effective way to deal with that, because a lot of BEOG's money goes to families with over $12,000 as well.

We have restored the work-study program. There is almost an extra $1 billion in education in the Carter budget over the Ford budget for higher education.

Mr. FLOOD. What about the nurses, anything on the nurses, especially?

Secretary CALIFANO. Well, I guess I would have to say in all candor, I take the judgment of the people in whom I have confidence in the Department and people in whom I have confidence whom I brought into the Department that the nurses would be there without this Federal contribution.

Mr. FLOOD. I tell you what you do: Suppose you have someone prepare a statement on each one of those three programs we were just talking about and explaining the reasons for these proposed reductions and submit that for the record.

[The information requested follows:]

RATIONALE FOR CUTTING BACK IMPACT AID, DIRECT LOANS AND NURSE TRAINING

IMPACT AID

Impact Aid is not an effective or equitable way to distribute Federal education funds—except for "A" children, whose parents live and work on Federal property and pay no local property taxes.

Title I is a better means of getting education funds targeted in the right places, and that is where we want to put our elementary and secondary education resources. We are requesting $350 million over the Ford budget for title I.

DIRECT LOANS

There are several reasons:

First, we believe that scarce student aid dollars should be allocated to the program that best meets the needs of disadvantaged students—that is, basic grants.

Second, there is another federally supported loan program in place—namely, the guaranteed student loan program. Under this program, we expect approximately 960,000 loans will be available through the private sector. These loans are both guaranteed and subsidized by the Federal Government.

Third, we are not eliminating the direct loan program. All that we are proposing is to eliminate additional new Federal capital contributions—for the following reasons:

Federal capital contributions have been made since 1959, nearly 20 years. As a result, over $3 billion has been contributed to the student loan revolving funds of institutions of higher education.

Approximately $276 million will be available for relending from these revolving funds to almost 550,000 students in 1978.

Furthermore, if these institutional revolving funds were better managed and more diligent collection efforts were made, there would be at least $150 million more available for relending.

NURSE TRAINING

There is no serious overall shortage of nurses which would justify a continuation of general Federal support for nursing schools. Government efforts to increase the number of registered nurses in the Nation have been successful. First year enrollments in nursing schools increased from 52,000 in 1963 to 105,100. A greater proportion of nursing graduates are now active in the work force. Because of these factors, the active nurses to population ratio has increased from 306 per 100,000 in 1963 to 395 per 100,000 in 1973.

The Department has requested support for nurse practitioner, disadvantaged scholarships, and nursing special projects. These programs address particular areas of national concern in the nursing profession. Nurse practitioners provide primary care services to rural and urban shortage areas. Disadvantaged scholarship funds will support about 9,000 disadvantaged nursing students. Special projects funds provide incentives for nursing schools to improve faculty train-

ing and course offerings which lead to improvements in the quality of nursing instruction.

Mr. Michel?

Mr. MICHEL. Mr. Secretary, we welcome you to the subcommittee.

During the course of all the campaign rhetoric, I was rather concerned when I heard about all these brand new faces that were going to come to Washington, particularly to take over that can of worms down the street at HEW. It was with much relief that I heard of your appointment as Secretary, as an old hand who would know something about what goes on down there in that Department.

Let me ask you. Do you really think it is possible to get a handle on all the activities of that Department?

Secretary CALIFANO. I do.

I think so far I have been fortunate to get some very good people and I hope to be able to make some administrative changes that will make it a little easier to manage.

ADMINISTRATIVE CHANGES

Mr. MICHEL. I see you have retained the Director of NIH. Are there some others that will be retained or will you make a clean sweep?

Secretary CALIFANO. On the whole, my view is that it would be very healthy for the Department to have as much new blood as possible at the top. I believe that the Director of NIH may be one of the few, if not the only one, that will be retained. And I say that, incidentally, not in a partisan way. I have not asked anybody that I have asked to come to the Department what their political affiliation is. I have asked that they were in accord with President Carter's general philosophy.

I inadvertently neglected to mention Mr. Cardwell, the Administrator of the Social Security System, who has done some superb work so far and who is indeed a very fine man, and I have asked him to stay on for the time being.

ZERO-BASED BUDGETING

Mr. MICHEL. Are you going to do anything about zero base budgeting in your Department?

Secretary CALIFANO. We are. We are now working on establishing a system for zero base budgeting.

Mr. Young is working on it, Mr. Champion, my Under Secretary-designate, is working on it. I have spent some time on it myself. That will affect the programs that are not formula grants.

I just yesterday, in talking to my own staff, said that even though the President's zero-based concept does not require evaluation of those formula grants formula-by-formula, I thought we had so many of them we ought to go after it and we will look at that.

Mr. MICHEL. I am glad to hear that.

The chairman made quite a to-do about the number of times the Labor-HEW bill has been vetoed and then either sustained or overridden over a period of years.

In answer to the question, would the President veto this bill, your response was pretty affirmatively no, which then gives rise to the question I have to ask you: How much license have we here to pile on?

Now, I know what emphasis the President in his campaign made about some of these things, just as be did about jobs. He has a jobs package and there is no way, if we raised it 10 times, he could veto that just because he was so set that, by glory, nothing would be vetoed and that was first in his priority.

Then, you know, you leave yourself wide open to all kinds of things up here. Everybody is running every 2 years and he is contacted by every pressure group under the sun.

I still feel there is going to have to be a measure of restraint on some of these requests. I have to applaud you on again making the effort, like every President has, on impact aid. I do not know that you need any other explanation in the record than the one you gave. I think it was right to the point; something we have been talking about for years, but cannot get any help up here.

You know what is going to happen to that; the same thing with the nurses, nobody wants to be anti-nurse, so you pile on one after the other; everybody tries to outdo another and pile on another 10 and make himself look better.

You have a difficult chore.

FRAUD AND ABUSE

I am concerned down there in HEW, even though I have been for an awful lot of cuts in this area, as to auditing and investigating in-house to keep some of these big money programs on track, such as student loan fraud, medicare, medicaid; wherever we have these big bundles of cash, food stamps, or what not, there is going to be fraud.

Can you tell me how you are going to approach this whole area of potential fraud when there are hundreds of millions and billions of dollars just being thrown around very loosely?

Secretary CALIFANO. Well, the first and most important thing I think I have been able to do is to get Tom Morris to agree to become the new Inspector General. As some of you know, Mr. Morris was the Assistant Comptroller General who put together many of their auditing procedures over there. Prior to that time he was an Assistant Secretary of Defense for Installations and Logistics, in which role he was the architect of the McNamara base closure program, which today saves the Pentagon over $2 billion a year, although it was a difficult thing to achieve politically.

Most recently, Mr. Morris has been at Brookings where he has done a study of the delivery of health and social services in Florida. They have been totally reorganized and may be among the most efficient delivery systems in the Nation. I brought him in because I think I would like HEW to have its own Comptroller General operation, because it is fraud, as you indicated, and as you also indicate, it is abuse, it is leakage that we want to prevent.

There appear to be tremendous problems with identification of those who are eligible, with ineligible people receiving benefits, with duplicate benefits.

I think we will move on that. I would hope to come back here next year with a good record on that.

CATEGORICAL VERSUS BLOCK GRANT

Mr. MICHEL. I see in the Carter proposals, or their revised proposals of the Ford budget, the elimination of the block grant approach for education and health. Of course, our concept is one of trying to leave more of that decisionmaking up to the local bodies as distinguished from everything being mandated from Washington.

What is your own view on that score?

Secretary CALIFANO. My own view is that we need categorical programs. Whether or not we need every categorical program we now have in HEW, I am not prepared to say. But I certainly think that we need some broad categories at a minimum.

That is why we restored those programs. I am not prepared to say at this point in time that I would not be back here next year with some combination—a request for a little more flexibility to the States and the cities. But if we move down that track, we have to recognize that we also enhance the opportunities to use funds in ways in which Congress has not intended they be used.

Mr. MICHEL. Well, I would have assumed I was going to get some kind of an answer like that, because, frankly there has been that division of thought between the parties. But I would hope again, going back to our exchange with respect to zero-base budgeting and oversight, that if we have to be wedded to categorical programs, some of those which have been on board a long time and have outlived their usefulness, that you would have, you know, the old tenacity or forth rightness to say, after evaluation, very objectively and forthrightly, we think they are outmoded and we would like to eliminate them.

Secretary CALIFANO. We would like to eliminate impact aid.

Mr. MICHEL. Right. Well you have to do that. Otherwise, we just do not make the kind of changes proposed.

STREAMLINE REPORTING TO HEW

I take our President seriously when he makes the kind of statements he does with respect to a leaner Government, and, of course, you cannot achieve leaner Government if you do not cut out some of these things.

I was interested when the President said he was going to force all you Cabinet members to read, word-for-word, all of those rules and regulations.

How about that last "baby" that went out to all those local districts—just a monumental batch of paperwork for every school district? What are you going to do about that kind of a situation?

Secretary CALIFANO. I think you are talking about the forms 101 and 202. Let me just deal with them.

There were three. The forms 101 and 102 went out in 1977 to 16,000 school districts. The major complaint was from smaller school districts which said they could not fill those forms out. They are not as long, I think, or as complicated as the press would indicate, or as some of the critics would indicate. But what I have done in the following year to deal with that program is, in 1978, we will go only to 3,500 school

districts. We will take a good sample. We will use the identical form and for every small school district that does not have an administrator that can do it, we will provide the personnel to fill out the form, someone from HEW will go fill it out, so we will take that burden off the schools—which is the only burden they complained about.

Mr. MICHEL. How much is that going to cost?

Secretary CALIFANO. I do not think it will cost much because there will be a relatively small number of very small school districts. Out of the 3,500, I would not think more than 500 school districts would need help. I think we can tighten up procedures well enough in the Office of Civil Rights so we can absorb that extra task without asking for any additional funds to do it.

I think there were also fairly elaborate forms for New York and Los Angeles.

Mr. MICHEL. They were elaborate enough for Peoria. We are a town of 130,000; the school district was completely befuddled by the complexity of those forms. I don't think that what you are suggesting is the solution to the problem at all. It is ridiculous to take the position that because the forms are too complex to fill out, we won't simplify them, but simply send Federal people to fill the forms out. That is a stupid waste of tax dollars, and certainly does not comply with Mr. Carter's promise to reduce Federal paperwork.

Secretary CALIFANO. I think this should do the trick.

I met with 50 school superintendents before doing this. I think this might ease the problem for you.

Mr. FLOOD. Mr. Natcher?

Mr. NATCHER. Mr. Secretary, it is a pleasure to have you appear before our committee at this time. You are an able man, in my opinion you will make an excellent Secretary of HEW.

IMPACT AID

Now, Mr. Secretary, the next time you go down for the Kentucky Derby, I am going to find out about it, I am going to meet you and take you over to Fort Knox. That is in one of the adjoining counties, Mr. Secretary, in Hardin County. Impacted aid means considerable, it means a lot to these people and it means a lot to the people in that immediately vicinity.

As you go along, Mr. Secretary, do not let my friend Charlie Miller or any of those people down there sell you a real strong bill of goods as far as impacted aid is concerned. I say that to you frankly, Mr. Secretary.

You know in some sections of the United States that program would simply mean that you would close schools, because we cannot handle these children, we just cannot do it. Fort Knox is the best example I can give you.

Mr. PATTEN. Wait a minute, I misunderstood you. I thought you were talking about the place where we keep the gold.

Mr. NATCHER. That is the place where we keep it. We do not have much there, but we keep it.

REORGANIZATION

Mr. Secretary, can you tell me if there is any major move underway at this time as far as any reorganization in the Department is concerned?

Secretary CALIFANO. No.

Mr. NATCHER. Any serious reorganization?

Secretary CALIFANO. None that would require any legislative authority to do. I am looking at all kinds of administrative changes that might be possible that would make it more efficient. None would create any danger to anybody's job over there and none that would require anything as large as legislation.

Mr. NATCHER. Of course, you have been here in Washington a number of years, you have proposals from time to time concerning cutting off education or cutting off welfare.

Now, as you well know, several years ago we brought out the education portion of the bill and took it to the House in a separate bill. That bill was vetoed, we overrode the veto. We even tried that route one time, Mr. Secretary.

I know that the Department is referred to and has been for a number of years as a can of worms. I do not know whether you could separate any part of this Department and pass this bill in the House or not. I would just be right frank with you.

HEW EMPLOYMENT

How many employees do you have in HEW at this time?

Secretary CALIFANO. Mr. Natcher, we have approximately 142,000.

Mr. NATCHER. That is approximate.

Now let me ask you this: How many new employees are you requesting for fiscal year 1978?

Secretary CALIFANO. For 1978, we are going up from—actually, I give you a little low figure there. In fiscal 1977 we estimate there will be 145,223 employees. In fiscal 1978 we are requesting authority for 145,804 employees; 570 more, roughly.

Mr. NATCHER. 570 more.

Do you feel that the Department has enough people, Mr. Secretary, to administer the $162 billion program that is before this committee, with the request for the additional new employees?

Secretary CALIFANO. Yes; I do, Mr. Natcher. I guess—there are in addition to those employees, not many, but there are a few temporary employees that I think we need, mostly—and a relatively small number, it is less than 100—to do all the computer studies related to the welfare reform study and the study for national health insurance.

We have undertaken to run out the costs and analyze every program in these areas. That takes time and a lot of computer software and some money. I think we need some temporary employees on a special basis for that for a period of about 18 months. But other than that, I think we have enough employees.

Mr. NATCHER. As our chairman has said, Mr. Secretary, you probably have one of the most difficult assignments in the President's Cabinet. We believe you are big enough to do this job. If you could wave a magic wand, Mr. Secretary, as far as the Department of Health, Education, and Welfare is concerned, and make a change down there, what would it be?

Secretary CALIFANO. I think it is a little too early to say with precision, but the one thing that I would, I suppose rather have than anything else right now, would be to have legislated to the Secretary the power that every constituent element of that Department has, so the Secretary would have the freedom to move those boxes around, to make them more efficient.

That is not the case today. There are many constituent elements of that Department to whom authority has been legislated directly. They have simply been placed in the Department. That, more than anything, would help.

I intend to move administratively as soon as I think I know the right things to do, and to the fullest extent of the power that the Secretary now has, to make it more efficient. And if that is not enough, I will be knocking on the door up here for some authority to take some additional steps.

But I would think that if I can restore some trust that would be the greatest magic wand. I think there has been a tremendous lack of trust between the executive branch and the Congress, and the executive branch and the constituencies that have appealed to the Congress for help, whether they are poor or disabled or what have you. But if I could restore that trust so I could get a little more authority to execute laws, I think that would be the best thing that could be done as far as HEW is concerned.

Mr. NATCHER. Mr. Secretary, that is an excellent statement. I certainly want to concur with you that that would really help in the Department of Health, Education, and Welfare.

My time is about up, Mr. Secretary. Again, I just want to caution you a little about impacted aid.

Downtown now, Mr. Secretary, do not let them convince you too firmly about this program. You might want to take a new look at it since you are Secretary.

Secretary CALIFANO. My secretary is a woman named Evelyn Ferguson, who you will remember once worked for you, and she would like to keep the impact aid, too.

Mr. NATCHER. She certainly did work for me.

Thank you, Mr. Secretary.

Mr. FLOOD. Mr. Patten?

Mr. PATTEN. When I heard you were willing to take on this job I was gratified. You will get cooperation here. I might vote against impacted aid to back you up. But there will be 340 votes out there that will lay their life down to put it back.

POSITIVE EFFECTS OF HEW

I think HEW is what makes America great.

When I went to Rutgers, there were 800 students. Today I have 47,000. I think it is good for America.

I think in many towns today if there were no social security money, people would drown. Do you know what the Federal Government gave my people? Seventy-one million dollars came into my town last year in social security checks and veterans' checks.

Otherwise, we would have had much human suffering. The unemployment benefits; I had fellows thank me, "Ed, the $97 helps me stay afloat."

Mr. Califano, this is America's best. This is the human government. This is what I think saved us from turning socialistic, as half the world is. I do not know any better way to go.

JOINT FUNDING SIMPLIFICATION

Mr. PATTEN. A few years ago we passed a law under the Intergovernmental Cooperation Act to permit a "Joint Funding" simplification procedure by which an applicant could address a whole problem such as cancer, and submit the application to the various agencies.

In terms of cancer, for instance, my State applied for joint funding for money in EPA, some in HEW, some with the National Cancer Institute, some FDA. Has the procedure ever been called to your attention?

Secretary CALIFANO. Yes, it has.

Mr. PATTEN. Would you say you will cooperate with the other agencies successfully on these joint funding applications?

Secretary CALIFANO. I talked to some of the Governors. They raised this with me yesterday at a luncheon. I told them that I would look at this. We would certainly cooperate in doing anything in connection with any law the Congress had passed, including the Joint Funding Simplification Act, with respect to the Intergovernmental Relations Act. Yes, we will.

On specific cases or issues, I will just have to look at them. I am not familiar with the specifics.

UNREALISTIC CUTS

Mr. PATTEN. Mr. Secretary, I would like to point out your cuts that in my judgment, politically, are not realistic. The chairman tried to impress you that as we get on the floor, even though I might vote against impacted aid, we are going to get clobbered. That money is going to be back, you see. As sure as you are sitting there, the money you mentioned for the nurses program will be back. Do not ever forget this.

I think HEW is for the American people, beautiful. And you have the honor of heading it up.

Secretary CALIFANO. Mr. Patten, I appreciate those comments.

I agree with you about the work of HEW, I think it is the most important work of our society. It is the people's department.

Mr. FLOOD. Mr. Conte?

Mr. CONTE. Thank you, Mr. Chairman. I want to join with the rest of my colleagues in congratulating Mr. Califano for being appointed to this very difficult job. I think it is one of the most vexing departments, one of the most difficult jobs in the whole U.S. Government. But you come well prepared, with a tremendous background in education,

and with a wealth of experience and knowledge in the Federal Government.

Certainly if anyone can do it, I am sure you can, Mr. Secretary.

I am really proud to have you there.

Secretary CALIFANO. Thank you; thank you very much.

IMMUNIZATION

Mr. CONTE. You said in your opening statement the Department will be requesting $180 million for the CHAPS program if authorized. I am wondering, have we neglected the immunization program that much in the past?

How much of these Federal funds will the State and the local communities be able to match?

Secretary CALIFANO. As far as immunization is concerned, yes. If I can have 1 minute.

The EPSDT program, the early periodic screening program has a match of roughly 50–50 in most States. It is not enough to encourage lots of States to go out and find the poor, disadvantaged child, bring that child in for medical treatment, dental treatment, hospital treatment, whatever is necessary.

Some States we found would rather take the penalty or the chance of getting a penalty of 1 percent of their AFDC funds rather than embark on these procedures because, basically, the money is coming out of medicaid budgets which are very tightly strapped.

After some consultation and a look at this, we think that 75-percent match will encourage the States to go out and do this. We would rather go that route than go the penalty route.

I do not think there is much point in imposing penalties on States and cities in an area like this: that is the $180 million for children to be examined, diagnosed and treated through ambulatory medical care, to focus the treatment out of the hospital where we have these skyrocketing costs. And we will leave in place the old program which will provide a 50-percent match for hospital treatment.

We think, at the lesser match, States will be a little more careful about who they put into hospitals. The immunization feature of it we added on when we discovered that, though we had the earlier immunization program, children were not immunized as a matter of course.

For immunization we will pay 100 percent, $6 million to immunize 1–3 million children.

We are worried about immunization. The immunization levels in this country are in some areas dangerously low. Examples: Of children aged 1 to 4 in 1976, only 65.9 percent of the children were immunized against measles, a very simple, totally safe immunization. We have seen the measles outbreaks and the fear of a measles epidemic this year.

Only 71 percent of the children in 1976, ages 1 to 4, were immunized against diphtheria, whooping cough, and tetanus, and only 61 percent of the children in 1976 were immunized against polio. It is incredible.

We have a virtually fail-safe polio vaccine and 40 percent of our children aged 1 to 4 do not have it. That is intolerable.

To give you a sense of what has happened over the last several years, in 1964, almost 79 percent of the children were immunized against polio. We think it should be up around 90 percent.

Mr. CONTE. Good.

On the impacted area assistance, I think one thing you failed to mention was that you are proposing to cut $350 million out of that program.

Secretary CALIFANO. Yes.

ELEMENTARY AND SECONDARY EDUCATION

Mr. CONTE. $68 million was for impacted area aid under the guise of public housing, which is of recent vintage in the Congress. You are not cutting that out of the budget. You are going to transfer that $350 million into title I of Elementary and Secondary Education, right?

Secretary CALIFANO. We added $350 million to title I.

Mr. CONTE. Which is the exact amount you are taking out of impacted aid, isn't it?

Secretary CALIFANO. A little less, I guess. It is about $400 million.

Mr. CONTE. You feel that this money could be better utilized under the Elementary and Secondary Education Act?

Secretary CALIFANO. We have to make a choice, Mr. Conte. Over the past several years, for a variety of reasons, the disparity between the per pupil expenditure for disadvantaged children and for nondisadvantaged children has grown. The best estimate that one can make in a rough sense, nationally, of how much you have to spend per child is about $450 per child, as the minimum necessary expenditure for reasonably good elementary or secondary education on the average.

If the $350 million we asked for in title I is added, that could bring the disadvantaged children up to as high as $445 per child.

Mr. CONTE. Very good.

HEAD START RESEARCH

How will the $10 million increase be broken down in researching a more effective Head Start program?

Will you be able to give us a decision as to exactly how we can best update the preschool education next year at this time?

Secretary CALIFANO. What led to that $10 million was, on a preliminary look, it appears that Head Start programs where the family is involved, where the program gets the mother and father, or mother or father if it is a single parent family, involved with the child in the Head Start program, helping the child, that it works far better.

That evidence is not systematic, it is largely anecdotal. We wanted to spend some money to find out if that is so, and if it is so we can upgrade other Head Start programs and know where to invest future money better.

Mr. CONTE. I wonder whether with that money you can also look into Follow Through. You are cutting Follow Through out; that has been a tremendous program.

Secretary CALIFANO. We restored the Follow Through funds. We have Follow Through back in.

Mr. CONTE. Did you? I'm glad to hear it. That is a great program. I have taken a special interest in Follow Through in this committee. I have gone out and looked at it. It is a good program.

Mr. Secretary, I am sure that you are aware of the plight of the small colleges, the private colleges of this Nation. Have you looked

into this to see what steps can be taken to help the private colleges? Many of those schools are folding every year. They certainly serve a valuable purpose in offering an alternative to public education.

Secretary CALIFANO. I cannot say that I have looked in depth at that. I am aware of the problem that you raise. I am aware of the difficulties that they have.

It is also pointed out to me that 50 percent of our scholarship funds are spent at private and proprietary institutions from the State student incentive grants. But I think it is a difficult problem. I have no answer to it. It is going to get more difficult as the student population increases, and we will look at it in the course of the next several months. But I cannot say I have been into it in any depth.

Mr. CONTE. What are the potential advantages or disadvantages of shifting the food stamp program to HEW?

Secretary CALIFANO. That is one of the alternatives under consideration by the Welfare Reform Task Force. I do not know whether it makes sense or not. God knows HEW does not need any more programs at this point of that magnitude.

But if the food stamp program were cashed out, it is possible it would make more sense. I really have not looked at it closely enough to have a view. It is one of the alternatives that the Welfare Reform Consulting Group is looking at.

Mr. CONTE. One last question because of the time limit.

ALTERNATIVES TO ABORTION

I was pleased to hear your statement on your alternatives to abortion. You are requesting $35 million in this particular area. Could you tell us some of the programs that you are going to institute?

What will be the biomedical research to be used in regard to alternatives to abortion? Will the results of this research be used in other areas of medicine as well?

Secretary CALIFANO. It will.

Although small in amount—only $5 million, the most important money in that program may be in the biomedical research area. We have not, I am told by the experts, done the kind of work that should have been done in terms of the whole prenatal period; why a child born to healthy parents is in one way or another harmed physically or mentally during the course of the growth process or from inception.

This kind of research could have a tremendous payoff in terms of reducing the pressures on a woman to have an abortion.

We also have funds to deal with the teenage pregnancy problem, which is a very serious problem.

We also will be looking at legislation which has been introduced up here on the Hill to create teenage pregnancy centers or areas like that, legislation introduced in both the House and the Senate, I gather, last year. We have not declared formally in any way on that legislation, but something has to be done about that problem. And I think whether one is for or against abortion, my sense after meeting with a variety of women's groups is that no one is really for abortion in the sense that there is no woman that would just like to have abortions. She would rather have some alternatives to that.

I hope we can provide them.

Mr. CONTE. I could not agree with you more.

You know, if you go home and you talk to your welfare people, one of the biggest problems they have right now is with teenage pregnancies.

Mr. FLOOD. Mr. Stokes?

Mr. STOKES. Thank you, Mr. Chairman.

Mr. Califano, I join with my colleagues in congratulating you upon your appointment and also welcoming you before this committee; it is a pleasure to have you here.

Secretary CALIFANO. Thank you, sir.

Mr. STOKES. I have read your testimony and I am quite impressed with several of the programs which you have underway.

MEDICAL COST CONTAINMENT

I am particularly concerned where you tell us that you will seek legislation which sets up a process for negotiating an annual limit on hospital cost increases. I wonder if I could get your comments relative to this.

For instance, I represent a large urban community where a lot of the poor are congregated, particularly those who are classified as being medically indigent. It is also an area where we have a large concentration of hospitals. I perhaps have the second largest concentration of hospitals in my congressional district of any congressional district in America; at the same time, many of those inner-city residents who are confined to being medically indigent because of the disparity of doctor-to-patient ratio in the city as opposed to suburban areas. For instance, Shaker Heights outside of Cleveland, the ratio is 1 doctor to every 828 persons. In the city it is 1 doctor to every 3,200 persons. So many of these people then are dependent upon hospital out-patient care in order to try to get good medical service.

In my hospitals, just with the announcement of this proposed legislation, they tell me that there is a possibility that this can impair their ability to be able to deliver these services to the inner-city residents who are more dependent upon them than upon physicians.

So I would like to get whatever comments you have on this.

Secretary CALIFANO. Mr. Stokes, let me say that I think that that is not so and our proposal will not have that impact.

Hospital costs in this country have been rising at the rate of 15 percent a year, both in the city and in rural areas.

It would drive the Federal budget from $38 billion in expenditures, I guess, in this area, to $66 billion in a 4-year period if we do not put some kind of a lid on hospital costs.

There is no competition among hospitals. It would be like having the whole Pentagon on a cost-plus basis. This committee dealt with the difficult question of a carrier today. Going to hospitals in this case is like saying, "We will pay the freight whatever it is, plus a walloping percentage for overhead." Every hospital in the country is not the same. We recognize that. But we also have to recognize that these costs are driving up the budgets of State governments.

At the meeting of the Governors yesterday, the Governor of Illinois said he will be telling the people of Illinois next week that the medicaid budget for Illinois next year is going to be $1 billion and a

tremendous amount of that is attributable to sky-rocketing hospital costs.

The average American worker in this country works 2 weeks a year to pay hospital bills.

The reason we will be seeking some kind of broad legislation rather than a specific piece of legislation is to provide some flexibility, so that we can make certain that people in areas like yours are not hurt, do not lose the necessary medical treatment they receive.

But we have to do something about hospital costs in this country. The hospital cost increases will eat up very fiscal dividend that the soundest economic policy in the country could produce. Unless we do that, there will be that hospital out there with a huge gaping mouth that will just swallow every dividend from every decent fiscal policy that any administration, Republican or Democratic, can produce.

That is what we are after, that is what we are trying to deal with.

Mr. STOKES. I can appreciate that and that is why I raise the question, so that you will address yourself to that particular problem when you do.

Secretary CALIFANO. We absolutely will.

MINORITIES IN THE PROFESSIONS

Mr. STOKES. Also, I was interested in your new proposed program of $4 million to attract and train minorities in the professions.

I certainly am in full accord with the necessity of such type of program.

The problem that we find here sometimes is that every time a program of this type comes along to try to address itself to the age-old problem of lack of opportunity and discrimination, someone claims that this is reverse discrimination.

I wish you would just for a moment give us some idea of what you have in mind in terms of such a program so that we might have that enlightenment.

Secretary CALIFANO. Mr. Stokes, it is a program that I hope would give the same kind of opportunity to poor, minority children that I had or others had given to them by their parents. What really struck me, to give you an example, occurred when I was dealing with the A-Victoria/swine flu problem a couple of weeks ago. The 20 best doctors to deal with that problem came to Washington. I had a list of the 20 best experts. I called them. The first one called came in every case, 19 white men and 1 women; not a black face in that group. There never will be unless we open that funnel up a little bit.

What we have in mind is trying to identify intellectually gifted disadvantaged children. We have to identify them in high school, have funds to provide them the necessary wherewithal to go to the best colleges in the country, regardless of what those colleges cost, and then go on to the finest graduate schools in this country, because, unless we open that funnel a little bit, these minority representatives just will not be there.

There is no question in my mind from meeting with university presidents that they will welcome a program like this and welcome an opportunity to do that.

There is no reason why this in any way should be regarded as reverse discrimination. There are going to be plenty of places avail-

able in those universities in the next several years. I regard it simply as giving a poor kid the kind of opportunity I would think a democracy of our kind would give them, the kind of beautiful thing that Mr. Pattern was talking about.

Mr. STOKES. Thank you.

Secretary CALIFANO. At Rutgers and elsewhere.

SPECIAL PROGRAMS FOR THE DISADVANTAGED

Mr. STOKES. I have just one further question then, it sort of ties into the same thing.

You mentioned full funding for the basic educational opportunity grants, work-study and so forth. I would be interested in any comments that you can make regarding the TRIO programs, which are also targeted for disadvantaged youth.

We have been confronted with a situation since 1972 of only funding that program at $70 million from the beginning, with no increase whatsoever. So since it is targeted for disadvantaged youth in that same category, trying to get them into the universities and keeping them there once they are there with the proper support of services, I would appreciate any comments you have relative to that program.

Secretary CALIFANO. That program remains at $70 million. We kept it as its current level. This $4 million is, if you will, an add-on to that program, although we intend that $1 million of the $4 million deal with the legal professions, a la the CLEO program that Senator Brooke worked on in the Senate.

I do not think $4 million is the end; I think $4 million is just the beginning for this program for fiscal 1978. I think this program will grow.

We kept the TRIO program at $70.3 million. We did bring up to the full authorization the developing institutions program from $110 million to $120 million.

Mr. STOKES. This past September the Congress raised the authorization level of the TRIO program up to $200 million with some realization that we had not fully developed and utilized that program the same way we had done with reference to BEOG's and some of the other programs that affect middle and upper income families, all the way up to $31,000.

I would just hope that as you go through your legislative program that you would take another look at this particular program and we might better afford disadvantaged youth an opportunity to be brought into the mainstream in terms of higher education.

Secretary CALIFANO. I will, Mr. Stokes.

Mr. FLOOD. Mr. Early?

Mr. EARLY. Thank you, Mr. Chairman.

Mr. Califano, I want to welcome you to a responsible position, and being a graduate of Holy Cross, I am happy to have you. But I disagree with the other members in their praise of HEW. I see HEW over the last several years as the most ineffective, most mismanaged, most bureaucratic agency we have.

I am alarmed. I think HEW is providing less services at a much greater cost each year.

HEW ADMINISTRATION COSTS

You have 145,000 employees. What is the cost of those employees?

Secretary CALIFANO. The personnel costs—I am sorry, I do not have that number.

Mr. EARLY. I would think it is staggering.

Secretary CALIFANO. It is not small.

Mr. EARLY. In an agency that is a service agency, the administrative expenses just seem so great.

Mr. Carter, campaigning for President, said there was going to be less Federal Government. Now in the two new programs you suggest, CHAPS, comprehensive health assessment and primary care for children, you want to increase the Federal share from 55 to 75 percent.

How is that going to provide less Federal Government?

Secretary CALIFANO. Well, that program is operated by the States. We provide the funding. States seek out the child, provide for the examination of the child, and then they have been using their own medicaid funds to provide these services.

Mr. EARLY. So you are just going to merely provide more moneys and the States will spend it?

Secretary CALIFANO. Enough incentive for the States to go out and seek to deal preventively with the health of disadvantaged children.

Mr. EARLY. Let's take my State, Massachusetts; we have the DYS, million-dollar agency; we have the office of children, million-dollar agency; yet the new Federal chapter 766 they have implemented up there, it is all to do exactly what this program suggests. So, is one of those agencies going to be removed?

Secretary CALIFANO. I think that would be up to Governor Dukakis, however he chose to operate this program.

Mr. EARLY. So that the $180 million in the program is merely going to be given to the States with the goal of a program and they are going to set the rules?

Secretary CALIFANO. Well, the $180 million is available to States for the purpose of identifying disadvantaged children; roughly 15 million children who would fall into the poverty arena according to the way the States themselves determine poverty.

The prior program reached only 2 million of those children, only enough incentive for the States to find 2 million of them, only 60 percent of that 2 million got treated.

Most of that 2 million did not even get immunized.

Mr. EARLY. How do you come up with these numbers?

Secretary CALIFANO. We get those numbers from the States themselves. The poverty numbers I am giving you are the numbers that come out of the States. They are the way the States identify their own populations as poor.

Mr. EARLY. I do not know of anything more inaccurate than the statistics used by the Federal Government.

We had the Bureau of Statistics telling us we have 5-percent unemployment in my State; terrible. How are we going in the direction of less Federal Government by an extension of the $200 million for the title XX social services program?

Are States not going to participate in the expense at all for day care service?

Secretary CALIFANO. Those funds are needed for day care centers. They will be used immediately. We have not yet resolved all the questions relating to the standards for day care centers.

We just asked for it as a temporary add-on in effect.

Mr. EARLY. What incentive is there for State efficiency when they do not pay any of it?

Secretary CALIFANO. The only incentive is in meeting whatever the Federal rules are, and you rely on the Federal Government to impose——

Mr. EARLY. Really no incentive, the Federal Government pays it.

Secretary CALIFANO. No incentive in that they do not have their own money in it?

Mr. EARLY. That is the only thing that gives incentive, is it not? HEW started more programs—I blame HEW for many of the fiscal problems in my State. It was HEW just a few years back that said you could not spend any less moneys in social programs and get Federal reimbursements. So you know, how is that conducive to good government?

How was that conducive to better service to the poor?

How was that conducive to efficiency? It was not.

We seem to be on the same track. I would love to see a budget or a program that provided more services with less expense. But we are not decreasing 145,230 employees; we are going up. That is roughly 3,000 HEW employees in each State, for each State, is that not alarming?

Secretary CALIFANO. No, it does not alarm me when I think of the fact that they are dealing with $162 billion.

Mr. EARLY. But they are spending it, they are part of that expense. Does it not alarm you when that is money that should be providing services to the poor, but it is going in administrative expenses?

Secretary CALIFANO. I want to free up every dollar that could be provided to the poor, because of more efficient management. I hope we can begin to wring those dollars out of HEW.

I am not saying that HEW is the most efficiently managed agency in Government. It is clear to me that there is plenty of room for more efficiency in a whole variety of areas.

Mr. MILLER. I want to make the point that over half of our employees are involved in running the Social Security System. A great number of those Social Security employees are out in the field taking claims. They are providing services.

Mr. EARLY. That is the whole point. There is too much federalism. You want welfare reform. My State has the 361 cities and towns administering the welfare system which takes up one-half of our budget, one-half. We changed, we centralized and took it to Boston. What did it do? It made much more fraud, much greater expense, and much less service to the people that need it.

It is the same thing the Federal Government is doing. Mr. Carter got elected by saying he was going to change this system. But you do not look like you are changing at all.

Secretary CALIFANO. Well, this is your view. I think we are; we have made some changes in this budget that are consistent.

Mr. EARLY. The Congressional Budget Office conducted an investigation of welfare. Are you in communication with them, the CBO?

Secretary CALIFANO. I have seen one of their papers on welfare reform.

Mr. EARLY. They are doing a total study on the cost of welfare.

Secretary CALIFANO. They have also done some staff papers on welfare reform which would substantially increase welfare payments.

Mr. EARLY. What we seem to do, Mr. Califano, is to try to write programs, to have programs in effect, that will just get us off the hook, the elected officials and the bureaucracy. It allows less and less money to go to the poor.

If they are doing a study, why do you need to do it? Are you doing the same study? Let me ask.

Secretary CALIFANO. I do not think so. I think they are in contact with us. I would note that the committees of the Congress that have jurisdiction, namely, the House Ways and Means Committee and the Senate Finance Committee, the two budget committees and the Labor and Education Committee of the House and the Human Resources Committee of the Senate, all have representatives on this welfare consulting group.

The work is not being duplicated by the CBO. A large part of the work being done is to study the programs that those committees have put forth.

Chairman Ullman's proposed programs, Subcommittee Chairman Corman's program, Senator Long's programs are programed on the computers so that when you vote, when you look at what program you are for or against, you will have at least the best information that we are capable of providing.

Mr. EARLY. Final question to stay within the rules, Mr. Secretary: These programs that HEW insisted that the States start—drug abuse, alcoholics, Head Start—in New York and Massachusetts, the States can no longer afford to do them, so they have discontinued them; does that bother you, that loss of Federal moneys?

Secretary CALIFANO. I am not sure I am clear on the loss of Federal moneys.

I would note that HEW is not operating programs on its own. The Congress enacts laws, and it is our job to execute them. The Congress appropriates money.

Mr. EARLY. But you do not always implement those laws the way they were intended by the Congress.

Secretary CALIFANO. Well, that may or may not have been true over the past several years. I will do the best I can to implement them.

Mr. EARLY. I certainly cannot ask anyone for any more than that.

Again I tell you, I was in disagreement with the other members of this committee. I am concerned that it is costing more to give less. We should look for programs that demand fewer people doing more things, so we can have money to give the services to the poor, to the minorities, and to get out to the people we are supposed to, in health, education, and welfare.

Thank you, Mr. Chairman.

Mr. FLOOD. Mr. O'Brien?

Mr. O'BRIEN. Mr. Secretary, I join the others in welcoming you. I wish you well.

Secretary CALIFANO. Thank you.

Mr. O'BRIEN. In my opinion you will be a credit to your administration.

I would like to touch on two things:

One, I echo Mr. Early on the question of efficiency. We kind of get away from that in the Washington scene. I note, for example, Howard University has 9,200 students, it has 4,600 faculty and nonfaculty employees, including 100 which are hospital employees. That still runs pretty close to three employees to one student.

In the junior colleges and colleges back in my district, we run 17- or 18-to-one. I simply cite this as an example, keep your eye on the ball in these areas.

HOSPITAL COSTS

I would like to get back to Mr. Stokes' comments with regard to hospitals.

Among your obligations is to keep the hospital system healthy because you obviously attribute a great deal of importance to it. But take my area, which is rather typical, highly industrial in the North, very rural in the South. I have the State penitentiary, I also have the oldest junior college, a good well-rounded district.

Let me tell you what my hospitals are faced with and I do not believe you are considering them a whipping boy, but they have serious problems.

I have gone to all of my hospital administrators. Next to the head of your department, I think I envy their job less.

Take heating costs, in November, December, and January, in Joliet, St. Joseph's Hospital $17,000, $20,000, $22,000, respectively; 1975–76; November, December, January this recent period, $21,000, $30,000, $55,000

Now malpractice costs in 1972, $146,000 for one to $3 million coverage with a $5 million umbrella; 1976 that had gone to $800,000; this year it is $900,000 and the umbrella is taken away. Cost has gone up, coverage reduced.

Dairy products, 15 months ago it ran about $18,000 per year. In this recent November it was up to $38,000.

General supplies and labor, 38 percent of their expenses go to general supplies; it goes up about 11 to 12 percent a year.

Labor is going up 10 to 11 percent a year.

Government-inspired costs are different, but they are included.

Workmen's compensation, social security, and increased reporting requirements, which is no small item.

Now I think that my hospitals and my administrators take a view that there should be some control and they believe in reasonableness. They worried about how you arrived at your 9 percent. Is it a sound-based percentage? Will it be retroactive from the date it is employed?

Will you contribute some serious attention to depreciation, the handling of bad debts, the handling of charity cases?

Will you look toward having a Rate Review Commission that is not dominated by departments of public health who generally provide many of the patients that go in there. They should not be setting the rate.

Finally, in the line that you suggest, I think you ought to try to reward the efficient hospitals. That is not much of a question, but it gives you an idea of my concern.

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Secretary CALIFANO. Let me maybe make some general comments.

We announced a very general program because we want an opportunity to meet with and we will be meeting with a variety of people, including the representatives of the hospital administrators.

I realize there are a lot of problems in rising costs, but the reality is, if you take a State like Massachusetts where Mr. Early is from, Massachusetts as of last year had moved hospital charge increases down to a 9-percent annual rate, and Governor Dukakis said yesterday that he expected to have the hospitals in Massachusetts on the average increasing their charges only 7 percent. So that it can be done.

Many States have moved in this direction. Connecticut has moved in this direction, and Connecticut is down to around 10 or 11 percent.

Governor Brown of California attempted to move in this direction but was blocked by litigation in that State. The question was whether or not he had the legal authority.

We would hear them out, we will negotiate this out, and ultimately come with a rate—we put 9 percent in the budget. That may or may not be where it ends up.

We put 9 percent because on the average nationwide 7 percent is sufficient to handle labor costs, the cost of living is not going up half as fast as 15 percent.

There are ways this can be done. It has to be done. The people of this country are beginning to realize what they are paying in hospital bills and it is a system that is a very peculiar system because, as I indicated before, there is no competition, there is no incentive that traditionally infuses other segments of our society to provide better services for lower costs.

One of the points Mr. Early made is he hopes we can produce more efficient services at HEW, reach more people for less money, if you will.

Well, I think hospitals can provide these services.

There are excess hospital beds in this country. There are tremendous capital investments being made by hospitals that may or may not be necessary; not every hospital has to be the Mayo Clinic. At the same time that we look for an average nationwide lid, we recognize there are differences in individual hospitals and we would take that into account.

Mr. O'BRIEN. That would supply what you are talking about when you speak of incentive in competition. If you find one that in some fashion, I do not know the answer to this, and I hope you and your staff can find out, but they need some incentive, it seems to me, some encouragement if they are doing a good job, and I do not think you can say flat out that all across the country the labor rate is around 7 percent.

In my area the rates are around 10 or 11. It is a regional problem that you will have to deal with.

Secretary CALIFANO. I am sure that is true.

As far as retroactivity, let me make the point, if we find that the charges of hospitals have been increased without regard to increases in costs, during this interim period while we are seeking legislation and the authority to act, we will have to limit in some way the benefits gained by hospitals that take that kind of action.

I hope the hospitals of this country will not take such action and I assume most of them will not.

Mr. O'Brien. Thank you, Mr. Secretary.

Mr. Flood. We talked about this when I first had you on, Mr. Secretary. There are other proposals in your 1975 budget that is going to be pretty hard for Congress to swallow.

COMMUNITY MENTAL HEALTH CENTERS

For example, can you tell us why you are proposing no new grants for the Community Mental Health Centers?

Secretary Califano. I can try, Mr. Chairman.

Mr. Flood. That is all you can do. You cannot hate a guy for trying.

Secretary Califano. We basically take the attitude that we will hold the centers where they are and improve the services at those centers, that there are new services required for the elderly and for children that are expensive.

We will try to make those centers better and more varied.

We also have the President's Commission on Mental Health, which is chaired by Mrs. Carter, which, when it looks at this problem, will undoubtedly have recommendations which we will be writing to the Congress next year.

But our best judgment was that this was the thing to do this year, improve what we had, no new starts, if you will.

Mr. Patten. Which Carter was that? You do not mean the President, do you?

Secretary Califano. It is his commission, but Mrs. Carter is chairing it.

Mr. Patten. Mrs. Carter?

Secretary Califano. That is right.

EDUCATION FOR THE HANDICAPPED

Mr. Flood. Now you also mentioned that you are proposing an increase, an increase now, about $50 million, for education for the handicapped. Many people are telling us that is not nearly enough.

By the way, the authorization for fiscal year 1978 on that is $800 million, the 1978 authorization.

All right. Now what are we going to say to these people that say there must be a larger amount appropriated for education for the handicapped? What do we say?

Secretary Califano. I think the handicapped area is the most difficult area I faced in the first 30 days over there.

We are going up 16 percent from $310 to $365 million. I am not prepared to say that the handicapped cannot use more money. I am not prepared to say that they do not need help. I have met with a few members of one of those groups. It is a very difficult problem.

We have the problem not only of these funds; we have the problem of the architectural barriers board; we have the problem of regulations to prevent discrimination against the handicapped which I am now looking at. They are people who have by no choice of their own been placed into an incredibly difficult situation.

Mr. Flood. You see what I mean.

BASIC EDUCATION OPPORTUNITY GRANTS

You have a pretty large increase in your budget here for our old friend BEOG's, the basic educational opportunity grants. But you are not proposing to fund these grants at the level which would be necessary to permit the maximum grant of $1,800 per student.

Now, why not?

Secretary CALIFANO. We get to $1,600 a student.

Mr. FLOOD. All right. The law permits a maximum of $1,800 for 1978. OK; now the current maximum is $1,400.

Secretary CALIFANO. That is correct.

Mr. FLOOD. And the budget asks for $1,600.

Secretary CALIFANO. Yes, sir.

Mr. FLOOD. Now we go back to my question; why not $1,800?

Secretary CALIFANO. It is the best judgment we could make in terms of moving up the maximum grant, in terms of the funds we had available.

You know, every program I have in HEW can use more money. I have to do the best I can.

Mr. FLOOD. I heard that about half past 2, yes.

Secretary CALIFANO. Moving to $1,600 was as far as we felt we could go this year. It is an increase of $472 million over the budget of the Ford administration. It will cover about 500,000 newly eligible students.

We would not under this kind of proposal get to $1,800 in fiscal 1978; that is correct.

Mr. FLOOD. All right. I think you will soon find out, but maybe you know.

BIOMEDICAL RESEARCH

Congress in general, but this subcommittee in particular, has always been a very strong supporter of biomedical research. Do not forget that. We regard the National Institutes of Health; that is our baby. Out of an abundance of caution, just so you know, that is the attitude here.

We are very proud of the fact, no matter how you look at it, that the United States is No. 1 in the world in biomedical research. We have been pounding at that for years.

Now this budget, you provide an increase of $45 million. That is about 1.8 percent; 1.8 percent for NIH, for the National Institutes of Health.

Now, is that not a cutback? Certainly that is not going to cover inflation costs. How can you defend a budget like that for our baby, NIH?

Secretary CALIFANO. That is like, when did I stop beating my wife?

Mr. FLOOD. Yes.

Secretary CALIFANO. All I can answer to that is that we are putting our money in those places in NIH where we think it will have the best payoff. Like everything else, the choice has to be made. We made the best choice we can make.

We have $2.576 billion in NIH. That is a substantial amount of money. I cannot give you a better answer than that, if you will. It is the best choice we could make.

Every one of these decisions involves very difficult choices.

Mr. FLOOD. Dean Pound of the Harvard Law School, asked me a question. He let me go for about half an hour. When I finished he said, Mr. Flood, you have just restated the question. What is the answer?

You have just very well restated the question.

Secretary CALIFANO. My answer basically, Mr. Chairman, is that is the best judgment we have, that that is the amount appropriate for NIH.

Mr. FLOOD. All right.

Secretary CALIFANO. The NIH budget has increased over the last 8 years about 58 percent in constant dollars. So it has on the whole been going up in constant dollars. If you want the answer to your question in terms of inflation, it is not enough to cover the cost of inflation.

Mr. FLOOD. All right.

EFFECTIVENESS OF TITLE I

You have an increase here of $350 million for disadvantaged children under title I of the Elementary and Secondary Education Act. Now, you have not been at this too long, you may not know, but there have been many, many questions raised at the hearings and the debates on the floor about the effectiveness of that title I program.

I do not know how to ask you: Are you satisfied that title I of the program is effective?

Have you been able to come up with any concrete evidence so far that we have positive results under title I of this program?

We have been through it a lot. You should know that.

Secretary CALIFANO. Yes; I think title I is probably the most targeted and most effective targeted dollars we have in this area for disadvantaged children.

I hate to think of what some of the school systems of this country, particularly in urban areas, would look like without title I funds; as grim as the picture occasionally still is, I think it would be in much worse shape.

If the question is: Does money help get better education for children? I suppose there is an answer to that in the sense that everybody in this country that has the money and the child with the ability wants to send that child to the University of Pennsylvania, or Harvard Law School, if you will. Perhaps the parents will send him there even though it costs a lot more to do that.

Mr. FLOOD. I know. But we are talking about this committee.

Is there concrete evidence of positive results under title I, in view of all the criticism, the attacks, this, that, and the other thing?

We want some concrete evidence, positive results under title I.

Secretary CALIFANO. I suppose I should ask to submit whatever specifics we have back at the Department for the record.

Mr. FLOOD. Probably. We will need something for the record on that; yes.

[The information follows:]

EFFECTIVENESS OF TITLE I OF THE ELEMENTARY AND SECONDARY EDUCATION ACT

A recent study of conpensatory reading programs in both title I and nontitle I schools conducted by the Educational Testing Service indicates that title I has been effective in providing assistance to educationally needy children.

In summary, the results from this study have shown that in schools offering compensatory reading programs, the most educationally needy students (as indexed by their depressed reading test scores) are receiving special assistance in reading, and that this assistance is in addition to the level of services provided to noncompensatory students.

Overall, recipients of this special assistance in reading tend not to fall further behind their more advantaged, unassisted peers. For some of the tests, compensatory and noncompensatory students are closer together in their reading skill performance at the end of the school year than at the beginning.

Schools receiving title I funds had greater concentrations of educationally and economically disadvantaged students than did schools receiving funds from other sources. In addition, Title I schools tended to provide compensatory assistance to greater proportions of their students than did nontitle I schools, and those students served were more needy. Moreover, most of the unusually effective compensatory programs were funded by title I.

Some of the general implications of these results are noteworthy. First, the negative conclusions which have characterized other studies and discussions on compensatory education, generally to the effect that schooling per se had little effect and that compensatory education in particular is ineffective for redressing the educational deficits of the disadvantaged, are not supported by data from this evaluation. Data from this study seem to indicate that title I, as well as similar compensatory education programs, have reached the point where they are retarding or preventing the relative decline in achievement among disadvantaged students that would probably occur in the absence of such programs. Data from the study also seem to indicate in some cases relatively dramatic achievement gains beyond the "prevention of decline" level.

Another study of patterns in title I reading achievement was conducted by the Stanford Research Institute. One standard of success employed by the study was monthly achievements. In terms of this measure, the study indicates that title I is successful.

Mr. FLOOD. It is hard for you to do off the top of your head. We certainly want something for the record on the positive results from title I.

BUDGET AMENDMENTS

You mention in your statement, you have not had time yet to fully review the Ford budget. "There will undoubtedly be changes made as Appropriation Committee hearings before the Congress unfold." That is a quote from your statement. That is fair enough.

Now, you asked for it: Can you tell us when we might expect the changes to be made? As you may know, we are up under a very tight deadline here under the new setup.

Secretary CALIFANO. I was referring to your changes at that point, Mr. Chairman. I would rest on the historical record on that, that you will undoubtedy make changes in the appropriations we are recommending.

I am sure that as time goes on I will come across pieces of this budget, and I will want to go over to OMB and say, we have made a mistake, we have not had a chance to look at that.

Mr. FLOOD. There are very tight deadlines here. That is why we are saying to you, if and when.

Secretary CALIFANO. The reference in my statement is, there undoubtedly will be changes made by the House Appropriations Committee.

Mr. FLOOD. Yes, I quoted that, yes.

I still come back to when, as far as you are concerned?

Secretary CALIFANO. I do not know.

Mr. FLOOD. Which comes first, the chicken or the egg?

Secretary CALIFANO. I am sure you will make changes in the proposals we have made.

STUDIES AND COMMISSIONS MANDATED BY LAW

Mr. FLOOD. Now this is more and more, as I am sure you know very well, we find that we have to appropriate money for studies, we have to appropriate money for commissions, for advisory councils, and these are all mandated now. These are mandated by law.

So will you supply for the record a detailed listing of such studies, these commissions, these advisory councils, together with the amounts budgeted for them in the fiscal years 1977 and 1978?

Secretary CALIFANO. Yes, we will, Mr. Chairman.

Mr. FLOOD. It is a tough one, but that would be a big help.

[The information follows:]

NAME OF COMMITTEE (and HEW component in which it is located)	1977-1978 Estimated Annual Cost
Accreditation and Institutional Eligibility Advisory Committee (OE)	$ 217,220
Ad.Hoc Committee on Reserpine and Breast Cancer (FDA)	0
Advisory Committee to the Director, NIH (NIH)	30,000
Advisory Council on Developing Institutions (OE)	75,000
Advisory Council on Education Statistics (OASE)	102,000
Advisory Council on Environmental Education (OE)	48,050
Advisory Council on Financial Aid to Students (OE)	65,000
Aging Review Committee (NIH)	53,500
Alcohol Research Review Committee (ADAMHA)	85,000
Alcohol Training Review Committee (ADAMHA)	119,815
Allergy and Immunology Research Committee (NIH)	72,000
Allergy and Immunology Study Section (NIH)	107,900
Anesthesiology Advisory Committee (FDA)	31,100
Anethesiology Device Classification Panel (FDA)	99,000
Animal Resources Advisory Committee (NIH)	36,000
Anti-Infective Agents Advisory Committee (FDA)	31,800
Applied Physiology and Orthopedics Study Section (NIH)	101,300
Arteriosclerosis and Hypertension Advisory Committee (NIH)	41,000
Arthritis Advisory Committee (FDA)	31,400
Artificial Kidney-Chronic Uremia Advisory Committee (NIH)	36,720
Bacteriology and Mycology Study Section (NIH)	112,800
Behavioral Sciences Research Contract Review Committee (NIH)	10,000
Biochemistry Study Section (NIH)	133,300
Biological Science Training Review Committee (ADAMHA)	50,000
Biomedical Library Review Committee (NIH)	68,600
Biometric and Epidemiological Methodology Advisory Committee (FDA)	29,900
Biometry and Epidemiology Contract Review Committee (NIH)	25,000
Biophysics and Biophysical Chemistry A Study Section (NIH)	96,700
Biophysics and Biophysical Chemistry B Study Section (NIH)	96,200
Blood Diseases and Resources Advisory Committee (NIH)	109,000
Board of Advisors to the Fund for the Improvement of Postsecondary Education (OASE)	23,000
Board of Regents of the National Library of Medicine (NIH)	20,100
Board of Scientific Counselors, Division of Cancer Biology and Diagnosis (NIH)	46,000
Board of Scientific Counselors, Division of Cancer Treatment (NIH)	43,000
Board of Scientific Counselors, NEI (NIH)	3,500
Board of Scientific Counselors, NHLBI (NIH)	7,500
Board of Scientific Counselors, NIA (NIH)	5,000
Board of Scientific Counselors, NIAID (NIH)	1,800
Board of Scientific Counselors, NIAMDD (NIH)	6,048
Board of Scientific Counselors, NICHD (NIH)	10,000
Board of Scientific Counselors, NIDR (NIH)	14,000
Board of Scientific Counselors, NIEHS (NIH)	16,500
Board of Scientific Counselors, NIMH (ADAMHA)	18,031
Board of Scientific Counselors, NINCDS (NIH)	30,000
Board of Tea Experts (FDA)	1,500
Breast Cancer Diagnosis Committee (NIH)	50,000
Breast Cancer Epidemiology Committee (NIH)	43,000
Breast Cancer Experimental Biology Committee (NIH)	55,000
Breast Cancer Treatment Committee (NIH)	53,000
Cancer Center Support Grant Review Committee (NIH)	50,000

Cancer Clinical Investigation Review Committee (NIH)	$ 89,000
Cancer Control Community Activities Review Committee (NIH)	72,214
Cancer Control Grant Review Committee (NIH)	80,238
Cancer Control Intervention Programs A Review Committee (NIH)	131,619
Cancer Control Intervention Programs B Review Committee (NIH)	35,333
Cancer Control and Rehabilitation Advisory Committee (NIH)	35,333
Cancer and Nutrition Scientific Review Committee (NIH)	35,000
Cancer Research Manpower Review Committee (NIH)	75,677
Cancer Special Program Advisory Committee (NIH)	51,000
Carcinogenesis Program Scientific Review Committee A (NIH)	23,900
Carcinogenesis Program Scientific Review Committee B (NIH)	23,900
Carcinogenesis Scientific Advisory Committee (NIH)	14,300
Cardiology Advisory Committee (NIH)	30,000
Cardiovascular Device Classification Panel (FDA)	87,900
Cardiovascular and Pulmonary Study Section (NIH)	115,300
Cardiovascular and Renal Advisory Committee (FDA)	44,300
Cardiovascular and Renal Study Section (NIH)	115,300
Cell Biology Study Section (NIH)	101,000
Cellular and Molecular Basis of Disease Review Committee (NIH)	35,000
Chemical/Biological Information-Handling Review Committee (NIH)	11,500
Child and Family Development Research Review Committee (OHD)	41,000
Clearinghouse on Environmental Carcinogens (NIH)	150,000
Clinical Applications and Prevention Advisory Committee (NIH)	50,000
Clinical Cancer Education Committee (NIH)	65,000
Clinical Cancer Program Project Review Committee (NIH)	50,000
Clinical Chemistry Device Classification Panel (FDA)	107,800
Clinical Program-Projects Research Review Committee (ADAMHA)	65,000
Clinical Projects Research Review Committee (ADAMHA)	74,000
Clinical Psychopharmacology Research Review Committee (ADAMHA)	75,000
Clinical Toxicology Device Classification Panel (FDA)	107,800
Clinical Trials Committee (NIH)	40,000
Clinical Trials Review Committee (NIH)	40,000
Coal Mine Health Research Advisory Committee (CDC)	40,000
Combined Modality Committee (NIH)	39,000
Commission for the Control of Epilepsy and Its Consequences (NIH)	150,000
Commission for the Control of Huntington's Disease and Its Consequences (NIH)	150,000
Committee on Cancer Immunobiology (NIH)	40,000
Committee on Cancer Immunodiagnosis (NIH)	45,000
Committee on Cancer Immunotherapy (NIH)	50,000
Committee on Cytology Automation (NIH)	50,000
Committee on Mental Health and Illness of the Elderly (ADAMHA)	125,000
Communicative Disorders Review Committee (NIH)	110,000
Communicative Sciences Study Section (NIH)	86,800
Community Alcoholism Services Review Committee (ADAMHA)	73,500
Community Education Advisory Council (OE)	273,000
Comprehensive Sickle Cell Centers (CSCC) ad hoc Review Committee (NIH)	115,000
Computer and Biomathematical Sciences Study Section (NIH)	102,300
Consumer Advisory Council (OASAM)	20,000
Continuing Education Training Review Committee (ADAMHA)	45,000
Contraceptive Development Contract Review Committee (NIH)	10,000
Contraceptive Evaluation Research Contract Review Committee (NIH)	10,000
Controlled Substances Advisory Committee (FDA)	30,000
Cooperative Health Statistics Advisory Council (HRA)	81,834
Crime and Delinquency Review Committee (ADAMHA)	35,000
Dental Caries Program Advisory Committee (NIH)	18,000
Dental Device Classification Panel (FDA)	92,300
Dental Drug Products Advisory Committee (FDA)	39,200
Dental Research Institutes and Special Programs Advisory Committee (NIH)	30,000
Dermatology Advisory Committee (FDA)	34,900
Developmental Behavioral Sciences Study Section (NIH)	116,000

Developmental Therapeutics Committee (NIH)	$ 38,000
Device Good Manufacturing Practices Advisory Committee (FDA)	58,700
Diagnostic Products Advisory Committee (FDA)	3,300
Diagnostic Radiology Committee (NIH)	45,000
Diagnostic Research Advisory Group (NIH)	75,000
Diet and Cancer Scientific Review Committee (NIH)	35,000
Diet, Nutrition and Cancer Program Advisory Committee (NIH)	50,000
Drinking Water Disinfection ad hoc Advisory Committee (CDC)	1,900
Drug Abuse Demonstration Review Committee (ADAMHA)	42,000
Drug Abuse Prevention Review Committee (ADAMHA)	49,500
Drug Abuse Research Review Committee (ADAMHA)	180,000
Drug Abuse Traning Review Committee (ADAMHA)	91,276
Drug Development Committee (NIH)	45,000
Ear, Nose, and Throat Device Classification Panel (FDA)	98,300
Endocrinology and Metabolism Advisory Committee (FDA)	48,200
Endocrinology Study Section (NIH)	147,400
Epidemiologic Studies Review Committee (ADAMHA)	74,842
Epidemiology and Disease Control Study Section (NIH)	134,200
Epilepsy Advisory Committee (NIH)	19,200
Ethical Advisory Board (NIH)	90,000
Experimental Psychology Research Review Committee (ADAMHA)	74,000
Experimental Psychology Study Section (NIH)	103,700
Experimental and Special Training Review Committee (ADAMHA)	40,000
Experimental Therapeutics Study Section (NIH)	113,600
Experimental Virology Study Section (NIH)	107,000
FDA/NIDA Drug Abuse Research Advisory Committee (FDA)	33,600
Federal Council on the Aging (OHD)	585,000
Federal Hospital Council (HRA)	6,200
Gastrointerological Urological Device Classification Panel (FDA)	113,400
Gastrointestinal Drugs Advisory Committee (FDA)	53,300
General Clinical Research Centers Committee (NIH)	55,000
General Hospital and Personal Use Device Classification Panel (FDA)	89,900
General Medicine A Study Section (NIH)	113,100
General Medicine B Study Section (NIH)	103,900
General and Plastic Surgery Device Classification Panel (FDA)	97,000
General Research Support Program Advisory Committee (NIH)	55,350
Genetics Study Section (NIH)	132,600
Graduate Medical Education National Advisory Committee (HRA)	162,400
Health Care Technology Study Section (HRA)	153,500
Health Insurance Benefits Advisory Council (OASH)	209,000
Health Services Developmental Grants Study Section (HRA)	223,300
Health Services Research Study Section (HRA)	164,800
Heart, Lung, and Blood Research Review Committee A (NIH)	325,000
Heart, Lung, and Blood Research Review Committee B (NIH)	289,000
Hematology Device Classification Panel (FDA)	107,800
Hematology Study Section (NIH)	107,700
Human Embryology and Development Study Section (NIH)	106,000
Immunization Practices Advisory Committee (CDC)	33,000
Immunobiology Study Section (NIH)	132,300
Immunological Sciences Study Section (NIH)	74,900
Immunology Device Classification Panel (FDA)	107,800
Indian Health Advisory Committee (HSA)	15,900
Infectious Diseases Committee (NIH)	28,950
Interagency Committee on Emergency Medical Services (HSA)	23,900
Interagency Committee on Federal Activities for Alcohol Abuse and Alcoholism (ADAMHA)	21,700
Juvenile Problems Research Review Committee (ADAMHA)	66,000
Lipid Metabolism Advisory Committee (NIH)	9,500
Long-Term Care Advisory Committee (HRA)	50,000
Mammalian Cell Lines Committee (NIH)	68,094
Maternal and Child Health Research Committee (NIH)	70,000

Maternal and Child Health Grants Review Committee (HSA)	$ 28,200
Medical Laboratory Sciences Review Committee (NIH)	55,258
Medical Laboratory Services Advisory Committee (CDC)	22,000
Medical Radiation Advisory Committee (FDA)	62,000
Medicinal Chemistry A Study Section (NIH)	123,800
Medicinal Chemistry B Study Section (NIH)	134,700
Mental Health Services Research Review Committee (ADAMHA)	40,000
Mental Health Small Grant Committee (ADAMHA)	144,000
Mental Retardation Research Committee (NIH)	135,600
Metabolism Study Section (NIH)	94,900
Metropolitan Mental Health Problems Review Committee (ADAMHA)	38,000
Microbial Chemistry Study Section (NIH)	87,400
Microbiology Device Classification Panel (FDA)	107,800
Minority Access to Research Careers (MARC) Review Committee (NIH)	54,055
Minority Advisory Committee (ADAMHA)	96,147
Minority Group Mental Health Programs Review Committee (ADAMHA)	79,000
Molecular Biology Study Section (NIH)	140,300
Molecular Cytology Study Section (NIH)	103,700
National Advisory Allergy and Infectious Diseases Council (NIH)	73,000
National Advisory Child Health and Human Development Council (NIH)	38,000
National Advisory Committee on the Handicapped (OE)	133,069
National Advisory Council on Adult Education (OE)	291,359
National Advisory Council on the Aging (NIH)	41,542
National Advisory Council on Alcohol Abuse and Alcoholism (ADAMHA)	20,000
National Advisory Council on Bilingual Education (OE)	136,000
National Advisory Council for Career Education (OE)	260,861
National Advisory Council on Drug Abuse (ADAMHA)	22,000
National Advisory Council on Education of Disadvantaged Children (OE)	281,505
National Advisory Council on Equality of Educational Opportunity (OE)	185,000
National Advisory Council on Ethnic Heritage Studies (OE)	40,000
National Advisory Council on Extention and Continuing Education (OE)	263,368
National Advisory Council on Health Manpower Shortage Areas (HSA)	16,200
National Advisory Council on Health Professions Education (HRA)	182,000
National Advisory Council on Indian Education (OE)	246,652
National Advisory Council on Migrant Health (HSA)	54,500
National Advisory Council on Nurse Training (HRA)	100,000
National Advisory Counicl on Services and Facilities for the Developmentally Disabled (OHD)	145,000
National Advisory Council on Vocational Education (OE)	437,410
National Advisory Council on Women's Educational Programs (OE)	316,588
National Advisory Dental Research Council (NIH)	25,000
National Advisory Environmental Health Sciences Council (NIH)	22,000
National Advisory Eye Council (NIH)	50,000
National Advisory Food and Drug Committee (FDA)	46,600
National Advisory General Medical Sciences Council (NIH)	38,306
National Advisory Health Council (OASH)	0
National Advisory Mental Health Council (ADAMHA)	66,000
National Advisory Neurological and Communicative Disorders and Stroke Council (NIH)	60,000
National Advisory Public Health Traning Council (HRA)	8,700
National Advisory Research Resources Council (NIH)	31,500
National Arthritis Advisory Board (NIH)	300,000
National Arthritis, Metabolism, and Digestive Diseases Advisory Council (NIH)	152,280
National Bladder Cancer Project Working Cadre (NIH)	43,416
National Cancer Advisory Board (NIH)	63,630
National Commission on Digestive Diseases (NIH)	1,500,000

National Commission for the Protection of Human Subjects in Biomedical and Behavioral Research (OASH)	$1,900,000
National Council on Health Planning and Development (HRA)	70,000
National Diabetes Advisory Board (NIH)	300,000
National Heart, Lung and Blood Advisory Council (NIH)	100,000
National Large Bowel Cancer Project Working Cadre (NIH)	43,416
National Pancreatic Cancer Project Working Cadre (NIH)	43,416
National Panel on Alcohol, Drug Abuse, and Mental Health (ADAMHA)	4,500
National Professional Standards Review Council (OASH)	101,200
National Prostatic Cancer Project Working Cadre (NIH)	43,416
Neurological Drugs Advisory Committee (FDA)	48,400
Neurological and Communicative Disorders and Stroke Science Information Program Advisory Committee (NIH)	35,000
Neurological Device Classification Panel (FDA)	99,100
Neurological Disorders Program-Project Review A Committee (NIH)	160,000
Neurological Disorders Program-Project Review B Committee (NIH)	165,000
Neurological Sciences Study Section (NIH)	103,000
Neurology A Study Section (NIH)	122,700
Neurology B Study Section (NIH)	130,000
Neuropsychology Research Review Committee (ADAMHA)	91,000
Nursing Research and Education Advisory Committee (HRA)	89,200
Nutrition Study Section (NIH)	93,800
Obstetrical and Gynecological Device Classification Panel (FDA)	126,300
Obstetrics and Gynecology Advisory Committee (FDA)	76,800
Oncologic Drugs Advisory Committee (FDA)	30,700
Ophthalmic Device Classification Panel (FDA)	107,300
Opthalmic Drugs Advisory Committee (FDA)	38,500
Oral Biology and Medicine Study Section (NIH)	146,600
Orthopedic Device Classification Panel (FDA)	82,800
Panel on Basic Skills (NIE)	98,500
Panel on Education and Work (NIE)	32,000
Panel on Review of Allergenic Extracts (FDA)	129,000
Panel on Review of Antimicrobial Agents (FDA)	111,500
Panel on Review of Antiperspirant Drug Products (FDA)	52,900
Panel on Review of Bacterial Vaccines and Bacterial Antigens (FDA)	41,100
Panel on Review of Bacterial Vaccines and Toxoids (FDA)	65,900
Panel on Review of Blood and Blood Derivatives (FDA)	104,400
Panel on Review of Cold, Cough, Allergy, Bronchodilator, and Antiasthmatic Drugs (FDA)	48,300
Panel on Review of Contraceptives and other Vaginal Drug Products (FDA)	84,200
Panel on Review of Dentifrices and Dental Care Agents (FDA)	90,900
Panel on Review of Hemorroidal Drugs (FDA)	47,500
Panel on Review of Internal Analgesic Including Antirheumatic Drugs (FDA)	48,300
Panel on Review of Laxative, Antidiarrheal, Antiemetic, and Emetic Drugs (FDA)	0
Panel on Review of Miscellaneous External Drug Products (FDA)	121,400
Panel on Review of Miscellaneous Internal Drug Products (FDA)	158,200
Panel on Review of Opthalmic Drugs (FDA)	75,400
Panel on Review of Oral Cavity Drug Products (FDA)	96,600
Panel on Review of Sedative, Tranquilizer, and Sleep Aid Drugs (FDA)	N/A
Panel on Review of Skin Test Antigens (FDA)	12,000
Panel on Review of Topical Analgesics Including Antirheumatic, Otic, Burn, Sunburn Treatment and Prevention Drugs (FDA)	93,700
Panel on Review of Viral Vaccines and Rickettsial Vaccines (FDA)	52,600
Panel on Review of Vitamin, Mineral, and Hematinic Drug Products (FDA)	62,300
Panel on School Capacity for Problems Solving (NIE)	16,000
Paraprofessional Manpower Development Review Committee (ADAMHA)	86,000
Pathobiological Chemistry Study Section (NIH)	94,000
Pathology A Study Section (NIH)	109,500
Pathology B Study Section (NIH)	145,800
Pathology Device Classification Panel (FDA)	107,800
Periodontal Diseases Advisory Committee (NIH)	20,000
Personality and Cognition Research Review Committee (ADAMHA)	92,000
Pharmaceutical Reimbursement Advisory Committee (OASH)	60,000
Pharmacology Study Section (NIH)	102,300

Pharmacology-Toxicology Research Program Committee (NIH)	$ 86,549
Physical Medicine Device Classification Panel (FDA)	97,400
Physiological Chemistry Study Section (NIH)	120,400
Physiology Study Section (NIH)	95,800
Population Research Committee (NIH)	131,000
Population Research Study Section (NIH)	90,700
Preclinical Psychopharmacology Research Review Committee (ADAMHA)	86,000
President's Cancer Panel (NIH)	32,434
~~President's Commission on Olympic Sports (OASAM)~~	
President's Committee on Mental Retardation (OHD)	720,000
President's Council on Physical Fitness and Sports (OASH)	25,500
Primate Research Centers Advisory Committee (NIH)	22,900
Program Review Team for the State of Arkansas (SSA)	2,650
Program Review Team for the State of California (SSA)	2,650
Program Review Team for the State of Florida (SSA)	2,650
Program Review Team for the State of Kansas (SSA)	2,650
Program Review Team for the State of Massachusetts (SSA)	2,650
Program Review Team for the State of Michigan (SSA)	2,650
Program Review Team for the State of New York (SSA)	2,650
Program Review Team for the State of Pennsylvania (SSA)	2,650
Program Review Team for the State of Utah (SSA)	2,650
Program Review Team for the State of Washington (SSA)	2,650
Psychiatric Nursing Education Review Committee (ADAMHA)	55,500
Psychiatry Education Review Committee (ADAMHA)	82,085
Psychological Sciences Fellowship Review Committee (ADAMHA)	30,000
Psychology Education Review Committee (ADAMHA)	68,000
Psychopharmacological Agents Advisory Committee (FDA)	87,800
Pulmonary-Allergy and Clinical Immunology Advisory Committee (FDA)	29,800
Pulmonary Diseases Advisory Committee (NIH)	50,000
Radiation Study Section (NIH)	120,500
Radiological Device Classification Panel (FDA)	107,000
Radiopharmaceutical Advisory Committee (FDA)	30,100
Rape Prevention and Control Advisory Committee (ADAMHA)	25,500
Recombinant DNA Molecule Program Advisory Committee (NIH)	73,000
Rehabilitation Services National Advisory Committee (OHD)	26,000
Reproductive Biology Study Section (NIH)	129,600
Research Manpower Review Committee (NIH)	8,500
Research Scientist Development Review Committee (NIH)	70,000
Review Panel on New Drug Regulation (OASH)	158,000
Safety and Occupational Health Study Section (CDC)	85,000
Science Advisory Board to the National Center for Toxicological Research (FDA)	88,200
Secretary's Advisory Committee on Population Affairs (OASH)	38,000
Secretary's Advisory Committee on the Rights and Responsibilities of Women (OASAM)	300,000
Sickle Cell Disease Advisory Committee (NIH)	25,000
Social Problems Research Review Committee (ADAMHA)	65,000
Social Sciences Research Review Committee (ADAMHA)	73,000
Social Sciences Training Review Committee (ADAMHA)	50,000
Social Work Education Review Committee (ADAMHA)	16,794
Student Financial Assistance Study Group (OASAM)	155,000
Surgery A Study Section (NIH)	79,000
Surgery B Study Section (NIH)	89,400
Surgical Drugs Advisory Committee (FDA)	18,700
Technical Electronic Product Radiation Safety Standards Committee (FDA)	35,700
Temporary Cancer Institutional Fellowship Review Committee (NIH)	35,000
Temporary Review Committee for Frederick Cancer Research Center (NIH)	5,289
Tobacco Working Group (NIH)	35,000
Toxicology Advisory Committee (FDA)	56,100
Toxicology Study Section (NIH)	113,900
Transplantation Immunology Committee (NIH)	32,500
Tropical Medicine and Parasitology Study Section (NIH)	99,600

United States National Committee on Vital and Health Statistics (HRA)	$ 44,500
Virology Study Section (NIH)	127,800
Virus Cancer Program Advisory Committee (NIH)	20,000
Virus Cancer Program Scientific Review Committee A (NIH)	34,600
Virus Cancer Program Scientific Review Committee B (NIH)	34,600
Vision Research Program Committee (NIH)	40,000
Visual Sciences A Study Section (NIH)	108,000
Visual Sciences B Study Section (NIH)	96,600
Consulting Group on Welfare Reform (DCMO)	50,000
TOTAL	$31,240,413

PUBLIC HEALTH SERVICE HOSPITALS

Mr. FLOOD. One of the problems we have had to wrestle with here all along over many years is the matter of the Public Health Service hospitals.

For years the administration has been trying to close these Public Health Service hospitals or getting them into community use in some way. All right.

Now, what are your plans for the future role of the Public Health Service hospitals?

Secretary CALIFANO. We asked for $6 million more than Ford did to pay for their built-in cost increases and maintain the same level of services they have had before.

Mr. PATTEN. That is not how I read it. How did you read it, Mr. Chairman.

Mr. FLOOD. Thereby hangs the question.

In other words, if you are studying what is going to be done, of course what we want to know is when will the study be completed but, on the other hand, if you say you are going to keep them open, if you say to us right now that you are going to keep them open, then we want to know from you what plans you have, what requests for funds are you going to make to renovate these hospitals, to modernize them.

It depends upon what you say.

Secretary CALIFANO. We have asked for $6 million over the Ford budget which was $129 million, for an increase to $135 million. This will enable the Public Health Service hospitals to keep the same level of services that they had as of January 1, 1973, which is what the Congress requires, as I understand the law.

Mr. FLOOD. Then you are going to keep them open?

Secretary CALIFANO. The larger question of the future of the public hospital system is something we have not yet answered. We have not yet answered that question.

Mr. FLOOD. If you say you are going to keep them open, that would be one thing. Now I asked you a question. Now you say you are looking at this, the question has not been answered. I come back to my question: When is the question going to be answered?

We have to know. You cannot go on like Tennyson's brook with this one. We have to know, when are you going to answer the question?

Secretary CALIFANO. The question has gone on I guess for at least 4 years. We reported on January 17, I gather in response to your conference committee report, that it would cost $120 million to modernize these hospitals.

Mr. FLOOD. Yes.

Secretary CALIFANO. We are looking at that now. I am sure that there are a lot of people in HEW that would conclude that that was not a cost-effective way to spend $120 million, but the history of Publice Health Service hospitals, I guess, has been that every attempt to close them down has met with a singular lack of success but that in the past they were gradually reduced one-by-one.

If I had to predict what will happen, I predict that is probably what will continue for the next several years.

Mr. FLOOD. What?

Secretary CALIFANO. That the hospitals will gradually, on an individual basis, become so inefficient to operate as a separate unit that

the services that are provided by those hospitals would be provided by other hospitals in nearby areas.

Mr. FLOOD. That is why I repeat again, if you are going to keep them open, we would like to know; do you have plans, if these hospitals are going to be kept open, do you have plans to ask for the necessary funds to renovate these hospitals, modernize them, keep them open?

Secretary CALIFANO. As of this time we do not have plans to do that, but we have not made a final decision on that point.

Mr. FLOOD. When do you have reasonable cause to think that you can answer?

Secretary CALIFANO. I cannot answer that. We will do it as soon as we can.

HEW PERSONNEL COSTS

Mr. FLOOD. Will you supply for the record what the cost of the 145,000 employees is?

Secretary CALIFANO. Yes; we will.

[The information follows:]

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

SUMMARY OF PERSONNEL COSTS

[In thousands of dollars]

	Fiscal year—		
	1976 actual	1977 estimate	1978 estimate
Health:			
FDA	$133,215	$163,015	$177,188
HSA	288,186	321,294	337,668
CDC	72,041	79,020	81,220
NIH	235,631	266,396	271,709
ADAMHA	104,598	123,033	124,675
HRA	43,619	50,987	51,310
OASH	28,905	30,705	30,291
Subtotal, Health	906,195	1,034,450	1,074,061
Education Division:			
OE	62,856	72,586	80,693
NIE	7,905	8,842	9,376
ASE	5,532	6,449	7,213
Subtotal, Education Division	76,293	87,877	97,282
Social and Rehabilitation Service	38,367	47,607	49,767
Social Security Administration	1,254,682	1,370,531	1,380,031
Office of Human Development	32,345	36,350	36,403
Departmental management	119,122	145,570	153,987
Departmental total	2,427,004	2,722,385	2,791,530

Note: Amounts shown above include salary and benefits costs of all departmental employment.

Mr. FLOOD. Thank you very much, good show. I have some additional questions which will be submitted for the record. Some of the other members may also have questions which we will submit.

Secretary CALIFANO. Thank you, Mr. Chairman.

[NOTE: The following questions were submitted by members of the subcommittee with the request that they be answered for the record:]

Mr. FLOOD. In the interest of managing the preponderance of Federal health care funds, do you have available current, uniform, and consistent data on the quality and quantity and cost of federally funded health care?

Answer. Two major problems regarding data have confronted HEW as we attempt to manage the health care funds of this Department. Despite the large amounts of data generated by health care institutions, other providers, and State agencies, there are significant data gaps existing in several key areas. For example, data on costs and expenditures for health care are not easily obtainable, especially in the medicaid program, which is administered by the States. This is due in part to the original design of data systems, which were not designed for the management and evaluation of programs at the State and local level.

Secondly, coordination among programs has to be radically improved. HEW needs to assure that the operating components within the Department have an awareness of the problems of enumerating and defining the data elements and setting reporting requirements for data collection and processing. Within the Department, a Health Data Policy Committee has been established whose functions include analysis and review of the problems of coordination. It is also expected that recommendations will be generated to help standardize data requirements.

Mr. FLOOD. Can you provide this committee with your perception of the quality, consistency, and usefulness of the data obtained from the major Federal programs and larger discharge abstracting operations routinely gathering data on health care encounters?

Answer. Medicare routinely gathers hospital discharge data on 20 percent of its hospital admissions. In order to assure quality and consistency of the data, SSA centrally codes all medical information on the hospital bill. SSA has also recently developed an automated computer coding system which, when implemented, will improve the quality and uniformity of diagnostic coding, in addition to saving some manpower that currently manually codes the data. HEW's experience is that coding at the hospital (rather than centrally) does not produce consistent and useful data at the national level.

Mr. FLOOD. Do you enforce the use of a universal (standard) data description for symptoms, procedures, and diagnosis (which is acceptable to providers, third-party relations, State and Federal agencies) for comprehensive analysis of the health care delivery funded by the Federal Government?

Answer. Existing medicare legislation permits each carrier to use its own coding system for health care data. A comparable situation exists in the PSRO program; and in medicaid, the situation is even worse. Uniform standards are extremely important and this is an area which the Department plans on addressing as in reviews current health financing activities and options in national health insurance.

Mr. FLOOD. Can you provide the committee with your awareness of the cost related to data gathering and processing for the purposes of cost containment, quality assurance, planning and program management under both medicare and medicaid programs?

Answer. The medicare and meicaid programs do not tabulate administrative cost data in a way that would permit breakdowns of cost related to data gathering and processing for cost containment, quality assurance, planning, and program management. However, in terms of total administrative costs, the medicare and medicaid programs will spend about $950 million each in fiscal year 1978. This amounts to about 5 percent of total expenditures for those programs.

Mr. FLOOD. Can you provide the committee with any insight as to cumulative cost burden the apparent redundancy of information gathering and processing (by Government activities, fiscal intermediaries, and third-party payers) places on the health care delivery system?

Answer. We have no information on the system costs of duplicative information gathering and processing activities. In some cases, this redundancy is minimal, as, for example, in the case of a fiscal intermediary that employs the same data and fee screens for physician reimbursement under medicare, medicaid, and its private business, or where medicare, medicaid, and Blue Cross use the same hospital cost reporting forms. However, much duplication does exist. The Department is working to eliminate some of this redundancy through the development of a standardized procedure coding terminology, standardized cost reporting and accounting procedures and the development of various data systems such as the medicaid management information system.

Mr. FLOOD. How will the Office of the Inspector General determine the actual existence and the magnitude of fraud and abuse, if commonality of data does not presently exist?

Answer. Where commonality of data does not exist, the Inspector General will have to get at fraud and abuse through the separate Medicare and Medicaid data bases. To some extent, this will be a continuing situation because Medicare is administered at the Federal level while Medicaid is administered at the State level.

Mr. FLOOD. Mr. Secretary, we recently reviewed your request for supplemental funds to support a hospital cost containment program. This is certainly an area that requires close attention. However, I would like to know if this program will pursue any of the recommendations of the National Academy of Sciences to reduce by 10 percent the ratio of hospital beds to population? (The Academy recommended a 10 percent reduction within 5 years and further reduction thereafter.)

Answer. A major aim of our hospital cost containment program will be to encourage greater efficiency and economy in hospital operations. Cutting back on excess hospital beds is one important approach, although the greater problem today is the location of beds rather than their total numbers. The program will begin to address this problem through separate treatment of capital and an attempt to slow the rapid rise in capital equipment and new services that fuels cost inflation in future years. The specific measures have not yet been worked out, but options include a bed moratorium, limits on the dollar value of new certificates of need, limits on depreciation payments, pooling depreciation, etc.

Mr. FLOOD. Mr. Secretary, what role do you see industry and labor playing in helping you contain the spiraling cost of health care? (I'm talking about industry that pays the health insurance premiums and labor that must manage the money through its health and welfare funds).

Answer. Some industry and labor groups have taken steps to hold down inflation in health care, in general. They have, for example, required a second opinion about approving it. Others have become members of hospital boards or local planning agencies. As members of these boards, they can directly influence cost cutting measures. It is critical that all insured groups eliminate unnecessary hospital utilization and, instead, seek ambulatory care whenever possible.

Mr. MICHEL. President Carter's HEW budget for fiscal year 1978 limits or reduces funding in a number of areas where Congress has in the past provided steadily increasing amounts. Can we expect you and your associates in the Department to undertake a concerted effort to defend and achieve adoption of the President's recommendations in these areas, or are you just likely to go through the motions, thereby essentially giving Congress free reign to increase spending to its heart's content?

Answer. We strongly support the principal reductions in the revised budget. In the case of student aid, further capital contributions should be discontinued for the college direct loan fund and funds otherwise appropriated for this program should be shifted to basic opportunity grants.

Mr. MICHEL. As an example, the Carter budget proposes a significant reduction in the impact aid program. I happen to think that reduction makes a lot of sense, because this is an inequitable, outmoded program. Can I count on strong support from you in trying to achieve adoption of that budget recommendation?

Answer. We will support the proposal; it is time that Congress cut back spending on impacted area aid, as has been recommended by every President since President Eisenhower.

Mr. MICHEL. Is the President likely to veto the Labor-HEW appropriation bill if we exceed his budget recommendation a significant amount?

Answer. One of our goals and one of the President's, also, is to avoid a veto. It is not an impossibility, but my view is that we have made our recommendations to the Congress; Congress will make changes, and we respect its right to do so.

Mr. MICHEL. Can you give us any guidance as to what the magic dollar figures might be, whereby if Congress exceeded it a veto might be forthcoming?

Answer. We will certainly try to reach a compromise with the Congress and avoid a veto. To set a dollar figure, however, would risk fixing a level which the President could not accept.

Mr. MICHEL. I'm not sure I buy the argument that the budget you have submitted is an "inherited budget." President Carter had a task force working on the budget since the election, which is almost 4 months ago. That's more time than this subcommittee is allotted to review the budget. It seems to me that if that task force was doing a proper job, this budget ought not to be referred to as an "inherited budget," but as a straight forward Carter budget. Isn't that a fair statement?

Answer. Several task forces were working on various transition issues, including the 1978 budget. However, prior to the public release of the budget on January 17, the transition groups only had access to the so-called current services budget. Thus, we only had a month to examine the budget that President Ford actually submitted. In a Department such as HEW, which has more than 300 different programs, there just wasn't enough time to make a thorough review of all of them. We had to focus on a few key programs and objectives such as health care for poor children and education for the disadvantaged.

Mr. MICHEL. Many of President Ford's appointments in your Department were career people selected for their expertise in a particular area, rather than for their political affiliation. The word I hear from the grapevine is that you are giving higher priority to the political credentials of the people you are seeking to fill the top departmental slots. Is that an accurate representation?

Answer. No; it is not. We have been reviewing job candidates solely on merit. We felt that we should have a new team at HEW, but political affiliation has not been a factor in picking the best people we can find for the jobs.

Mr. MICHEL. Why don't we have a new Assistant Secretary for Health as yet? What's the problem?

Answer. This is a very difficult and sensitive post to fill. It is now our top recruiting priority and a selection should be announced quite soon.

Mr. MICHEL. If I recall correctly, President Carter said during the campaign that he favored having the Federal Government provide a third of all educational costs, rather than the present 7 or 8 percent. Is the administration planning on moving in this direction, which of course would require a massive increase in Federal expenditures?

Answer. The revised budget President Carter recently submitted contained substantial increases for several education programs. Among them were: Title I; $400 million; emergency aid: $20 million; handicapped: $50 million; student assistance: $500 million; and institutional assistance: $70 million. These increases move us in the direction of Federal assumption of a greater share of the cost of education, although not, of course, one-third.

Mr. MICHEL. When Secretary Marshall was here, I asked him for his view on the proper role of the Federal Government vis-a-vis the States and localities. The gist of his response was that the Federal Government ought to determine basic policy, with the States and localities given responsibility in many respects for administering the policy. What this boils down to, in other words, is a view of the States and localities as little more than administrative arms of the Federal Government. I wonder if you hold the same view?

Answer. A better way of describing the relationship is in terms of a partnership, in which the Federal, State, and loacl governments all play a somewhat different role in terms of policy development, identification of priorities, and implementation. In some areas of activity and concern, it may make a lot of sense to have Federal leadership and even direct Federal program oversight. In other areas, we would clearly benefit by reducing the Federal role and providing more flexibility to State and local governments.

Mr. MICHEL. I see the Carter administration has rejected President Ford's block grant proposals for education and health, which would have returned more decisionmaking responsibility back to the States. Isn't the administration in effect saying by this action that it doesn't trust the States and localities to make the proper decisions?

Answer. The Carter administration has not rejected the block grant approach in health and education. Rather, the Carter administration is not yet convinced that the block grant approach is the proper one and so has delayed a decision on this issue in order to more carefully evaluate the appropriatenes of the various approaches that could be taken.

Mr. MICHEL. You have this task force you have set up to develop a welfare reform plan. Would you provide for the record a list of the members of the task force and their backgrounds?

Answer. A list of the members is provided.

[The list follows:]

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Executive Director

Mr. Bob Heim, 245–6286 DHEW, 410 East South Portal Bldg., 200 Independence Avenue, SW., Washington, D.C.

Mr. MICHEL. Does it contain members of all political persuasions and outlook, or just people with generally likeminded views toward welfare reform?

Answer. We are pleased with the wide range of views which have been expressed in meetings of the consulting group. Our intention in establishing the consulting group was to get the broadest range of views possible. Scanning down the list of members shows how diverse the points of view are.

Mr. MICHEL. Has the task force been given any policy parameters to work within, or has it been given carte blanche?

Answer. We are doing everything possible to keep the agenda open and to see that all possible alternatives are given a thorough airing.

Mr. MICHEL. In Milwaukee, the local newspaper conducted an extensive survey on the welfare program there, and among other things found that 36 county welfare employees were also receiving welfare assistance. Do you see a conflict of interest here, and does it disturb you?

Answer. We don't believe it is a question of conflict of interest. As long as the employees met Wisconsin's eligibility criteria, we don't think it should make any difference who the recipient's employer happens to be. But if the State's eligibility criteria were not met, then you could be dealing with a case of fraud, subject to criminal prosecution.

Mr. MICHEL. Is there any justification for automatically making AFDC recipients eligible also for medicaid and food stamps? Doesn't this also give favorable treatment to the nonworking poor as against the working poor?

Answer. There are inequities created where the working poor can end up with fewer benefits than families receiving welfare assistance. But this isn't caused by automatic eligibility of welfare recipients for certain other support programs. The problems in the welfare programs are very complex and solutions are not simple. But we are committed to solutions to the inequities and disincentives that make it more attractive to stay out of the work force, and to reforming eligibility criteria and benefit structures that encourage the breakdown of the family.

Mr. MICHEL. Is there any reason in your view why cash welfare benefits should not be subject to taxation in order to correct the present inequity whereby the nonworking poor are treated better than the working poor?

Answer. If a situation should exist where a working family would pay Federal income taxes with a lower yearly income than a welfare recipient, there would be an undeserved and unintended inequity. Issues of work disincentives and inequities will be addressed in the Department's examination of welfare reform options.

Mr. MICHEL. Is there any justification for permitting unemployed recipients who receive AFDC–U grants to take jobs that pay less than these grants plus 21 percent for so-called work related expenses?

Answer. Federal regulations authorize payments under the unemployed fathers' program only when the father has not, without good cause turned down a bona fide job offer at wages meeting applicable minimum wage requirements. Regulations also authorized that certain income and expenses be disregarded, including

work-related expenses. The intent of these regulations is to encourage the employment of unemployed fathers while offering them some financial assistance if they enter low-paying jobs. If an unemployed individual is receiving this benefit, he is not eligible to receive unemployment benefits also.

Mr. MICHEL. According to testimony we received last year, all but two States permit welfare payments to go to stepchildren, regardless of the new father's income. In a number of documented cases, the fathers have substantial incomes. Do you think this is right, and if not, would you favor any Federal action to make stepfathers responsible for the support of their new children:

Answer. In most States there is no legal requirement of stepparent support of children. Therefore, there is no legal basis to require the counting of a stepparent's income in determining AFDC eligibility and benefits. Legislation was proposed in the 1977 budget to require that stepparents income be counted, but, it was not adopted by the Congress. HEW has not yet had an opportunity to reexamine the merits of resubmitting this legislation.

Mr. MICHEL. That Milwaukee newspaper survey I mentioned earlier revealed that one family was receiving $15,264 a year in tax-free welfare benefits, due largely to the requirement that SSI benefits should not be counted when determining the size of a family's AFDC grant. Do you agree or disagree with this loophole in the law which allows SSI benefits to be excluded?

Answer. The law requires (1) that an SSI recipient's income and resources not be counted in the income and resources of the AFDC family and (2) that the SSI individual not be considered a member of the AFDC family. Therefore, the eligibility and benefits of the AFDC family are based solely on the family unit, exclusive of the SSI recipient. No benefits were provided to the family because an SSI recipient was an occupant of the household. But, the SSI recipient's monthly benefit would have been reduced by one-third if he or she was receiving support from the AFDC household unit. We have not asked that the law be changed.

Mr. MICHEL. In 1973, GAO concluded on the basis of a survery that illegal aliens cause a drain on welfare programs and that "providing welfare could attract illegal aliens and prolong their stay." The House Judiciary Committee stated in a report in 1975, however, "that Federal, State, and local governments, in general, have little information on the participation of illegal aliens in pubic assistance programs." Has HEW made any effort at all to find out the extent to which illegal aliens are receiving welfare benefits?

Answer. HEW regulations allow Federal assistance in public assistance programs only to aliens lawfully admitted into this country. Thus, illegal aliens are not eligible for the federally aided public assistance programs.

HEW's quality control system, and our validation reviews checks to assure that recipients are citizens or lawful residents. These validations are done through statistical means by examining a sample of a State's recipient population. The evidence is that the number of illegal aliens is low. However, it should be pointed out that if an alien has forged paper, especially birth certificates, ineligibility can be very difficult to detect.

Mr. MITCHEL. That 1973 GAO report recommended "that the Attorney General and the Secretary of HEW develop guidelines for Federal and local welfare agencies to provide information to INS for identifying illegal aliens applying for or receiving welfare assistance." Have such guidelines been developed, and if not, do you plan to do so?

Answer. HEW does not currently have plans to issue such guidelines. Title IV–A of the Social Security Act limits the use and disclosure of information concerning AFDC applicants or recipients to purposes directly related to the administration of the program. Thus, under existing law, there is doubt that Federal and local welfare agencies would be authorized to provide information to INS for identifying illegal aliens. There are, of course, other overriding concerns such as effective law enforcement and national security which also affect privacy and information disclosure. This is an area we need to study further.

Mr. MICHEL. That same Judiciary Committee report I cited also states that neither the "States nor HEW have established adequate procedures to insure compliance" with the requirements of the law that illegal aliens are ineligible for the various welfare benefits. Are you planning to take any steps this year to institute such proceures?

Answer. HEW regulations require documentary evidence of citizenship or lawful immigration and States are prohibited from approving applications without this evidence. Further, through the quality control system, the degree of accuracy of State procedures for approval of applications is evaluated, for aliens as well

as all other recipients. Short of HEW making a 100-percent examination of every public assistance case, the Department does not believe that additional procedures would provide further effectiveness. And, a 100-percent sample would be extremely costly and would still not be completely effective.

Mr. MICHEL. HEW is, of course, one of the worst offenders in terms of the amount and complexity of regulations it puts out and the redtape it generates. What specifically are you doing to comply with President Carter's directives to simplify the regulations and reduce the redtape?

Answer. The Department has undertaken several initiatives to comply with President Carter's directive to simplify our regulations and reduce redtape. First, we are continuing our effort to simplify rules by insuring that they are written in clear English and that the requirements contained in those rules are kept to the minimum necessary to insure proper program implementation. Almost 20 percent of the Department's 1,000 regulation writers have been retrained to write regulations in clear English. Initiatives are currently underway in medicaid, vocational education, student financial assistance, and civil rights to rewrite existing rules with a minimum of overlap and contradiction. The Department continues to study the possibility of establishing universally applicable administrative requirements that will cut down on the often conflicting procedures tailored to specific programs.

Finally, the Department will continue to explore ways of simplifying and consolidating reporting requirements in order to reduce the paperwork burdens felt by institutions receiving Department funds.

Mr. MICHEL. A good place to start would be with this school survey the Office of Civil Rights has sent out to the school districts in this country. It is a massive 12-page questionnaire in fine print which in my view is imposing an intolerable burden in terms of time, and money, on our local school districts. It seems to me if one were truly interested in reducing the paperwork burden, one would order the survey withdrawn and a new one substituted in its place substantially reduced in scope. What about it?

Answer. We have already indicated our intent to cut down on our data collection requirements wherever possible. The Office for Civil Rights is reviewing the survey with this objective in mind, and no new questions will be added to the next survey. Only approximately 3,500 school districts will be surveyed during the next school year, whereas all 16,000 school districts are being surveyed this year. In addition, we have withdrawn a special information report that three of the large school systems were asked to complete under the previous administration.

Mr. MICHEL. It appears from newspaper reports that you are taking a heavy handed attitude in the civil rights field, talking about cutting off funds to school districts if they are not fully complying with your directives. Isn't the real issue here not whether there is discrimination but the way in which HEW defines discrimination. The HEW definition seems to be that if there is not a proper mix or balance of races or sexes, there is discrimination. Understandably, many would disagree with HEW's interpretation, but apparently you are saying now there is no room for disagreement. A school district must either comply with HEW or lose its funds. Is that the policy?

Answer. The civil rights statutes and the case law have articulated what constitutes discrimination in federally funded programs. The regulations HEW has issued are designed to implement the broad prohibition contained in the statutes. We do not say that HEW requires a "proper mix" or that statistics alone are sufficient to make a case under most circumstances.

The civil rights statutes passed by Congress provide that no funds should be granted to programs that are discriminating. We have indicated that the administration intends to carry out the law. Of course, the statutes provide for due process hearing procedures, where the recipient of funds is given a full opportunity to present its case. Also, enforcement action cannot be taken unless and until HEW first seeks to obtain voluntary compliance.

Mr. MICHEL. Chicago is apparently being made the first example of this more rigid policy. One of the reasons its school system is being faced with a fund cutoff is that black teachers were found to be too heavily concentrated in predominately black schools. Isn't it possible that black teachers might prefer to teach in predominantly black schools, and white teachers in primarily white schools? Is it HEW policy that local systems cannot give teachers a say in where they prefer to teach?

Answer. Last year the Office for Civil Rights initiated enforcement proceedings against the Chicago school system under title VI of the Civil Rights Act of 1964. An independent administrative law judge was appointed by the Civil Service

Commission to hear the case and he issued his decision finding the school system out of compliance with title VI. One of his findings was that the district was assigning minority teachers to the predominantly minority schools, and that this constituted discrimination in violation of title VI.

It is possible that some black teachers might prefer to teach in predominantly black schools, and vice versa. But it must be borne in mind that teachers are assigned to schools, regardless of whether their preferences are honored in all cases or not, and this assignment process is the responsibility of the school administrators. HEW does not prescribe how the school systems should assign their teachers. Our concern is that it is done on a nondiscriminatory basis.

Mr. MICHEL. Isn't it also possible that black students might relate better to black teachers?

Answer. That is a possibility. But even if the district carried out a reassignment plan to correct the violation, the plan would not preclude black teachers and staff being assigned to schools with large black student enrollments.

Mr. MICHEL. Do you personally favor the merging of city and suburban school districts in order to achieve greater racial balances?

Answer. Barring a finding of discrimination in accordance with Supreme Court decisions in this area, this kind of decision rests with local school officials, not with HEW. At the same time, we would encourage school districts to deal in a positive way with school racial isolation, and one alternative that they may want to consider is metropolitan school desegregation.

Mr. MICHEL. What about the busing of students across school district lines for such purposes?

Answer. Here again, it appears that school districts should be encouraged to deter and reduce racial isolation in the schools, over and above our commitment to enforce the Civil Rights Act of 1964. This is, after all, the purpose of the emergency school aid program that the Congress has approved and funded year after year. Busing is not an end in itself, it is a means to an end, and we don't think the Federal Government should discourage school systems from using busing or any other tool to improve educational opportunity when they find that it is practical and in the best interests of the students. Of course, the Congress has placed limitations on the extent of transportation that may result from an HEW finding of illegal school segregation.

Mr. MICHEL. Your budget proposes a substantial increase in ESEA title I funding (aid to the disadvantaged) in the face of little evidence that the large amount of funds being distributed under this program are doing any good. Wouldn't it make more sense to try and come up with a more effective program rather than continue to simply pour more and more dollars into this one?

Answer. One of the major educational goals of the Department of Health, Education, and Welfare is to see that equal educational opportunities are provided to all children in America. We believe that title I of the Elementary and Secondary Education Act is the principal service program of the Federal Government which is designed to accomplish this goal.

Recent evidence indicates that title I has been effective in meeting this objective. A study conducted by the Educational Testing Service of compensatory reading programs in both title I and nontitle I schools indicates that the most educationally needy students are being served. Title I funds are being targeted to locations having the greatest need. Title I funds are going to those areas with the highest concentrations of low-income children in the urban North and impoverished South.

The study also shows that students served are provided with compensatory services that supplement the regular reading program, and the students benefit from additional services by achieving at a rate equal to or greater than that of nondisadvantaged students.

Consequently, during the school year, disadvantaged students either improve or maintain their relative status of reading performance, rather than falling further behind.

With this kind of positive evidence about the educational gains achieved in title I programs, and the fact that title I funds are being targeted where the need is greatest, we feel that we already have an effective program of aid to educationally disadvantaged children. Of course, we are continuing our efforts to improve the quality of services to disadvantaged students. In addition, we are involved in the development and dissemination of effective models of compensatory education programs.

Mr. MICHEL. Regarding your proposeal to set ceilings on hospital charges, this would apparently involve some sort of negotiation. How would this work, and what criteria would be used?

ANSWER. We are working out the procedures now, and are establishing a health cost containment advisory committee to advise on (1) the proposed regulations for the hospital cost containment program and other policies prior to their publication for public comment; and (2) the potential effects of alternative levels and types of hospital cost containment. We also plan to hold public hearings on proposed reimbursement limits and allow for discussion of the views of all interested parties.

Mr. MICHEL. You are talking about a 9-percent limit on cost increase in fiscal year 1978. If the rates are to be negotiated, how do you come up with a figure ahead of time?

ANSWER. The precise ceiling has not yet been determined. It would be worked out in consultation with all affected parties—hospitals, physicians and nurses, consumers, industry, and labor. The 9 percent figure plus 1 percent for exceptions used in the budget was merely a planning target, representing a goal that would be in the reasonable range. However, it is more important to have a good program than to meet any specific target in the first year.

Mr. MICHEL. Would this ceiling cover just medicaid and medicare, or all hospital payments, private as well as public?

ANSWER. We intend to limit reimbursement to hospitals from all payors, including private patients, commercial insurance companies, and Blue Cross. If our ceiling protected only the Government payors—namely, medicaid and medicare—the hospitals could shift the costs to the others and thus defeat our goal of protecting all purchasers of hospital care.

Mr. MICHEL. What kind of reception have you had from the hospital people regarding this proposal?

ANSWER. As you might expect, any proposal for cost containment will inevitably be greeted with complaints from the hospitals that cost inflation is beyond their control. A number of voluntary compliance and jawboning solutions are proposed in place of programs mandated by legislation. We recognize the value of voluntary cooperation, but feel that the problem is more serious than can be dealt with solely through the private sector. Recognizing these fundamental differences, we still expect a great deal of cooperation from the hospital to assure that cost containment can be achieved with minimal description of hospital managerial prerogatives.

Mr. MICHEL. It seems to me one of the best ways of keeping hospital costs down is better health planning, in order to avoid duplication of expensive equipment and facilities. Yet I see you are not proposing any increase in health planning funds in fiscal year 1978 over the current level. Why?

ANSWER. While the specific details of the hospital cost containment program have not yet been worked out, we hope to use existing third party payors and health planning agencies to the greatest possible extent. We do not envision any major changes in the function of health planning agencies that would require additional funds.

Mr. MICHEL. Where do we currently stand in the courts regarding the Hyde amendment prohibiting Federal funds for abortions? When is the issue likely to be resolved?

ANSWER. The preliminary injunction in *McRae* v. *Mathews* barring enforcement of the Hyde amendment was issued by the U.S. District Court for the Eastern District of New York on October 22, 1976, and was appealed to the Supreme Court on November 19, 1976. The Federal Government's jurisdictional statement in the case was filed on February 17, 1977, and asks the Court to reserve decision in this case pending its decision in the case of *Roe* v. *Maher*, on which oral argument in the Supreme Court was heard on January 11, 1977. The lower court in the *Roe* case held that a State may not constitutionally exclude payments for abortions from its medicaid program. If the decision in the *Roe* case is reversed on appeal then the Hyde amendment will probably be found to be constitutional. If, however, the Supreme Court affirms the lower court decision in *Roe*, the Court will still need to decide whether the Federal Government has the same obligation to fund abortions that a State does. The *Roe* case should be decided this term, and if the decision is reversed and a full hearing is required on the Hyde amendment case, it will not occur until next term, which begins next October.

Mr. MICHEL. Would you recommend that we include the Hyde amendment in the bill?

ANSWER. Yes. President Carter and the Secretary have each publicly stated their opposition to Federal funding of abortions performed for family planning purposes.

Mr. CONTE. How much more is paid out from the social security trust fund than is taken in, and what do you plan to do to get rid of this deficit?

ANSWER. Based upon current revenue and expenditure projections, fund reserves in the several trust funds will be depleted beginning in 1979 for the disability fund, and sometime in the mid-1980's for the old-age and survivor fund. These are not precise estimates because slight changes in the economy have a big influence on the status of the social security trust funds. But they are accurate enough to show the seriousness of the situation, which we are currently reviewing. We hope to be able to submit proposals dealing with the potential deficits to the Congress within the next few months.

Mr. CONTE. Do you anticipate a budget request for the President's newly formed Mental Health Commission?

ANSWER. We have not been asked to assist, nor do we anticipate making a funding request to support the Commission. This is not to say that the Department will not be deeply involved with the work of the Commission, but simply a reflection that Mrs. Carter does not want the Commission to become overly dependent on any one group or agency. Mrs. Carter is desirous of attracting private funds to support the Commission. The Commission's initial operational funds came from the President's "unanticipated needs" appropriation for 1977.

Mr. CONTE. In many of the national health programs the regional administrators report to the Assistant Secretary of Health rather than to the specific agencies which are responsible to Congress for the administration of the programs. In your view, is this an effective chain of command or would it be more effective if the regional directors reported back to their agencies?

Answer. We haven't yet had the opportunity to examine all of the delegations of authorities in the Department. However, we recognize that over past few years the Congress has been critical of efforts to decentralize the administration of several health programs. Our target is to have each program, and the chain of command, operating in such a way as to be responsive to the needs of the beneficiaries, the Administration and the Congress. We will be reviewing this particular question as we examine the Department's organizational patterns over the next year.

Mr. CONTE. As you know, the National Institutes of Health are heavily influenced by the Office of Management and Budget. What can be done to depoliticize this area and give many of the decisions to the scientists who are more concerned with the needs?

Answer. A major step in depoliticizing NIH was taken by reappointing Dr. Frederickson. We want to insure the maximum flexibility in pursuit of biomedical research; however, this must be pursued within constraints imposed by the need to set priorities in the budget for the health dollar. While appropriately delegating scientific decisions to scientists, we must, when necessary, make choices among competing resources.

Mr. CONTE. Why is the Administration not proposing to include community mental health centers under medicaid reimbursement? Wouldn't such inclusion reduce the need for categorical funds in this area?

Answer. The question of whether to mandate the inclusion of clinical mental health services in State medicaid plans has been discussed extensively in the past. We are beginning to review all of the Department's health financing programs. A position on this issue has not been reached. We might point out that CMHC's receive about 11 percent of their operational funding from medicaid in those States which have elected to include these services in their plan.

Mr. CONTE. In your opinion, what are the advantages and the drawbacks to a federalization of the welfare system, and do you have any plans to implement such a change?

Answer. No; we certainly do not have any plans to proceed with federalizing the welfare system at this time. In fact, some of the most difficult issues involve questions of the Federal Government's relationship to State and local governments in the areas of finance and administration. These issues will be thoroughly discussed by the Consulting Group in the context of specific reform alternatives. We think it is important to focus first on what we would like the reformed welfare system to look like and second, to consider the question of who administers the system. Obviously, certain administrative structures are implied by certain alternatives.

Mr. CONTE. Would you comment on the cost-efficiency of the centralized HEW payroll and what the comparative cost-efficiency is for an agency by agency payroll?

Answer. In 1963 when payroll was first centralized, we had 277 people in payroll servicing 69,500 Department employees as opposed to the current staff of 196 people servicing 145,000 Department employees.

Mr. CONTE. Had any pilot studies been done before centralization was implemented?

Answer. No; there were no pilot studies done prior to payroll centralization.

Mr. CONTE. What other HEW services are centralized,

Answer. The personnel management system is centralized in that all personnel master files are maintained on our headquarters computer. Thansactions against this master file are transmitted over telecommunications circuits from various locations throughout the United States.

In addition, we have centralized activities servicing the Office of the Secretary and agencies located in the Southwest Washington complex. These services consist of: printing, duplicating, photographic, visual-graphics, purchasing, contracting, supply, shipping and receiving, storage, publications distribution, laboring service, postal and messenger service, telegraphic, airline ticketing service, legislative materials distribution, and data processing services.

Each region also has centralized personnel, financial and office services which are provided for agency regional staffs.

Mr. CONTE. Are there any other health service programs in addition to the community mental health center program for which you are requesting no new starts? What is HEW's position on the programs as opposed to OMB's? Do you anticipate any changes in your requests for such program?

Answer. First our request for 1978 is largely an inherited budget. Due to the time limitations we only had an opportunity to revise major program areas. Individual program-by-program reviews will be conducted over the coming year in order that we may be in a better position to state our priorities and concerns to the Congress more fully. We intend to actively involve and inform the Congress as we move in new directions.

In regard to the specific case of no new starts in the health services area, we have that situation not only in the community mental health centers program but also in the hemophilia, family planning, migrant health, health maintenance organizations, rodent control and alcoholism programs. In response to exactly what our position was when budget revisions were being developed, we did attempt to provide for a modest level of funding for new CMHCs.

Mr. CONTE. What is the reason for the $36 million decrease in Research Resources, under National Institutes of Health, and what research will be cut as a result?

Answer. The Division of Research Resources is the location of the Biomedical Research Support Grant (BRSG) program. We feel that the original BRSG objectives of building institutional strength have been met and we, therefore, have eliminated the program in 1978. This reduction freed funds to be used in other targeted research areas such as cancer and heart and lung.

Mr. CONTE. What are your views of a National Health Insurance program and when could such a program be initiated?

Answer. Before any national health insurance program is considered, it is essential that we put in place a system for limiting hospital cost increases. We are preparing one now.

At the same time, a public advisory committee on national health insurance is being set up. Represented on it will be the providers, the insurors, consumers, labor and business leaders.

We intend to develop a program before the end of the year and to introduce legislation early next year.

Mr. CONTE. There is such overbearing bureaucratization in the various welfare programs that it promotes a condition of inequities and disincentives. Many welfare recipients wish to work but they are afraid that if they do work they will lose medicaid and other assistance for themselves and their children. How will you approach the problem of disincentives inherent in the present system?

Answer. We are currently developing reform options and hope to be able to present them to the President by the first of May. Disincentives and the inequities that exist between the working and nonworking poor are some of the problems we are examining.

Mr. CONTE. What are the possibilities of offering a training and followup placement program for areas with a high rate of recipients like New York City?

Answer. In order for training and placement activities to be successful, there have to be jobs to place people into, which requires a strong economy. And, President Carter is stressing economic stimulus and recovery as one of his foremost objectives, including job training and public service jobs programs. But, even with the most optimistic economic projections, we must still recognize that there will still be a significant number of unemployed individuals and persons who need income assistance and other support.

Mr. CONTE. What steps can be taken to increase the quality of health facilities in places like Appalachia and other rural areas which are seeing a rapid disappearance of country doctors and adequate health care?

Answer. We are supporting a number of programs designed not only to increase health service capacity in rural areas but also to make better use of the resources that are already available.

First, we are submitting legislation to permit clinics in underserved rural areas to be reimbursed for the cost of medicare services provided by nurse practitioners and physician assistants even when a doctor is not actually present. The change will improve the health care available to people living in areas with a shortage of physicians and increase the financial resources available to rural clinics.

We are also attacking the shortage of health personnel through the National Health Service Corps. In 1978 the corps will assign about 975 health professionals to 453 communities that have a shortage of doctors, dentists, nurses, and other health specialists. Corps members serve a minimum of 2 years in these communities but we have been encouraging them to remain even after their period of service is over and we are having increasing success with this.

Another effort to improve rural health care is the integration and more efficient delivery of services under the general rubric of the rural health initiative. The two most important components of this initiative are the health underserved rural areas program and primary health care centers. The first is a research and demonstration program aimed at developing innovative approaches to rural health problems especially for medicare beneficiaries. The primary health care centers integrate a number of resources into a single facility in order to benefit rural groups served by various programs. We have earmarked $45 million for these two programs in 1978.

Mr. CONTE. As you may know, I have long been interested in full implementation of the community mental health program. In light of the growing need for such health care, how can you justify no new starts in fiscal year 1978?

Answer. We are currently required by the 1975 amendments to the CMHC Act to expand from 5 to 12 the required services offered by a center. Adding on these services to all the existing centers is quite expensive. This year we have decided to forego the expansion of new centers and concentrate our efforts on improving services at our existing projects.

Mr. CONTE. What is "model replication and studies" which amount to a $2 million change and has this been authorized?

Answer. Model replication and studies will support the demonstration of new and innovative practices as well as carry out necessary studies in bilingual education. These activities are authorized by part C, sections 742 (b) and (c), of the Bilingual Act.

Under section 742(b), the Commissioner of Education is authorized to contract with public and private educational agencies, institutions, and organizations to test the effectiveness of NIE's research findings with regard to bilingual education, and to demonstrate new or innovative practices, techniques, and methods for use in bilingual education programs.

Under section 742(c), the Commissioner of Education is authorized to undertake studies to determine the basic educational needs, characteristics of language acquisition, and most effective conditions for educating children of limited English-speaking ability.

Mr. CONTE. Your budget requests an additional $20 million for the bilingual education program. Under training and grants for LEA in service training you add $1.5 million to fiscal year 1977 and under "Other" you request a $5.7 million increase. Can you tell us what grants are covered by this "Other" category and how the $5.7 million will be spent?

Answer. Three activities are covered by the "Other" category. They include fellowship awards for individuals pursuing graduate work in bilingual education; awards for resources center providing training for local school district personnel, including those who are not part of bilingual classroom projects; and awards to colleges and universities to promote institutional innovation and reform, including stipends for participating trainees.

Of the additional $5.7 million requested, an increase of $1 million above the 1977 level of $4 million for graduate fellowships will support 100 added fellowship awards, bringing the total to 625 in 1978. An increase of $3 million above the 1977 level of $5 million for resource centers will provide training to an additional 3,000 participants, bringing the total to 12,500 in 1978. For awards for institutional innovation and reform, an increase of $1.7 million above the 1977 level of $9.3 million will provide an additional 20 awards to institutions of higher education, bringing total awards to 120 in 1978, and will provide stipends for an additional 175 trainees, bringing total stipends to 925 in 1978.

Mr. CONTE. Do you feel that your budget gives enough support to veterans educational needs, and what future expansion, if any, are you planning for veterans' cost-of-instruction and other veterans educational assistance?

Answer. We are requesting $23,750,000 for the veterans' cost-of-instruction program which will support recruitment and outreach programs and provide counseling, tutoring and remedial services to veterans. The funds will be allocated to over 1,200 postsecondary institutions to provide services to approximately 666,000 veterans.

Also, we are requesting over $3 billion for student assistance and providing subsidy payments for approximately 960,000 new guaranteed student loans. Veterans, who meet the specific eligibility and need requirements of the student aid programs, can receive grants, loans and/or a job to help finance the cost of postsecondary education.

The policy reflected in the higher education budget for 1978, except for basic grants and direct loans, maintains the current services level of funding. Over the next several months, we will be thoroughly examining the higher education programs and reassessing our budget priorities.

Mr. CONTE. You are proposing a greatly expanded basic educational opportunity grants program. Will this increase the number of grants as well as the amount per grant?

Answer. Yes; both the number of grants and the amount of each grant will increase. The $472 million increase over the Ford budget will increase the number of grants to students from 2 million to 2.5 million. The additional 500,000 grants will be awarded to students from middle income families with annual incomes ranging from $13,000 to $17,000. The maximum award will increase from $1,400 to $1,600, with the average grant increasing from $880 to $910.

Mr. CONTE. How many junior colleges were added to the VCIP rolls through the Education Amendments of 1976? Why doesn't your budget reflect this increase of eligible schools for veterans' cost-of-instruction benefits?

Answer. Currently there are 796 junior colleges participating in the veterans cost-of-instruction program. There was no provision in the education amendments of 1976 which would increase the number of junior colleges eligible to participate in the program. However, the amendments included a provision which expanded the definition of an institution of higher education to include institutions that admit as students persons who are beyond the age of compulsory school attendance but do not have a high school diploma or its equivalent. These institutions are frequently junior colleges and the provision merely clarified the status of some schools whose eligibility for participating in Federal assistance programs could have been questioned.

Mr. FLOOD. We will insert in the record at this point a number of special reports which were prepared by the Department of Health, Education, and Welfare at the request of the subcommittee.

[The reports follow:]

SPECIAL REPORTS

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DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

REPORT ON ACTIVITIES IN

AGING

A REPORT TO THE

HOUSE COMMITTEE ON APPROPRIATIONS

FEBRUARY, 1977

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

ACTIVITIES SERVING OLDER AMERICANS

DURING 1976

In response to the many social, health, economic, education, and other needs of the Nation's elderly, a wide range of programs serving this age group were administered during 1976 by various agencies throughout the Department of Health, Education, and Welfare. This report begins with a tabular summary of actual and expected annual expenditures for activities on behalf of older Americans of each HEW agency which administers one or more major programs serving this segment of the population. This is followed by narrative descriptions of these activities, in the following order:

I. Office of Human Development

- A. Administration on Aging
- B. Rehabilitation Services Administration
- C. Office of Native American Programs
- D. Office of Rural Development
- E. Architectural and Transportation Barriers Compliance Board

II. Social Security Administration

III. Public Health Service

- A. National Institute on Aging
- B. National Institute of Mental Health
- C. Health Resources Administration
- D. Health Services Administration

IV. Social and Rehabilitation Service

- A. Assistance Payments Administration
- B. Public Services Administration

C. Medical Services Administration

D. Office of Planning, Research, and Evaluation

V. Education Activities

A. Office of Education

B. Office of the Assistant Secretary for Education

VI. Office of Consumer Affairs

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Funds for Programs on Aging
(in thousands of dollars)

I. Office of Human Development	1975 Actual	1976 Actual	TQ Actual	1977 Actual	1978 Estimate 1/
A. Administration on Aging					
Title III, Area Planning and Social Service Programs	82,000	93,000	31,250	122,000	122,000
Title III, Planning, Coordination, Evaluation, and Administration of State Plans	15,000	17,035	4,250	17,000	17,000
Title III, Model Projects	8,000	13,800	2,500	12,000	12,000
Title IV-A, Training	8,000	10,000	4,000	14,200	14,200
Title IV, Research and Demonstrations	7,000	8,000	2,000	8,500	7,000
Title IV, Multidisciplinary Centers of Gerontology	0	1,000	1,000	3,800	3,800
Title V, Multipurpose Senior Centers	0	0	5,000	20,000	20,000
Title VII, Nutrition Program for the Elderly	125,000	125,000	31,250	203,525	225,000

1/Carter Budget Figures

Funds for Programs on Aging
(in thousands of dollars)

	1975 Actual	1976 Actual	TQ Actual	1977 Actual	1978 Estimate
Federal Council on the Aging	500	575	150	585	450
National Information and Resource Clearinghouse	0 [2]	0 [2]	0 [2]	0 [2]	2,000
Total, Administration on Aging	245,500	268,410	81,400	401,610	423,450
B. Rehabilitation Services Administration [3]					
Basic State Grants	12,240	14,406	378 [4]	16,287 [4]	16,730
Facility Improvement	165.042	138		140 [4]	140
Service Projects	300	350		350 [4]	350
Rehabilitation Training	12.3	12.3		12.5 [4]	10

[2] The Clearinghouse functioned during these years without a specific appropriation, with salary and expense funds of the Department of H.E.W.
[3] All R.S.A. figures relate to rehabilitated persons 65 years of age and over.
[4] Estimate

Funds for Programs on Aging
(in thousands of dollars)

	1975 Actual	1976 Actual	TQ Actual	1977 Actual	1978 Estimate
C. Office of Native American Programs	-- 6/	-- 6/	-- 6/	-- 6/	-- 6/
D. Office of Rural Development	-- 6/	-- 6/	-- 6/	-- 6/	-- 6/
E. Architectural and Transportation Barriers Compliance Board	-- 6/	-- 6/	-- 6/	-- 6/	-- 6/
II. Social Security Administration					
Benefit payments to persons age 65 and over from social security trust funds:					
Disability insurance benefits (dependents).....	$25,000	$33,000	$9,000	$38,000 7/	$41,000

6/ It would be difficult or impossible to estimate the portion of total expenditures which should be considered for older persons, since activities relate to individuals of all ages.

7/ Estimate.

Funds for Programs on Aging
(in thousands of dollars)

	1975 Actual	1976 Actual	TQ Actual	1977 Actual	1978 Estimate
Retirement and survivors' insurance benefits.....	43,066,000	49,301,000	13,445,000	56,466,000 1/	61,862,000
Hospital insurance benefits.....	9,417,000	11,026,000	2,754,000	13,359,000 1/	14,218,000
Supplementary medical insurance benefits..	3,335,000	3,970,000	1,046,000	4,915,000 1/	5,900,000
Sub-total, benefit payments to persons age 65 and over from social security trust funds.....	55,843,000	64,330,000	17,254,000	74,778,000 1/	82,021,000
Payments to persons age 65 and over from Federal funds:					
Supplemental Security Income payments.....	1,817,000	1,810,000	452,000	1,754,000 1/	1,731,000
Special benefits for disabled coal miners.	608,000	645,000	164,000	664,000 1/	695,000

1/ Estimate.

Funds for Programs on Aging
(in thousands of dollars)

	1975 Actual	1976 Actual	TQ Actual	1977 Actual	1978 Estimate
Sub-total, payments to persons age 65 and over from Federal funds..	2,425,000	2,455,000	616,000	2,418,000 1/	2,426,000
Grand Total, Social Security Administration.....	$58,268,000	$66,785,000	$17,870,000	$77,196,000 1/	$84,447,000
III. Public Health Service					
A. National Institute on Aging.....	15,989 8/	19,221	4,004	30,000	34,500
B. National Institute of Mental Health....	4,438	7,242 2/		8,156	7,776
C. Health Resources Administration...					

8/ Funds for aging program of National Institute of Child Health and Human Development, before establishment of National Institute on Aging.
2/ FY 1976 figures include funds for the transition quarter.

Funds for Programs on Aging
(in thousands of dollars)

	1975 Actual	1976 Actual	TQ Actual	1977 Actual	1978 Estimate
1. Division of Facilities Development..	50,986	60,452	47,704	33,915	16,798
2. National Center for Health Statistics..	1,841	1,870 [9]		2,756	2,756
3. Bureau of Health Manpower					
a. Nurse Practitioner Program.....	2,030.876 [10]	78.562 [9]		75.779	1,500
D. Health Services Administration					
1. Bureau of Medical Services..... [11]	15,424	16,806	4,764	16,954	[12]

9/ FY 1976 figures include funds for the transition quarter.
10/ New reporting category; cumulative amount through 1975.
11/ All figures for BMS relate to individuals age 60 and over.

Funds for Programs on Aging
(in thousands of dollars)

	1975 Actual	1976 Actual	TQ Actual	1977 Actual	1978 Estimate
2. Medical Care Standards.....	6,255	4,888	2,162	4,368	12/
3. Professional Standards Review Organizations.	34,083	49,961	9,510	61,125	12/
IV. Social and Rehabilitation Service					
A. Assistance Payments Administration....	3,762 13/	4,191 13/	1,080 13/	4,258 13/	4,125 13/
B. Public Services Administration....	248,000	299,000	77,000	318,000	318,000
C. Medical Services Administration....	2,759,042	3,254,705	920,252	3,999,663	4,620,056
D. Office of Planning, Research and Evaluation....	1,438	5,914	205	14/	14/
Total, Social and Rehabilitation Service.....	3,012,242	3,563,810	998,537	4,321,921	4,942,181

12/ '78 estimate being reported under category of "quality of care".
13/ Adult programs in Guam, Puerto Rico, and Virgin Islands only.
14/ FY'75, 76 and TQ included Long-Term Care which is now a separate report. For FY'77 and 78 SRS will provide only waivers for the remaining Aging projects--no Federal funds are required.

Funds for Programs on Aging (in thousands of dollars)	1975 Actual	1976 Actual	TQ Actual	1977 Actual	1978 Estimate
V. Education Activities					
A. Office of Education					
1. Library Resources	2,145	2,475 [15]		2,475	2,475
2. Adult Education	5,630	2,700 [16]		7,150 [16]	8,050 [16]
3. University Community Service and Continuing Education	1,326	1,631		1,750	1,750
Total for Office of Education	9,101	6,806		11,375	12,275
B. Office of the Assistant Secretary for Education					
1. Fund for the improvement of Postsecondary Education	52	347		--- [17]	--- [17]
VI. Office of Consumer Affairs [18]					

15/ All Office of Education figures for FY 1976 include funds for the transition quarter, July 1 - Sept. 30, 1976.

16/ Estimate--based upon the percentage of adults receiving services under this program who are aged 65 and over.

17/ Estimates are not available at this time. Funds for this program are awarded on the basis of approval of individual projects, the totality of which address many program areas.

18/ It would be difficult or impossible to estimate the portion of total expenditures which should be considered for older persons, since activities relate to individuals of all ages.

I. OFFICE OF HUMAN DEVELOPMENT

A. ADMINISTRATION ON AGING

During FY 1976 the Administration on Aging was involved in a wide range of activities pursuant to its mandates as set forth in the Older Americans Act of 1965, as amended. These mandates and the associated activities during FY 1976 are articulated later in the report.

ORGANIZATION OF THE ADMINISTRATION ON AGING

To carry out its mandates, the Administration on Aging has been organized in the following manner: (1) The Office of the Commssioner on Aging; (2) The Office of Planning and Evaluation; (3) The Office of State and Community Programs; (4) The Office of Research, Demonstrations and Manpower Resources; (5) The National Clearinghouse on Aging; (6) The Field Liaison Staff; and (7) The Nursing Home Interests Staff. The current organizational structure of the Administration is presented in Table I of this report.

The Office of Planning and Evaluation (OPE) serves as the focal point in the Administration on Aging for forward 5-year planning, policy analysis and evaluation. It conducts policy analyses of program issues affecting AoA and programs for the aging, develops and updates AoA's 5-year forward plan, prepares AoA's annual reports to the President and Congress, develops and implements an annual evaluation plan for AoA, develops legislative proposals, and identifies and reports on policy issues regarding proposed legislation which will affect the elderly.

The Office of State and Community Programs (OSCP) serves as the focal point for development and assessment of the State and Community Programs on Aging (Title III), the Multipurpose Senior Centers Program (Title V) and the Nutrition Program for the Elderly (Title VII). In addition, OSCP develops regulations, policies, and guidelines for use by State and Area Agencies on Aging, Nutrition Project Agenices and where appropriate Senior Centers; develops optional models and disseminates "best practice" suggestions for use by the Regional Offices, State Agencies on Aging, Area Agencies on Aging and Nutrition Project Agencies; develops and monitors, in cooperation with other AoA units, management information and reporting systems which provide updated information to facilitate planning and program adjustment for management efficiency at all organizational levels; and carries out other related functions.

AoA's Office of Research, Demonstrations and Manpower Resources serves as a focal point for coordination of research on aging by Federal agencies; provides the chairman and secretariat services to the Interagency Task Force on Aging Research; develops policy, supports projects and monitors

progress related to research, demonstration, and manpower resources programs under Title IV of the Older Americans Act and the Model Projects program authorized by Section 308 of the Act; and carries out other functions supportive to AoA's mandate to provide national leadership and expertise in encouraging new knowledge and upgrading competencies in the field of aging.

AoA's National Clearinghouse on Aging serves as the focal point within the Federal Government for the collection, analysis, and dissemination of information related to the needs and problems of older persons, and, wherever possible, develops and coordinates programs with other offices and agencies to fill gaps in information in the field of aging; develops policy for information and referral services; provides technical assistance to State Agencies on Aging in the development of information and referral services; provides the chairman and secretariat services to the Interagency Task Force on Information and Referral, and to the Federal Task Force on Statistics; produces a variety of professional and lay publications and audiovisual material on aging; publishes AGING magazine; develops special information campaigns; responds to letters and telephone inquiries; and performs other related functions in the area of public information.

AoA's Field Liaison Staff assists Regional offices in keeping informed of continuing developments relative to the objectives and programs of the Administration on Aging; identifies difficulties being encountered by Regional offices in carrying out their duties and responsibilities; ascertains the degree of further assistance required from AoA Headquarters to ensure that Regional offices achieve national and operational planning objectives; and provides other related assistance to Regional office staff.

The Nursing Home Interests Staff provides technical assistance to community and advocacy groups which are working for the improvement of long-term care, assists in the development of alternatives to institutional care in collaboration with other agencies, serves as project manager for the Nursing Home Ombudsman Program, and provides technical assistance in the area of nursing home patient relocation.

ORGANIZATION OF REPORT

The remainder of this report identifies activities conducted by AoA during FY 1976 from two perspectives:

- accomplishments by program
- accomplishments as related to AoA forward plan goals.

ADMINISTRATION ON AGING ACTIVITIES BY PROGRAM

For purposes of discussion, the programs assigned to the Administration on Aging by the Older Americans Act of 1965, as amended are grouped as folows:

- Programs Directly Affecting the Elderly
- Programs Supporting the Concerns of the Elderly

PROGRAMS DIRECTLY AFFECTING THE ELDERLY

STATE AND COMMUNITY PROGRAMS ON AGING

TITLE III: COORDINATED, COMPREHENSIVE SERVICE SYSTEM FOR THE ELDERLY

PURPOSE

Under the Title III program, the Commissioner makes formula grants to each State with an approved State plan submitted by the Governor and developed by the designated State Agency. Each State plan is designed to develop or strengthen at the State and sub-State or area level a system of coordinated and comprehensive services, which will enable older persons to live in their own homes as long as possible and to continue to participate in their communities. In 1973 and 1974 State Agencies on Aging conducted Statewide surveys of their population to determine the concentration of older persons with the greatest social and economic needs to assess resources available to meet these needs. Planning and Service Areas (PSAs) were then designated based on these surveys. State Agencies then designated Area Agencies on Aging within these PSAs.

ACCOMPLISHMENTS 1/

STATE AGENCIES ON AGING

Title III resources 2/ in FY 1976, were directed toward:

- expanding the number of area agencies on aging
- establishing, at the State level, mechanisms for developing or strengthening coordination efforts between State Agencies on Aging and other public and private agencies at the State level

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1/ Accomplishments are reported separately for State Agencies on Aging and Area Agencies on Aging.

2/ Funds are provided on a formula grant basis to support the operation of each State Agency on Aging. $17,000,000 was available for this purpose in FY 1976 and $4,250,000 in the Transition Quarter--Note State by State allocations in Appendix 1A.

- expanding access by older Americans to information and referral
- implementing nursing home ombudsman and legal services programs.

Expanding Number of Area Agencies on Aging: The 56 geographical jurisdictions 3/ within the U.S. have been divided by these jurisdictions into 596 planning and service areas. By the end of FY 1976, States had approved the plans and budgets of 536* Area Agencies on Aging. This is a significant increase in the number of Agencies in existence at the end of FY 1975. By the end of FY 1976, therefore, only 60 planning and service areas nationally are without an Area Agency on Aging. These 536 Area Agencies on Aging cover 90% of the Nation's older persons. Most of those areas not covered are highly rural, lightly populated planning and service areas.

Coordination and Program Development at the State Level: State Agencies on Aging are responsible for establishing such procedures and mechanisms as are necessary to assure the effective coordination of all State planning and service activities related to the field of aging.

Federal leadership and technical assistance influences State and local agencies which have discretionary authority on the expenditure of Federal resources. The Administration on Aging, therefore, has negotiated and signed twenty formal interagency working agreements with other Federal Departments and agencies in order to assist State Agencies to coordinate activities at the State level. Concurrently the activities of the National Network on Aging underlines and reinforces the attention given to the field of aging by the counterpart agencies of Federal agencies. This dual-edge approach, with interest being expressed to the respective controlling State or local agency from both its Federal counterpart and a State or Area Agency, should result in more resources being utilized for services for older persons.

By the end of FY 1976, 247 Interagency Agreements had been signed at the State level in the areas of:

- Health
- Housing
- Employment and Retirement
- Nutrition
- Transportation
- Social Services

This is an increase of 110 agreements over FY 1975.

3/ Includes the 50 States plus American Samoa, Guam, Puerto Rico, Trust Territory the Virgin Islands, and the District of Columbia.

* This figure represents the most recent FY 1976 count.

Information and Referral: State Agencies in cooperation with Area Agencies on Aging also have a responsibility to assure the availability of information and referral sources in sufficient numbers so that all older persons have reasonably convenient access to such sources.

It is estimated that 95% of all older persons in the nation have access to information and referral services.

The Nursing Home Ombudsman Program: By the end of September 1976 forty-nine States had established a Statewide Nursing Home Ombudsman Program. The purpose of the Nursing Home Ombudsman Program, which is funded by AoA Model Projects funds ($1,087,234 million in FY 1976), is to enable State Agencies to develop a process at the local or area level which is responsive to complaints made by or on behalf of the elderly in nursing homes and to work in a variety of ways to improve the quality of care and quality of life of nursing home patients.

Significant findings due to the Ombudsman effort revealed complaints dealing with:

- need for frequent investigations involving financial difficulties, including overcharges, and determination of Federal benefits;
- problems of overdrugging, prolonged use of restraints, improper diets, lack of baths, physical abuse;
- complaints of feelings of isolation, neglect, and loneliness; and
- frequent violations of patients' rights.

Resolution of complaints often defy accurate documentation. Many resolutions are only temporary, some are partial, and others go unreported. Yet, reports presently being collected show evidence of major policy changes directly related to Ombudsman activity. This is observable in:

- the increased enactment of State legislation for the granting of access to nursing homes and provision of appropriation for employment of Ombudsmen - often designated as Advocates;
- increasing interest and support manifested by Governors of States in encouraging the location of the Ombudsman Program in their offices;
- growing support of Area Agencies in seeking new resources to support the programs; and
- the growing support from private and governmental sectors.

Legal Services Program: AoA announced in July 1976 a program to provide support to each State Agency to develop, working through Area Agencies on Aging, increased legal services for the elderly. The program will become operative in January 1977. Its objective is to provide the capacity for leadership within each State Agency for the promotion of Statewide legal services to the elderly. The promotion and development of legal services for the elderly includes:

(1) Working with Area Agencies on Aging in order to help them design legal services programs for older persons and to assist them in developing plans for the implementation of such programs by public or private agencies;

(2) Assisting, working through Area Agencies on Aging, legal services corporation offices and/or legal aid programs to expand services and outreach efforts to eligible elderly clients and to design and secure funding for programs which would serve all older persons;

(3) Assisting Area Agencies on Aging in involving the private bar in increasing legal representation to older people;

(4) Stimulating law schools and other educational institutions to provide research, law related training, and/or direct client services to the elderly;

(5) Designing and coordinating through State and Area Agencies on Aging legal and aging training programs for State and Area Agency staff and grantees, paralegals, lawyers, and older persons;

(6) Providing, working through the Area Agencies on Aging, assistance in developing legal back-up to the nursing home ombudsman programs at the area level; and

(7) Working with the State Agency, Area Agencies and other interested parties on research, drafts, testimony, advocacy and monitoring for legislation at all levels that benefits the elderly. Areas of particular legislative concern could include for example, SSI, Social Security, food stamps, Medicaid, Medicare, veterans benefits, public and private pensions, nursing homes, real property taxation, Federal taxation, housing and welfare.

The promotion and development of legal services for the elderly does not include:

(1) Acting as house counsel to the State Agency
(2) Litigation
(3) Direct client counseling and representation

AoA made several grants to organizations to provide technical assistance to the States in developing and implementing this program. These were:

- Legal Research and Services for the Elderly (Washington, D.C.)
- Legal Services for the Elderly Poor (New York, New York)
- National Senior Citizens Law Center (Los Angeles, California)
- National Paralegal Institute (Washington, D.C.)
- National Retired Teachers Association/ American Association of Retired Persons (Washington, D.C.)

AREA AGENCIES ON AGING

Federal funds are available through a formula grant to each State to pay part of the cost of the operations of Area Agencies on Aging and the funding of social services by the State Agency where there is no Area Agency. 4/ Area Agencies on Aging are public or private non-profit agencies, designated by the State Agencies on Aging, which receive Federal support through the State Agencies to develop and implement an annual area plan and budget to:

- Serve as the focal point and advocate on aging for a State-designated planning and service area, identifying the needs and problems of older people in the area, establishing goals and priorities, mobilizing resources from other public and private agencies to meet the needs and problems, and negotiating inter-agency cooperative agreements to expand and coordinate services;
- Maintain and increase levels of social services available to older persons by providing leadership, technical assistance, and funding to foster the development of a comprehensive and coordinated service system for the area involving all available public and private agencies and funds: to assure that the needs of older persons are met; to assure that resources are used effectively and efficiently; and to invest Area Agency funds strategically to facilitate access to existing services and to fill priority service gaps; and

4/ $93,000,000 was available in FY 1976 and $31,250,000 in the Transition Quarter for this purpose--Note State by State allocations in Appendix I-A.

- Engage in a continuing process of reassessment of priorities and approaches in terms of progress toward the development of a comprehensive and coordinated service system within the area to meet the needs of older persons.

Area Planning and Social Services funds are available at different matching ratios for three types of use:

- Up to 15 percent of the State's allotment is available for the operations of the Area Agencies, at a Federal matching rate of up to 75 percent;

- The remainder is available for the purchase of any services that promote the general welfare of older persons, at a Federal matching rate of up to 90 percent for services that are part of an Area Agency Annual Plan, and up to 75 percent for services in an area where no Area Agency has been established and there is no approved Area Plan (a maximum of 20 percent of the State's allotment is available for services in areas that are not part of an Area Plan).

Pooling Resources to Increase Services to the Elderly: A recent study (1976) 5/ reported that by the end of FY 1975 Area Agencies were successfully pooling resources from other public and private sources:

- 55% of the Area Agencies on Aging have obtained non-AoA sources of funds beyond the required local match by the end of 1975 (twice as many as one year earlier);

- almost one-fourth of the Area Agencies on Aging have obtained more than one non-AoA dollar for each AoA dollar; the average was 80 cents, including match and in-kind contributions, for each AoA dollar;

- 72% have had local government cash, 43% have had State appropriated funds, 40% have channeled Title VII nutrition funds, 28% have had general revenue sharing dollars, 26% have had private cash, and 15% have channeled Title XX (late 1975);

- high levels of contact with local elected officials and community leaders were established.

During FY 1976 State and Area Agencies made substantial progress in pooling resources.

5/ Raymond M. Steinberg, A Longitudinal Analysis of 97 Area Agencies on Aging, Social Policy Laboratory, Andrus Gerontology Center, Unversity of Southern California, May 1976.

The estimated total dollars pooled by State and Area Agencies on Aging 6/ during FY '75 and '76 are:

FY 1975	$122,541,000
FY 1976	$215,190,000

This increase of $92,649,000 million in pooled resources has undoubtedly had an impact on the level of services provided to older persons.

Serving the Elderly: The emphasis in the purchase of services is on priority services (listed below) identified in Title III of the Older Americans Act. The proportion of service funding during FY 1976 is as follows:

Title III Services

Type of Service	Percent
. Transportation	25%
. In-home Services	16%
. Information & Referral	16%
. Legal & Other Counseling	13%
. Home Repair	4%
. All Other Services	26%
	100%

In 1976, an estimated 7,086,210 7/ elderly persons were served under area plans approved by State Agencies. Of these, 17% were minority and 43% low-income 8/. They received the following services:

Persons Served by Title III

Type of Service	Number of Persons Served 9/
Transportation	1,790,000
Home Services	202,000
Legal & Other Counseling	92,000
Repair & Renovation	15,000
Information & Referral	1,692,000
Escort	158,000
Outreach	806,000
All Other Services	1,322,000
	6,077,000*

6/ Other than Title III and Title VII resources.
7/ Duplicated count - total served with all funds.
8/ Low income definition is based on Department of Commerce, Bureau of the Census poverty threshold - 1975 estimates, and established by each State.
9/ Number served under Title III funds only.
* Duplicate count.

Involving the Elderly: Area Agencies on Aging also have the responsibility to meaningfully involve older persons in programs that serve older persons. Area Agencies have demonstrated their commitment to this responsibility through the significant employment or use of older volunteers in Area Agency activities.

Older Persons and Area Agencies on Aging

Paid Staff	Percent
60 years or older	19%
Volunteer Staff	
60 years or older	52%

Also, Title III regulations require that at least one-half the members of Advisory Committees of State and Area Agencies on Aging must be older persons.

TITLE V: MULTI-PURPOSE SENIOR CENTERS

PURPOSE

Title V Section 501 authorizes the Commissioner to make grants or contracts to units of general purpose or other public or private non-profit agencies or organizations and to make contracts with any agency or organization for the purpose of acquiring, altering, or renovating existing facilities to serve as multi-purpose senior centers. The term "multi-purpose Senior Centers" means a community facility for the organization and provision of a broad spectrum of health, social, educational and other services for older persons.

ACCOMPLISHMENTS

The program was funded for the first time during the July-September 1976 Transition Quarter. A total of 549 grant awards were made from the $5 million appropriated for this period. 10/ It is estimated that the senior centers supported during FY 1976 will serve approximately 2.5 million older persons.

10/ The amount of funds awarded within each State is noted in Appendix II-F.

Multi-Purpose Senior Center Program

Total number of projects funded	549
Type of Senior Center Projects	
Facilities altered or renovated	457
Equipment and furnishings provided	69
Facilities which were acquired	23
Existing or New	
Existing senior centers which were altered or renovated	339
Newly established senior centers through acquisition, alteration, or renovation	210
Location of Center	
In rural areas	378
In urban areas	171

TITLE VII: NUTRITION PROGRAM FOR THE ELDERLY

PURPOSE

The Nutrition Program authorized by Title VII of the Older Americans Act, as amended, began operations early in Fiscal Year 1974. Under the provisions of Title VII, the Commissioner on Aging is authorized to make formula grants to States to establish and maintain community-based Nutrition Program project sites for the delivery of low-cost, hot nutritious meals, served primarily in congregate settings and with supportive services to persons 60 years of age and over and their spouses.

Each Nutrition Program project must provide hot meals five or more days a week, 52 weeks a year. The project must also provide supportive services necessary to facilitate participation of eligible individuals in the meals program. Such services include outreach, transportation and escort services. In addition, projects are encouraged to provide other supportive services, including health and welfare, education and counseling, information and referral services, shopping assistance and recreational services.

Under the terms of the 1973 amendments to the Older Americans Act, the U.S. Department of Agriculture provides commodity and product support to the Nutrition Program. Such assistance was to be at a minimum level of 15 cents per meal for FY 1976 and 25 cents per meal for FY 77. In FY 76 this support was equivalent to 16 1/2 cents per meal in donated food. Special emphasis is placed on providing high protein foods, meat and meat alternates.

Summary: Title VII - Nutrition Program

	FY 1975	FY 1976/11	Change
1) Total Meals Served	52,276,000	64,273,000	+ 11,997,000
2) Average Number of Meals Served Daily	209,000	259,000	+ 48,000
3) Estimated Number of Different Persons Served	1,470,000	1,723,000	+ 253,000
4) Average Cost Per Meal	$2.25	$2.25	No change
5) Percent Home Delivered Meals	13%	14%	+ 1%
6) Percent Expended on Supporting Social Services	13%	11%	- 2%
7) Percent Minority	24%	21%	- 3%
8) Percent Low-Income	62%	62%	No change
9) USDA Commodities	$3,263,000*	$10,500,000	+ $7,337,000

11/ Period ending June 30, 1976. (Excludes Transition Quarter)

* In FY 1975 program started late in the year.

The program is designed to assist communities to meet the nutritional and social needs of older persons who do not eat adequately because--

(1) they cannot afford to do so;

(2) they lack the skills to select and prepare nourishing and well-balanced meals;

(3) they have limited mobility which may impair their capacity to shop and cook for themselves;

(4) they have feelings of rejection and loneliness which obliterate the incentive necessary to prepare and eat a meal alone.

ACCOMPLISHMENTS

During Fiscal Year 1976 11/ the number of nutrition projects increased from 682 to 845. 12/ The number of meal sites increased from 4,491 to 6,672. Approximately 35% of the projects serve rural areas. See Summary: Title VII - Nutrition Program. (Page 13)

PROGRAMS SUPPORTING THE CONCERNS OF THE ELDERLY

TITLE IV, PART A: MANPOWER AND TRAINING

PURPOSE

This section of the Older Americans Act authorizes the Commissioner to award grants to public or non-profit agencies, organizations or institutions, including State Agencies on Aging, and to enter into contracts for training projects. The purpose of this program is to increase the number of trained personnel in the field of aging and thus improve the quality of services to older people.

ACCOMPLISHMENTS 13/

CAREER TRAINING

The Administration on Aging supports training programs at institutions of higher education that will provide students with the necessary gerontology knowledge and skills to enable them to serve the nation's elderly in their chosen career or profession.

11/ Period ending June 30, 1976. (Excludes Transition Quarter)

12/ $187,500,000 was made available in FY 1976 and $46,875,000 in the Transition Quarter for this program--Note State by State allocation in Appendix I-B.

13/ A list of all awards made under this program in FY 1976 and the Transition Quarter is included in Appendix II-C.

Career Development

Through the career development program, students are prepared for employment at baccalaureate, masters, and doctorate levels in:

(1) State and Federal program planning and administration;
(2) community development and coordination;
(3) administration of retirement homes and homes for the aged;
(4) senior center direction;
(5) teaching and research; and
(6) serving older people through adult education, architectural design, counseling, law, library service, recreation and other relevant fields.

During the 1975-76 academic year $3.5 million supported 50 grant awards at 47 colleges and universities in 34 States. Approximately 16,000 students were enrolled in courses and programs in aging. Five hundred and twenty-three students received financial assistance as part of FY 1975 Career Training Awards through the university. In addition, over 200 were supported in the summer institute program sponsored by the University of Southern California.

At the close of FY 1976, $6 million was awarded on a national competitive basis to educational institutions to support activities relative to career training in aging. This included:

A. University Multidisciplinary Development

Sixty-four awards for "Development Support for Career Training in Aging" with the program emphasis on multi-disciplinary efforts of the grantee institutions; and

B. Planning

Thirteen awards for "Planning Grants for Institutions of Higher Education," to assist in the organization and development of institution-wide faculty capability in the gerontology field.

IN-SERVICE TRAINING

The Administration on Aging continued its support of grants to each State Agency on Aging for the support of training to meet priority in-service needs identified in each State. Although the awards were made during FY 1975 they were used during FY 1976. A total of $3.5 million supported training in such areas as gerontology, information and referral, nutrition, program management and anaylsis, planning and outreach. More than 30,000 persons now in the field of aging were trained as a result of these programs.

MANPOWER DEVELOPMENT

Together with the Bureau of Labor Statistics, Department of Labor, the Administration on Aging has developed information on manpower needs in the field of aging.

According to the study, Manpower Needs in the Field of Aging: The Nursing Home Industry 14/, projected manpower requirements for nursing homes will be 873,000 persons in 1980 and 1,036,000 persons in 1985. As of 1973 583,010 individuals were working in the nursing home industry. (1975 figure will be available in updated report September 1977)

A recent study Human Resource Issues in the Field of Aging: Homemaker-Home Health Aide Services 15/, projected manpower requirements for homemaker -home health aides is 63,000 in 1980, 67,500 in 1985 and 72,000 in 1990. These estimates are based on the assumption that there is no change in the philosophy of appropriate care, legislation regarding home health, or the level of utilization.

Other Manpower and Training Activities--Other significant accomplishments in the area of training and manpower are:

- Development of a clearinghouse of training resources in aging (Duke University, Durham, N.C.)

- Compliation of a National Directory of Educational Programs in Gerontology (Association for Gerontology in Higher Education, Washington, D.C.)

The Administration on Aging has also concentrated on training in the field of aging in specific areas. These are for example:

- provision of training for Indian para-professionals in the problems of the elderly Native American (Association of American Indian Social Workers -- Morningside College, Sioux City, Iowa. 16/

14/ AoA Occassional Papers in Gerontology, No 1., Manpower Needs in the Field of Aging: The Nursing Home Industry, DHEW Publication No. (OHD) 76-20082, (Washington, D.C. U.S. Department of Health, Education, and Welfare, Office of Human Development, Administration on Aging, National Clearinghouse on Aging).

15/ AoA Occasional Papers in Gerontology, No. 2, Human Resource Issues in the Field of Aging: Homemaker, Home Health Aide Services, DHEW Publication_____ (Washington, D.C. U.S. Department _____)

16/ Currently located in Portland, Oregon

- training of older adults to prepare them for second careers in the allied health community organization fields. (George Washington University, Washington, D.C. and University of Washington, Seattle, Washington).

- provision of training of lawyers, law students, paralegals, and community advocates in the area of law and aging (See appendix ___ for operating grants).

Consistent with the Administration on Aging desire to build professional interest in the needs of the elderly, AoA awarded 20 dissertation grants in a variety of areas relating to social gerontology.

TITLE IV-B--TITLE IV, PART B: RESEARCH AND DEVELOPMENT

PURPOSE

The research and development program supports projects which expand knowledge in a wide variety of subject areas that are critical to the development and improvement of aging programs. Equally important, research program initiatives serve to increase the Federal sector capacity to realize the National Objectives set forth in Title I of the Older Americans Act, as amended.

Under Title IV-B, research and development project grants are made to any public or non-profit agency, organization, or institution and contracts with any agency, organization, or institution or with any individual to carry out research and development efforts.

ACCOMPLISHMENTS

Approximately 66-IV-B supported projects for research into increasing the Federal capacity to contribute to the realization of the national objectives set forth in Title I of the Older Americans Act as amended. AoA supported several projects designed to identify the critical policy and research issues associated with the Title I objectives related to: (1) adequate income; (2) physical and mental health; (3) suitable housing; (4) restorative services for the impaired aged; and (5) employment opportunities. The intent of these projects is to develop a research agenda that will equip AoA with material for advocacy in persuading other Departments and agencies to help implement the ten objectives in Title I.

In FY 1976, research support for 23 projects related to increasing State and Area Agency capability to foster the development of comprehensive, coordinated service systems for the elderly. These projects emphasize developing new and improved techniques for application at State and local levels.

In FY 1976 only one project supported research designed to increase the capacity of the Federal sector to develop and implement Federal interdepartmental and interagency agreements. These agreements are designed to help State and Area Agencies on Aging develop, at the community level, comprehensive and coordinated service systems for older persons.

Research and Development 17/

	FY 76 and TQ	
	Number	Funds
Goal I Research		
Projects Related to Increasing State and Area Agency Capacities:		
New Projects	18	$2,345,435
Continuation Projects	5	$ 255,879
Total New and Continuation Projects	23	$2,601,314
Goal II Research:		
Projects Relating to Inter-Agency Agreements:		
New Projects	1	$ 89,000
Continuation Projects	0	$
Total New and Continuation Projects	1	$ 89,000
Goal III Research:		
Projects relating to research contributing to the Federal capacity to realize the National objectives of the Older Americans Act:		
New Projects	40	$4,332,136
Continuation Projects	26	$2,977,550
Total New and Continuation Projects	66	$7,309,686
Total Number of All Projects	90	$10,000,000

17/ A list of all projects funded in FY 1976 and the Transition Quarter is included in Appendix II-D

TITLE IV - PART C: MULTIDISCIPLINARY CENTERS OF GEROTOLOGY

PURPOSE

Funds are made available through project grants to public and private non-profit agencies, organizations, and institutions for the purpose of establishing or supporting multidisciplinary centers of gerontology.

Centers are established to:

- recruit and train personnel at the professional and sub-professional levels;
- conduct basic and applied research on work, leisure, and education of older people, living arrangements of older people, social services for older people, the economics of aging, and other related areas;
- provide consultation to public and voluntary organizations with respect to the needs of older people and in planning and developing services for them;
- serve as repository of information and knowledge with respect to the areas for which it conducts basic and applied research;
- stimulate the incorporation of information on aging into the teaching of biological, behavioral, and social sciences in colleges or universities;
- help to develop training programs on aging in schools of social work, public health, health care administration, education, and in other such schools at colleges and universities; and
- create opportunities for innovative, multidisciplinary efforts in training, research, and demonstration projects

ACCOMPLISHMENTS

During FY 1976, and the transition quarter, multidisciplinary centers on gerontology were supported for the first time with an appropriation of $1,000,000 for each budget period. This $2 million supported operational grants to 7 ongoing centers and 13 developmental grants designed to help institutions establish multidisciplinary centers. All of the operational grants were awarded to universities with existing gerontology centers. All but one of the developmental (planning) grants were awarded to universities or colleges. One was awarded to a free standing geriatic institute.

18/ A list of all these awards is included in Appendix II-E

The centers of gerontology being supported by operational grants are engaged in expanding distinct components of their already well established. multidisciplinary efforts in gerontology.

TITLE II: NATIONAL CLEARINGHOUSE FOR THE AGING

PURPOSE

Title II Section 204, added to the Act by the Older Americans Comprehensive Services Amendments of 1973, establishes within AoA a National Information and Resources Clearinghouse for the Aged. The National Clearinghouse on the Aged is charged with the collection, analysis and dissemination of information about older people and their needs: the provision of information to people, agencies, and organizations with respect to programs for older persons; the encouragement and establishment of State and area information referral services; and the stimulation of other agencies to prepare and disseminate information.

ACCOMPLISHMENTS

During FY 1976, the Clearinghouse continued its activities in the areas of public information, public inquiries, and publications distribution, statistical analysis, and information referral policy. Further, the Clearinghouse completed the development of a new major initiative to be implemented during FY 1977 and 78, a model for the service center for aging information (SCAN), which is a national bibliography information system for the field of aging.

Public Information: Public information activities of the Clearinghouse continue to provide support to the national network on aging and to public and private agencies working for and with the elderly. Unique accomplishments in addition to AGING magazine 19/ during the year in this area are:

- Distribution of Administration on Aging supported film "Don't Stop the Music", a general introduction to American elderly, their problems and potential. This film was seen by over 78,000 viewers in FY 1976.

- Production and distribution of materials for the older Americans bicentennial community forum which were held throughout the country.

19/ "AGING," U.S. Department of Health Education and Welfare, Office of Human Development, Administration on Aging, National Clearinghouse on Aging - DHEW Pub. No. (OHD/AoA) 76-20938.

Statistical Analysis: During FY 1976 the Clearinghouse completed several publications and continued to produce and provide statistical information to the professionals in the field of aging. The following publications of interest were completed:

- Lack of Complete Kitchen Facilities Among the Elderly
- The Elderly Widow
- Facts About Older Americans, 1976
- Characteristics of the Elderly Population Living in Non Metropolitan Areas

Public Inquiries and Publications Distribution: This unit within the Administration on Aging, answered 48,451 letters from older persons across the country, covering such topics as:

- elderly services
- employment
- volunteer opportunities
- consumer matters

The correspondence revealed that economic and health problems were prominent among the difficulties faced by older persons. In addition to answering letters, assistance was given to approximately 19,000 phone callers and 3,250 visitations.

Service Centers for Aging and Information (SCAN): A major strategy objective for the National Clearinghouse is to expand access to the base of knowledge concerning the field of aging, so that information is made readily available, especially to those working in the field. In support of this objective, the Clearinghouse developed a model for a natinal bibliograhpic information system. The Service Center for Aging Information (SCAN) will be an automatic system which will aid in making an already large and ever-increasing volume of gerontology literature more readily available. This system is modeled after the Educational Resources Information Center (ERIC) used for the National Institute of Education. The SCAN system will consist of three decentralized resource centers which will be responsible for collecting, indexing, and abstracting reports of journal literature within their respective topic areas. Organization of the centers will be along disciplinary lines to cover three major areas: bio-medical, behavioral-social science, and social practice. The initial implementation of the SCAN system is anticipated to be accomplished during FY 1977.

TITLE III: MODEL PROJECTS

PURPOSE

Section 308 authorizes the Commissioner after consultation with State Agencies to make grants to any public or non-public, private agency or organizational or contracts with any agency or organization within

such States for paying part or to all the costs of developing or operating Statewide, Regional, metropolitan area, county, city or community model projects which expand or improve social services or otherwise promote the well-being of older persons.

ACCOMPLISHMENTS

During FY 1976 Model Projects awards were concentrated in the following areas: 20/

- To help increase the effectiveness and efficiency of the National Network on Aging.

- Nursing Home Ombudsman (51 projects - $1,087,234)—Provided support to foster the development of a process in each area of the State to respond to complaints about inappropriate conditions, policies or treatment in nursing homes.

- Legal Services (10 projects - $1,248,963.00)—Provided support to develop, test and demonstrate ways to increase Area Agencies' capacity to promote increased legal services for the aging.

- Senior Employment ($21 million--funds appropriated under the Economic Development Act but transferred to AoA)—In collaboration with the Emergency Employment Program of the Economic Development Administration, Department of Commerce, supported projects in employment of older persons.

- Ambulatory Day Care (2 projects)—Tested five social (as distinguished from medical) models of day care.

- Service Innovations (79 projects - $12,592,069)

- To develop new or improved ways for States and communities to help themselves and their elderly citizens better cope with the problems of aging, with preference given to projects focused on housing and living arrangements; retirement education and counseling; special needs of the impaired elderly, and special needs of the low-income, minority, Indian, limited English speaking and rural elderly.

20/ $13.8 million was made available in FY 1976 and $2,500,000 million in the Transition Quarter for this program. A list of all projects funded is included in Appendix II-B.

ADMINISTRATION ON AGING ACTIVITIES IN TERMS OF FORWARD PLAN GOALS

During FY 1976, the Administration on Aging began to focus its major program activities toward the realization of three long-range goals. These goals have been set forth in the Administration on Aging FY 1977-82 Forward Plan and are restated below as part of the discussion by goal of FY 1976 activities.

AoA Goal I: State and Area Agency Capacity (Comprehensive and Coordinated Services)

Goal Statement

Increase State and Area Agency capacity to foster the development and implementation of comprehensive coordinated systems of quality services for older persons, especially the low-income and minority, at the community level by increasing their capacity:

1. to identify the service needs of older persons;

2. to identify available resources and prioritize needs for action;

3. to establish action programs to coordinate existing services;

4. to expand and strengthen supporting services such as I&R and transportation, and other social services defined in the Older Americans Act through the pooling of untapped resources and the strategic investment of Older Americans Act funds; and

5. to act as an advocate on behalf of older persons on all issues that confront them.

Desired Goal Outcomes

The desired outcomes of Goal I are the attainment by State and Area Agencies on Aging, and, as appropriate, nutrition projects and multipurpose Senior Centers of adequate performance in the following areas of capacity:

Administration, including organization, staffing, staff development, policy implementation and guidance, fiscal administration and management and grants and contracts management.

Planning, including needs identification, resource identification, prioritization of unmet needs, objective setting, strategy development.

Implementation of plans for such areas as pooling and coordination, monitoring and assessment, and technical assistance.

Advocacy for the concerns of the elderly.

ACCOMPLISHMENTS

CAPACITY BUILDING

The Fiscal Year 1976 capacity building objectives were built on the accomplishments of the previous year. The Administration on Aging first identified the network capacities it considers essential to the effective conduct of the Title III and Title VII programs. The objective focused on developing or improving and putting into place the policy and process tools which are fundamental to the planning, management, and advocacy responsibilities of the National Network on Aging.

Assessment: Capacity building initiatives during the past year were particularly directed toward development of systematized assessment procedures and provision of basic instruments which could serve to support such efforts. The past year was marked by the development of a number of instruments which set forth common guidance to bridge the period from early and rapid expansion of the Network.

The Administration on Aging developed systematic program assessment processes at all levels of the network. Detailed guides for assessment which contain standards of performance in vital program areas along with a series of indicators for measuring performance in the various areas have been developed for use in assessing State Agencies, Area Agencies, and Nutrition Projects. In addition, three self-assessment guides were issued to assist area agencies in the management and monitoring of various program activities.

Technical Assistance: The Administration on Aging awarded a contract during the year for the development of self-instructive technical assistance materials for use by the network to improve equal employment practices, to increase the capabilities of State and local agencies in awarding grants and contracts to minority agencies or organizations, and to increase services to low-income and minority persons. These materials were issued in draft form late in Fiscal Year 1976 to the network for comment with final materials to be issued early in Fiscal Year 1977.

As a major effort at capacity building, the Administration on Aging in 1976 developed and issued a comprehensive guide which contains detailed technical assistance for the development of annual area plans. In addition, a reference manual for Objective Setting and Monitoring with accompanying training materials were also provided to State and Area Agencies to improve skills in preparation of annual plans.

In the interest of strengthening the involvement of advisory bodies in program operations of Title III and Title VII at both the State and sub-State level, a Technical Assistance Memorandum on the use

of advisory bodies was issued. This document addressed the purpose, role and responsibilities of the advisory committees/councils at State and local levels. The memorandum complemented guidance on the appropriate use of advisory bodies contained in State Plan instructions and in each of the assessment guides which were issued.

AoA is also developing technical assistance programs designed to assist State and Area Agencies in developing and strengthening the following priority services for older persons:

- information and referral
- legal
- nursing home ombudsman
- senior centers
- employment
- home and residential repairs and renovation

Each program will include a state of the art document on the service, possible approaches for network components to use in meeting service needs, a set of planning handbooks for development of the service, and, where possible, desirable standards of quality for delivery of the service. Handbooks for transportation and nutrition have been completed.

Evaluation: 21/ During FY 1976, AoA began work on major evaluation studies of both the Title III area planning and social services program, and the Title VII nutrition program for the elderly. These evaluations will provide information on the impact of both programs. The first year reports are due in April 1977 for Title VII and May 1977 for Title III. Two other projects funded during the first quarter of FY 1976 were the evaluation of information and referral services in relation to how well they are meeting AoA guidelines, and a co-sponsored evaluation of Title XX programs with the Public Services Administration.

During the Transition Quarter two additional projects were funded: an evaluation of the Title IV-A Career Training Program and an evaluation of the use and effectiveness of interagency agreements at the Federal, State, and Area levels.

During FY'76 several evaluation projects were completed. They are listed below with brief descriptions of their major findings.

- Evaluation of the outreach component of the Nutrition Program

  This study found that: both of the primary target groups of outreach, minority and low-income elderly participate in the program in a much greater proportion then their incidence among the elderly living in the site area.

21/ A listing of evaluation contracts awarded during FY 1976 and the Transition Quarter is included in Appendix II-A.

- Strategy evaluation for the National Clearinghouse on Aging

  Based on its findings, this study recommended: that the Administration on Aging should establish a central mechanism to direct the collection, analysis and dissemination of information in the field of aging by making use of currently operating resources in the field of aging.

  The general model for development of the information network should be the Educational Resources Information Center (ERIC) system of the National Institute of Education.

  Methodology: This project included two surveys. The first assessed the information needs of potential users of the Clearinghouse and how they felt their needs could best be met. In total, 300 potential users were surveyed. The respondents were selected as a judgmental sample. Interviews were conducted with staff of Area Agencies on Aging, State Offices on Aging, Congressional Committees and Federal agencies, nutrition projects, information and referral centers, senior centers, national associations and societies and research centers. Questions regarding specific information needs and potential Clearinghouse services were posed to each respondent.

  The second survey determined the location of current collections and sources of information about older persons. This would insure that the Clearinghouse would make maximum use of existing sources and not duplicate them.

- Evaluation of State Agencies on Aging

  This study discovered that while State Agencies on Aging are performing most of their required functions, their effectiveness would be increased if the role were mandated by State legislation.

- Development of a manual and course curriculum on objective setting and monitoring

  These assistance materials were developed for use of the aging network to provide the basis for both training programs and self-study in the area of planning. Many States and areas are using these materials.

- Social statistics system for the elderly

  The Census Use Study Group of the Bureau of the Census developed a social statistics system for use by State Agencies on Aging. The system can utilize existing data from various sources, organize the data and allow analysis of the data in order to determine the status and needs of the elderly.

- Operational tools for nutrition projects

  This project produced serveral tools which may be used by nutrition project directors including a combined guide for a site assessment and preparation for State assessments, a former participant questionnaire, a food service contract monitoring tool, and a community food preparation costs comparison tool.

AoA Goal II: Federal Capacity (Comprehensive, Coordinated Services)

Goal Statement

Increase the Federal capacity to develop and implement Federal-level interdepartmental and interagency agreements designed to help State and Area Agencies on Aging stimulate the development, at the community level, of comprehensive, coordinated services for older persons through more effective use of all existing resources.

Desired Goal Outcomes

Increased awareness of the needs of older persons and identification of resources that could be used to assist them at the Federal level in order to stimulate greater utilization and coordination of resources for development and maintenance of comprehensive and coordinated services for older persons at the State and local level.

The specific areas are:

- Health
- Housing
- Employment/Retirement
- Nutrition
- Transportation
- Social Services

ACCOMPLISHMENTS

To implement this basic strategy, AoA has pursued the following approach:

1) Negotiate signed, working agreements with Federal Agencies. These agreements serve to focus the attention of the Federal agency on the service and other needs of the elderly. These agreements call for specific action items designed to bring into play the leadership and technical assistance roles a Federal agency can assume with respect to its State and local counterparts, thereby focussing their attention on the field of aging. Some of the areas typically covered by Federal agreements include:

   - general descriptions of the programs and resources of the agencies entering into agreements, including a description of the kind of coordination that is possible;

- agreement to establish a mechanism for identification and resolution of policy and administrative barriers to coordinated planning, development and provision of services to older persons;

- commitments to prepare joint policy issuances and technical assistance material;

- commitments to jointly provide technical assistance and consultation to State and Regional office staff;

- exchange of relevant research and demonstration and evaluation findings;

- presentation of actions that could be undertaken to achieve coordination.

The Administration on Aging had negotiated and signed twenty formal working agreements with other Federal Departments and agencies by the end of FY 1976. A brief summary of some of these follows. See List of Working Agreements Negotiated by the Administration on Aging. (Next page)

HEALTH

The Administration on Aging is working with the Public Health Service and with the Medical Services Administration --- the two Federal agencies that control health care resources --- to ensure that available health resources are directed toward meeting the needs of older persons, and that development and implementation of programs is coordinated to the maximum extent possible.

Progress has been made in coordinating the resources available under the Public Health Service for long term (institutional and non-institutional) care and home health care. (These areas were made the priority areas for coordination because of AoA's emphasis on maintaining older persons in their own homes as long as possible and because of the Congressional investigations of nursing homes that highlighted the need for immediate Federal actions and intervention in this area.) The Administration on Aging participates on an intra-agency advisory group on long term care. Regional Offices have formed aging councils that are comprised of representatives of health and health-related programs and aging programs.

These councils have assessed how to better coordinate health and health-related activities, have identified barriers to coordination in the area of long term care, and have provided technical assistance to the States through a "task force" approach.

LIST OF WORKING AGREEMENTS NEGOTIATED
BY THE ADMINISTRATION ON AGING

Affirmative action (Civil Service Commission)

Community action programs (Community Services Administration

Community Development (Department of Housing and Urban Development)

Crime and victimization (Law Enforcement Assistance Administration)

Disaster assistance (Federal Disaster Assistance Administration/HUD)

Energy Conservation/Home Winterization (Federal Energy Administration, Community Services Administration -- OEO, Department of Agriculture, Department of Labor, Department of Housing and Urban Development, ACTION, Public Services Administration)

Health Services (Public Health Service)

Information and Referral (a. Social Security Administration and the Social and Rehabilitation Service)

(b. Federal Interagency Task Force on Information and Referral)

Medicaid (Medical Services Administration)

Native Americans (Office of Native American Programs, Indian Health Service, Office of Indian Education, Public Services Administration, Department of Transportation)

Nutrition Sites in Public Housing (Department of Housing and Urban Development)

Rehabilitation Services (Rehabilitation Services Administration)

Research (Federal Interagency Task Force on Research)

School Lunch/Community Education (Office of Education)

Social Services -- Title XX (Public Services Administration)

Social Services in Public Housing (Department of Housing and Urban Development)

Transportation (Department of Transportation)

Use of school buses (Department of Transportation and Office of Education)

Volunteer programs (ACTION)

AoA staff are participating on the Interagency Task Force on Home Health Services, which will prepare technical assistance materials for distribution to agencies at the State and local levels. In addition, the Administration on Aging has discussed joint activities with the National Institute for Mental Health, and with the National Institute on Aging. These discussions are to be the basis for agree ments in the areas of mental health and biomedical research on aging.

HOUSING/ENVIRONMENT

The Administration on Aging has begun to coordinate its resources with those of the Department of Agriculture Extension Service and Farmers Home Administration, Department of Housing and Urban Development, Department of Labor, ACTION, the Federal Energy Administration, and the Community Services Administration to weatherize and otherwise repair and upgrade the homes of low-income and older persons. The program was originally begun as an effort to "winterize" homes to lessen the impact of fuel shortages on the elderly. ACTION volunteers and persons employed under the CETA and Title IX public services employment programs have provided the labor to make repairs and insulate homes across the Nation, and have learned carpentry and other skills and received income in the process. State and Area Agencies on Aging locate older persons who need this service. Other agencies provide funding for the cost of supplies.

About half the States now operate such programs. It is estimated that over 60% of all homes repaired or weatherized under this program were homes of older persons.

The Administration on Aging has taken steps to ensure that consider- ation is given to the needs of older persons in determining how Title I Community Development Block Grant funds will be used. A Memorandum of Understanding was developed between HUD and the Administration on Aging providing for collaboration between the Area Agencies on Aging and Community Development program sponsors to ensure that funds under the HUD program were used for support of services that would benefit older persons, such as: acquisition, construction, reconstruction, or installation of neighborhood facilities, senior centers, parks, walkways, and recreational facilities; the removal of architectural barriers in public and private buildings and access areas; services supportive of other Community Development activities. Technical assistance material on the possible uses of the Community Development Block Grant program was transmitted to the State and Area Agencies on Aging.

In an effort to facilitate coordination between the Administration on Aging (AoA) Title III and Title VII program and the Department of Housing and and Urban Development (HUD) Section 202 and Section 8

programs, AoA and HUD signed a joint working agreement in July of 1976. The agreement, which has been disseminated to the respective networks of HUD and AoA, focuses on strengthening the linkage of services provided under Titles III and VII of the Older Americans Act with facilities assisted under HUD's Sections 202/8 programs.

Another attempt to improve environments in which older persons find themselves is being made through the development of an interagency agreement with the Law Enforcement Assistance Administration. This agreement is to encourage cooperation between State Agencies on Aging and Law Enforcement State Planning agencies in developing programs intended to reduce the extent of victimization of older persons and to increase public awareness of and citizen involvement in efforts to reduce circumstances of crime against older persons. It has been transmitted to the State Agencies on Aging and their State law enforcement counterparts.

EMPLOYMENT/RETIREMENT

The Administration on Aging has attempted to influence allocation of resources for public employment under the CETA program, through provision of technical assistance to State and Area Agencies on Aging. They have been informed about the process for obtaining funding under CETA, and for influencing priority-setting relative to population groups to whom jobs will be targeted.

In addition, staff of the Administration on Aging and the Department of Labor have worked together on program issues regarding the Title IX Senior Community Services Employment Program --- a categorical jobs program for low-income older persons (55 and over) --- and on development of program materials for transmittal to State Agencies on Aging and to CETA manpower prime sponsors and national contractors under the Title IX program. More extensive coordination of Title IX program activities will now take place as a result of recently passed amendments to the Older Americans Act.

NUTRITION

The Administration on Aging has also negotiated agreements with both HUD and the Office of Education to promote the development of congregate meal sites in public housing for the elderly and handicapped, and in existing school facilities. The Department of HUD has agreed to encourage both the use of space in current housing, and the design of space for nutrition programs as part of any new construction of elderly and handicapped housing. The Office of Education has also encouraged public school boards to establish nutrition sites in public school facilities. AoA staff have met with State representatives regarding utilization of these facilities for nutrition programs, and a number of sites are now located in public schools.

In addition, ACTION has provided volunteers for assistance at congregate meal sites. They help with serving and preparation of meals as well

as providing social services and assistance to older participants at the congregate site.

Finally, the Social Services program supported under Title XX of the Social Security Act can be a resource for the support of congregate meals, or for the provision of social services at Title VII sites. Joint efforts between the State and Area Agencies on Aging and the Title XX State and local counterparts to support expanded nutrition programs or provision of social services at nutrition sites have been encouraged at the Federal level, by AoA and PSA, SRS. Many States have used Title XX funds to support expansion of Title VII programs. This has been difficult because of different income and reporting requirements of Title XX and Title VII. Additional efforts will be necessary to resolve the policy and administrative barriers that these different requirements pose.

TRANSPORTATION

As part of a broader joint working agreement, AoA and DoT have agreed to support joint research, demonstration and technical assistance activities to promote efficient and effective provision of transportation services to older persons. A first step in this coordination was taken with the joint AoA/DoT planning, development and conduct of bi-Regional conferences on transportation for the elderly and handicapped. These Conferences were held in the early fall of 1976. More than 200 persons attended each of these Conferences. Participants consisted of local social service providers, local transit planners and State aging and transportation personnel.

AoA will participate in an OHD-directed and DoT-assisted coordinated transportation initiative which has as its goal the development, demonstration, and evaluation of coordinated or consolidated transportation systems to serve Office of Human Development target populations. During Fiscal Years 1976 and 1977, up to five sites will be selected for demonstrations of such coordinated systems, the sites being in areas where there are existing transportation services supported under Office of Human Development programs (e.g., The Older Americans Act, The Rehabilitation Act, Head Start, Office of Rural Development, Office of Native American Programs, Developmental Disabilities Act) but operating in a non-coordinated fashion.

State and Area Agencies on Aging have been encouraged to develop agreements at the State and local levels with State Departments of Transportation or Highways, local transit authorities and other State or local service agencies concerned with meeting the transportation needs of older persons. Currently 25 agreements exist betwee State Agencies on Aging and State Departments of Transportation.

State Agencies on Aging are encouraged to work closely with the Area Agencies on Aging to assist them in developing local-level transportation agreements with other social service agencies,

local transit authorities and with private para-transit operators (e.g. taxis) in the planning, pooling and coordination of aging-related transportation services. Working together, in cooperation with these various agencies and organizations, Area Agencies on Aging can take advantage of the opportunity to assist in the development of applications for funds and transit development programs that will provide the elderly and the handicapped with effective, coordinated transportation systems that meet their special needs.

Many States and local areas currently operate diverse transportation projects ranging from the relatively inexpensive, informal use of volunteer drivers in small towns and rural areas to the use of sophisticated demand-responsive or regularly scheduled transit vehicles, often designed to meet their patrons' special needs.

Free or reduced fares on public transportation vehicles are enabling the elderly in many parts of the country to travel during mid-day, night, and weekend hours. Many areas which permit older people to ride free during off-peak transit hours also offer reduced (but not free) fares during rush hours.

In November 1976 AoA submitted a report to Congress entitled Transportation for Older Americans - 1976 - Progress, Prospects, and Potential which updated a 1975 report and provides information on pooling and coordination of transportation programs.

SOCIAL SERVICES

ACTION

On November 1 under the Older Americans Act and the Domestic Volunteer Service Act of 1973, AoA and ACTION developed a joint working agreement. This called for the establishment of at least one ACTION program in each aging planning and service area and the placement of older volunteers in the Title III and Title VII aging programs. These volunteers contribute significantly to the capacity of the area agencies and nutrition projects in providing better services to older persons with emphasis on the homebound and the handicapped. These services include information and referral, escort, home visiting, outreach, and telephone reassurance. Although the agreement focused on the ACTION Retired Senior Volunteer program the Foster Grandparent Program, and the Senior Companion program, many of the State aging agencies and ACTION's State offices have developed activities which also involve the ACTION Co-operative Volunteer program and the VISTA program.

Under the agreement ACTION designates an "aging resource specialist" in each of its State Offices. The primary responsibility of the specialist is to support programs carried out under Title II of the Domestic Volunteer Service Act and to coordinate those programs with the Title III and Title VII programs of the Older Americans Act.

The "aging resource specialists" were trained in 1975 and the list of these specialists was transmitted to the State Agencies on Aging and the local aging network in March 1976. As a result of the coordinated activities between Older Americans Act programs and ACTION programs more and better services can be provided to older persons.

Title XX

The joint working agreement between AoA and the Public Services Administration, SRS, negotiated during FY'76 established a basis for a cooperative relationship and coordinated activities between Title III and Title VII Older Americans Act programs and the Title XX social services program. Under this agreement AoA and PSA have designated staff members to work together for the joint resolution of policy and administrative barriers to coordinated planning and integrated provision of services to older persons. To strengthen State level coordination, AoA required that each State Agency on Aging have a formal written agreement with the State agency administering Title XX as a condition for the approval of its FY'77 State Plan. All States met this requirement.

AoA Goal III: Federal Capacity (Title I, National Objectives)

Goal III Statement

Increase the Federal capacity to contribute to the realization of the National Objectives set forth in Title I of the Older Americans Act, as amended.

C. Desired Outcome of Goal III

The desired outcome of Goal III is the development, dissemination and utilization of knowledge which will impact on the formulation and implementation of Federal policies which will lead to realization of the national objectives for older persons (as defined in Title I of the Older Americans Act).

ACCOMPLISHMENTS

Toward the accomplishment of this goal, the Adminstration on Aging was engaged in the significant information development activities during FY 1976: (1) identification of policy issues related to the Title I objectives; (2) identification of research issues related to the Title I objectives; and (3) technical support to the Federal Council on Aging in its activities related to the Title I objectives.

1) Policy Issue Identification

AoA awarded four grants in FY 1976 for the purpose of performing intensive exploration of each of the substantive policy areas

of income, housing, employment, and community services. The first phase of this exploration will focus on a comprehensive identification of issues associated with each of the policy areas as they relate to older persons which need to be addressed in order to achieve the national objective in that area. In the area of income, for example, one of the policy issues identified might be: What should be Federal role in assuring an adequate income for older persons?

2) Research Issue Identification

The second phase of the grants will focus on identifying and explicating policy research and disciplinary research issues associated with each of the four policy areas. The findings of these studies will form a basis upon which to develop a research program designed to answer policy-related research questions that need to be answered in order to progress toward achievement of those Title I objectives related to the four policy areas.

3) Support to Federal Council on Aging

During FY 1976 the Administration on Aging provided technical support to the Federal Council on Aging in the development of three major reports which the Council submitted to the White House and to Congress:

- The Impact of the Tax Structure on the Elderly,
- The Interrelationships of Benefit Programs for the Elderly, and
- A Bicentennial Charter for Older Americans.

These reports provide information which further clarifies issues related to some of the Title I objectives.

Federal Coordination Activities

Besides the negotiation and implementation of interagency agreements discussed under Goal II in the previous section, the Administration on Aging was engaged in other Federal coordination activities during FY 1976. These activities are discussed below.

Federal Regional Councils - The Federal Regional Councils (FRCs) have established committees on aging in order to support the Federal government's Aging program of developing State and local programs for the elderly. The committees which are made up of the Regional Directors of several Departments seek to coordinate interdepartmental planning and program development with the view of identifying obstacles and assisting State and local officials to improve program delivery to the elderly. Some of

the committees also include voluntary organizations such as the American Red Cross, the American Association of Retired Persons and others. Examples of objectives which the FRCs are focusing on include the following:

(a) providing retirement planning for Federal employees;

(b) working with State Agencies on Aging and Area Agencies on Aging in the development, modification and implementation of Interdepartmental Agreements promulgated by the Administration on Aging;

(c) preparing and updating directories of Federal programs that impact the elderly;

(d) conducting public forums on the impact of the energy crises on the low income elderly;

(e) establishing coordinating mechanisms to assist in solving problems created by State boundaries intersecting municipalities which are adjacent to each other; and

(f) working with Indian Tribes on problems of program coordination involving Federal and State resources.

Federal Executive Boards - The Federal Executive Boards are organized in 26 major metropolitan areas, of which Houston, Texas is the latest. Membership is made up of the highest ranking Federal Officials in each city, and through the leadership of the Office of the President, program efforts are designed by the Office of Management and Budget and Lead Agencies to upgrade departmental management practices and provide a vehicle for the involvement of the Federal family and the community. Most recently the FEBs have been involved in assisting the local area agencies on aging establish adequate Information and Referral sources for the elderly. In addition, program efforts have been directed toward making the Federal agencies themselves more responsive to calls from the elderly.

Programs have been designed to address the fuel and energy problems of the elderly both as to fuel costs and home heating efficiency. Visits have been made to residential centers where the elderly live to listen to their problems. Public relations programs have been initiated to publicize the number of the local Information and Referral Office. Federal Executive Associations have been invited to share in the Information and Referral program. Various Directories of service resources for the elderly have been updated and distributed. The plight of the single older woman in the city has been addressed through a conference involving top Federal Officials and leaders from the private sector. Local elderly leaders have been recognized by the FEB for outstanding service to their peers. Efforts have been made to unify I&R number to avoid confusion and offer more efficient services to the elderly.

The FEBs are currently working on their FY 77 plan, and they are continuing to program efforts in the area of security problems of the elderly and community relation problems for residents in nursing homes.

Task Force on Research - The Task Force on Research in Aging has been engaged in a joint effort to develop ways of effectively coordinating Federal research and related activities which concern the older population.

Interdepartmental Task Force on Information and Referral - In FY'75, AoA working with the Interdepartmental Task Force negotiated a joint working agreement among 15 departments and agencies having responsibility in the I&R field and an intradepartmental agreement between the Social Security Administration, the Social and Rehabilitation Service, and the Administration on Aging. The Administration on Aging has continued its efforts in this endeavor.

The I&R Task Force works under the aegis of the interdepartmental working group on aging created by the Committee on Aging of the Domestic Council. The objectives of the I&R agreements are: (1) to extend and coordinate efforts of participating departments and agencies in information and referrral; and (2) to encourage their counterparts in States and communities to cooperate in making information and referral services immediately available to older people.

The Task Force is currently engaged in assessing Federal activity as identified in the I&R Interdepartmental Agreement; and elements and criteria for establishing suggested minimum standards for I&R services. Regions, States and area levels have been charged with improvement and expansion of their efforts in support of the I&R agreements. Federal Regional Councils and Federal Executive Boards continue to provide supportive assistance.

Interdepartmental Task Force on Statistics - An Interdepartmental Task Force on Statistics has been formed with a membership of 19 Federal agencies. The major objective of this Task Force is to determine what gaps in the statistics on the elderly exist. The objective of the Task Force is to construct an interagency agreement which will bring about better cooperation and coordination of information between agencies. In addition, AoA will be able to tap into the data resources of member agencies and thus develop and produce special tabulations as well as obtain selected data on the elderly not now available.

The members' first task was to prepare an inventory of data collection programs within their agencies. This information will assist those working in the field of aging concerning knowledge regarding efforts within the Federal government focused on statistical information about the elderly.

Other Agreement Activities - The interagency agreement activities referred to in the discussion relative to Goal II also, of course, have contributed to the achievement of this goal.

Special Projects

During FY 1976, the Administration on Aging carried out a number of important projects and activities in behalf of older persons which cannot be assigned to any specific program nor related to any of the three long range goals. Examples of such projects and activities are presented below.

AoA Role in Disaster Planning

Continuing to build on previous experiences in the area of disaster planning and follow-up, the Administration on Aging was able to make significant progress toward enhancing the capacity of the National Network on Aging to respond to needs of elderly disaster victims.

In May, 1976, a Conference on Natural Disasters and the Aged was hosted by the Eastern Nebraska Office of Aging and the University of Nebraska, Omaha, through a Model Project Grant from the Administration on Aging. From experiences gained during activities following the tornado that struck Omaha the previous year, a document setting forth the role of an Area Agency on Aging in disasters was produced and shared with conference participants. Participants, representing the AoA Central and Regional Offices, State Agencies on Aging, area agencies on aging and Title VII nutrition project agencies, had an opportunity to respond to the document and recommend revisions based on their personal experiences. The document was revised and distributed to the State and area agencies on aging. Following a subsequent printing, copies will be sent to the Title VII nutrition project agencies.

In conjunction with the Disaster Planning document, the Administration on Aging entered into a Memorandum of Understanding with the Federal Disaster Assistance Administration. The Memorandum sets forth the role of both the network on aging and the FDAA when a presidential declaration is made following a natural disaster. The role of the network on aging will be to identify those elderly persons affected by the disaster, determine their needs, identify resources to meet those needs, and where gaps exist arrange for services to meet those needs. The Federal Disaster Assistance Administration has agreed to reimburse the network on aging for services provided when AoA resources are exhausted.

In addition to the distribution of the Disaster Planning document and the Memorandum of Understanding, the Administration on Aging assembled an assistance package which detailed the role of the National Network on Aging and identified both public and private disaster assistance resources that may be available in time of a disaster.

The Administration on Aging has continued to respond to individual disasters by working with the State and area agencies on aging in time of a disaster. AoA staff was on the scene in Idaho following the Teton Dam disaster. Assistance in organizing the efforts to assist elderly disaster victims was provided to the area agency on aging in Idaho Falls and to the State agency on aging in Boise. A Model Project grant was awarded to the area agency to provide outreach and other services as identified.

AoA Central and Regional Office staff also responded to other disasters, including the flood in the Imperial Valley, California, the Big Thompson Canyon flood in Colorado, the after-effects of the hurricane that swept across Long Island, New York, tornadoes that struck suburban Chicago, and other disasters in Utica, New York and Harrisburg, Pennsylvania.

AoA staff also participated in a conference of National Voluntary Organizations Involved in Disaster Assistance, held in San Francisco. The purpose of the conference was to identify the role of the various organizations involved in disaster relief work, and to determine how the network on aging can link up with the voluntary network.

The White House Conference on Handicapped Individuals

As the White House Conference on Handicapped Individuals began during the summer of 1976, the Field Liaison Staff began collecting information on the conference. An information memorandum was signed by the Commissioner which gave background on the conference and provided information on the conference leadership by State so that State Agencies on Aging could work with the State Conference Directors in the involvement of older persons in the sections on "Unique Problems of the Handicapped Aged".

This memorandum to State Agencies referred to the sections of the 1971 White House Conference on Aging which related to disability among older persons. The State Agencies were also reminded of the joint working agreement between the Administration on Aging and the Rehabilitation Services Agreement and the potential it represented for improving the lives of handicapped older persons.

Earlier in the year, the members of the Administration on Aging staff, who had been members of the staff of the White House Conference on Aging in 1971, provided considerable assistance to the Office of Human Development in preliminary plans for the White House Conference on Handicapped Individuals and later worked with staff when they were assigned by OHD to the Conference on Handicapped Individuals.

Physical Fitness for the Elderly

Early in the calendar year 1975, at the request of the Commissioner, Field Liaison Staff began meeting with staff of the President's Council on Physical Fitness and Sports to follow up on a joint program initiated in 1968. The earlier program had been the production of a published exercise program for older Americans offered to the public, but not related to any group activities. The follow-up was concerned with development of an organized program.

As the result of a series of meetings, it was decided that sufficient research into physical activities for older pesons had been carried out earlier with favorable results; that the recently developed National Network on Aging might be interested in an organized program; and, that the health, physical education and recreation network could serve as the training vehicle for professionals in the aging program. Subsequently, the National Association for Human Development, a non-profit organization which had worked with the President's Council on Physical Fitness and Sports on other programs, was funded for a pilot project.

In April, 1975, the Subcommittee on Aging, Senate Committee on Labor and Public Welfare, held a series of hearings on the Older Americans Act. One of the hearings included a panel on physical fitness and the elderly. As the result of that hearing at which medical authorities and researchers offered expert testimony, the definition of social services was broadened. The Older Americans Act amendments of 1975 added subparagraph G to incorporate under social services (sec. 103) "services designed to enable older persons to attain and maintain physical and mental well being through programs of regular physical activity and exercise".

Staff worked closely with the President's Council on Physical Fitness and Sports and the National Association for Human Development (NAHD) in the location of and planning for the three demonstrations, funded by AoA. The pilot project was launched in Toledo, Ohio on October 9, 1976 with the full cooperation of the Ohio Commission on Aging, the Community Planning Council of Northwestern Ohio and the University of Toledo. The 212 participants represented the two cooperating networks - aging, and health, physical education and recreation. A similar demonstration was held in Newark, Delaware for the Delaware/Maryland project, and a third was held in Dallas, Texas for the demonstration in Texas.

Succes .. the demonstration programs and widespread interest generated by reports from them, led to further funding by AoA on a national basis. The first workshop, for Regions II and III, was held in Philadelphia on October 7-8, 1976. The second, for Regions VI and IX, was held in San Diego on November 11 and 12. In addition to the representation from the President's Council, the NAHD, AoA and the two networks, the pilot project leaders from Ohio, Delaware, Maryland, and Texas participated. Similar Regional workshops are planned to cover the balance of the country. In addition, numerous local groups have picked up the idea, secured technical assistance materials published by NADH and initiated physical fitness programs for "the active people over 60".

Influenza Immunization Program

In May, 1976, at the request of the Commissioner, the Field Liaison Staff developed a plan for the participation of the national network on aging to assist the Public Health Service in the National Influenza Immunization Program. Following clearance of the plan by the special influenza office of the Assistant Secretary for Health and the Center for Disease Control, a program instruction memorandum was issued to the national network on aging by the Commissioner.

The objectives set for the aging network were: to alert the older population to the importance of being immunized and to urge their participation; to cooperate with the health network in planning for the involvement of as many older persons as possible in the immunization program; to utilize the facilities of the National Network on Aging in making it possible for large numbers of older persons to participate in the immunization program. In addition meetings were held with the several national organizations of older persons to gain their support in their publications and among their memberships. The American Association of Homes for the Aging and the American Health Care Association were urged to advise their members of the effort to provide the opportunity for older persons to be immunized. ACTION, Community Services Administration, and HUD were also requested to ask the cooperation of their local programs. The Office of Management and Budget also notified the Federal Regional Councils and Federal Executive Boards to ask assistance of the task forces on aging and their member agencies.

Reports from State Agencies on Aging indicate close cooperation with their health counterparts in arrangements for immunization clinics, group immunization in homes, senior centers and nutrition projects, provision of older Americans transportation to clinics, and media support. (Apparently, the only problems in the program were caused by temporary shortages of vaccine, media scare stories, and initial delays, all of which were overcome as far as could be determined at this time.)

Mary E. Switzer Memorial Seminar

"The Older Blind" was chosen as the topic for the second Mary E. Switzer Memorial Seminar and the Commissioner assigned the responsibility for working with the planning committee to the Field Liaison Staff. The Seminar will be held in New York early in 1978. Staff participated in the planning sessions and continued to provide assistance to the Seminar director, both in terms of subject matter and potential participants.

Arts and the Elderly

During the past few years a growing awareness has developed within both the arts and aging communities that each has much to offer the other with the alternate benefit being a more independent and richer life for older persons. The Administration on Aging has held discussions with the National Endowment for the Arts on ways of jointly encouraging interaction between the arts and older persons. Two significant reports on art and aging have recently been completed by AoA grantees and their distribution has been included in the plans that are being developed for cooperative effort with the National Endowment for the Arts. Artists and the Aging: A Project Handbook describes the two year program sponsored by the St. Paul Community Programs in Art and Sciences. The report is a practical resource guide to arts and aging administrators who are sponsoring or developing art programs for older Americans. Older Americans: The Unrealized Audience for the Arts is a Unversity of Wisconsin study of the preceptions and concerns of practicing arts administrators of older persons as a current and potential audience for the arts.

APPENDIX I-A

Title III - Funding Distributions to State and Area Agencies

		Planning and Service Areas	Area Agencies on Aging	Area Plng. & Soc. Serv. Progs.	St. Plng. Co-ord, Eval. & Admin.
	TOTALS	596	509	93,000,000	17,035,000
1	Alabama	13	9	1,476,043	230,808
2	Alaska	1	1	465,000	200,000
3	Arizona	6	6	854,553	200,000
4	Arkansas	8	8	1,032,935	200,000
5	California	23	16	8,028,222	1,255,378
6	Colorado	9	9	833,888	201,991
7	Connecticut	5	5	1,278,234	201,991
8	Delaware	1	1	465,000	192,000
9	District of Columbia	1	1	509,272	200,000
10	Florida	11	11	4,781,577	740,325
11	Georgia	18	7	1,700,891	265,968
12	Hawaii	4	4	465,093	200,000
13	Idaho	6	6	512,747	201,991
14	Illinois	13	13	4,586,298	710,090
15	Indiana	18	16	2,087,754	326,463
16	Iowa	11	11	1,383,775	214,248
17	Kansas	10	10	1,083,362	201,991
18	Kentucky	15	15	1,442,425	193,329
19	Louisiana	8	5	1,368,973	214,066
20	Maine	5	5	611,531	200,000
21	Maryland	9	6	1,386,003	216,729
22	Massachusetts	10	9	2,612,245	404,450
23	Michigan	13	13	3,249,351	503,092
24	Minnesota	13	6	1,671,163	258,744
25	Mississippi	10	10	972,631	201,991
26	Missouri	9	9	2,296,482	355,561
27	Montana	7	7	507,783	201,991
28	Nebraska	15	6	759,458	200,000
29	Nevada	1	1	465,000	201,991
30	New Hampshire	1	1	529,128	201,991
31	New Jersey	21	21	3,079,617	476,813
32	New Mexico	8	6	530,618	200,000
33	New York	57	54	8,093,970	1,253,053
34	North Carolina	17	12	1,960,409	278,527
35	North Dakota	1	1	501,330	200,000
36	Ohio	14	14	4,219,232	659,765
37	Oklahoma	11	5	1,286,378	201,991
38	Oregon	15	12	1,011,298	200,000
39	Pennsylvania	41	41	5,471,028	847,072
40	Rhode Island	1	1	589,689	200,000
41	South Carolina	10	6	920,391	201,991
42	South Dakota	1	1	527,639	201,991
43	Tennessee	9	9	1,727,594	267,481
44	Texas	26	18	4,520,839	699,955
45	Utah	13	13*	537,071	200,000
46	Vermont	7	7	465,000	200,000
47	Virginia	21	21	1,703,446	266,369
48	Washington	15	8	1,407,755	220,134
49	West Virginia	9	7	837,505	201,991
50	Wisconsin	9	9	1,986,882	310,688
51	Wyoming	2	2	465,000	200,000
52	American Samoa	1	1	232,500	62,500
53	Guam	1	1	232,500	62,500
54	Puerto Rico	10	10	810,492	200,000
55	Trust Territory	1	1	232,500	62,500
56	Virgin Islands	1	1	232,500	62,500

*This figure represents the documented count at submission of State plans early in FY'76.

APPENDIX I-B

Nutrition Projects Allotment FY 1976

		# of * Nutrition Projects	T. VII Funds Allotted in FY'76
	TOTALS	809	123,750,000
1	Alabama	9	1,980,864
2	Alaska	3	618,750
3	Arizona	11	1,146,818
4	Arkansas	8	1,386,209
5	California	50	10,773,954
6	Colorado	9	1,119,086
7	Connecticut	11	1,715,403
8	Delaware	4	618,750
9	District of Columbia	5	618,750
10	Florida	24	6,416,924
11	Georgia	12	2,282,612
12	Hawaii	4	618,750
13	Idaho	10	618,750
14	Illinois	43	6,154,857
15	Indiana	18	2,801,786
16	Iowa	11	1,857,039
17	Kansas	11	1,453,882
18	Kentucky	15	1,935,749
19	Louisiana	16	1,837,175
20	Maine	5	643,426
21	Maryland	13	1,860,030
22	Massachusetts	21	3,505,659
23	Michigan	38	4,360,661
24	Minnesota	18	2,242,718
25	Mississippi	10	1,305,280
26	Missouri	9	3,081,902
27	Montana	7	618,750
28	Nebraska	9	982,482
29	Nevada	12	618,750
30	New Hampshire	10	618,750
31	New Jersey	26	4,132,876
32	New Mexico	6	618,750
33	New York	54	10,861,101
34	North Carolina	29	2,630,888
35	North Dakota	14	618,750
36	Ohio	21	5,662,251
37	Oklahoma	9	1,726,332
38	Oregon	8	1,357,172
39	Pennsylvania	41	7,342,174
40	Rhode Island	6	618,750
41	South Carolina	10	1,235,174
42	South Dakota	10	618,750
43	Tennessee	9	2,318,448
44	Texas	24	6,067,011
45	Utah	--	618,750
46	Vermont	7	618,750
47	Virginia	21	2,286,042
48	Washington	19	1,889,221
49	West Virginia	14	1,123,940
50	Wisconsin	20	2,666,416
51	Wyoming	7	618,750
52	American Samoa	-0-	309,375
53	Guam	1	309,375
54	Puerto Rico	22	1,087,688
55	Trust Territory	4	309,375
56	Virgin Islands	1	309,375

* represents count documented in early FY'76

FY 1976

CONTRACT AWARDS

EVALUATION

TITLE II, SECTION 207, OLDER AMERICANS ACT, AS AMENDED

STATE	CONTRACTOR	PROJECT TITLE	AMOUNT
District of Columbia	Mark Battle Associates	Evaluation of Information and Referral Services	113,111
	National Institute of Advanced Studies	Evaluation of Interagency Agreement	142,719
Maryland	Westat, Inc.	Evaluation of the Area Planning and Social Services Program (Title III)	543,083
	Ecomosometrics, Inc.	Evaluation of the Area Planning and Social Services Program (Title III)	Subcontractor
Minnesota	Robert Walker Associates	Evaluation of the Area Planning and Social Services Program	Subcontractor
New Jersey	Opinion Research Corporation (Joint Contractor)	Longitudinal Evaluation of the Nutrition Program for the Elderly	461,603
New Mexico	Kirschner Associates, Corporation (Joint Contractor)	Longitudinal Evaluation of the Nutrition Program for the Elderly	213,553
Pennsylvania	Camil Associates, Inc.	Evaluation of the Title IV-A Career Training Program in Aging	144,493

FY 1976
GRANT AWARDS
MODEL PROJECT ON AGING
TITLE III, SECTION 308, OLDER AMERICANS ACT OF 1965, AS AMENDED

Housing and Living Arrangements

STATE	GRANTEE	PROJECT TITLE	AMOUNT
District of Columbia	American Association of Homes for the Aging	Financing Plans - Facilities for the Aging	45,442
	International Center for Social Gerontology	International Information Clearinghouse - Housing and Environments	51,830
	National Center for Housing Management	Training of Managers for Housing of the Elderly	151,918
Florida	United Home Care Service, Inc.	Share-A-Home	66,496
Indiana	Community Action Program	Project SMILE	59,300
Michigan	Meridian Charter Township Department of Development Control	Housing Rehabilitation and Repair Assistance for Low-Income Senior Citizens	9,950
New Hampshire	New England Non-Profit Housing Development Corporation	Housing Alternatives for Senior Citizens in New England	48,000

Continuing Education

STATE	GRANTEE	PROJECT TITLE	AMOUNT
California	California State Department of Education	Curriculm Development on the Concept of Aging for Elementary and Secondary Education	25,811
Michigan	Oakland University Continuum Center for Adult Counseling and Leadership Training	Peer Group Counseling for Older People	72,662
Minnesota	College of St. Thomas	Minnesota Consortium Educational Services in Retirement for the Elderly	197,288
New Hampshire	University of New Hampshire New England Gerontology Center	Elderhostel '76: A New England Network of Educational Hostels	20,000
New York	Rockland Community College Department of Human Services	Project M.I.S.S.L.E. - Mission in Strengthening Senior Life Education	50,000
Utah	Weber State College Division of Continuing Education and Department of Political Science	Legislative Process Training for Senior Citizens	4,190

Retirement Preparation and Adjustment

STATE	GRANTEE	PROJECT TITLE	AMOUNT
District of Columbia	American Society for Public Administration	Semi-Retired Public Administrators Service	21,169
	Center for Community Change	Clearinghouse on Employment for Aging	75,180
	Foundation for Applied Research (F.A.R.)	The Impact of Job Opportunities for the Older Worker	148,347
	National Retired Teachers Association/American Association of Retired Persons	Senior Environmental Employment Program	200,000
Michigan	Regents of the University of Michigan Institute of Gerontology	DHEW Region V Pre-Retirement Education Leadership Training Program	125,615
North Carolina	Duke University Medical Center for the Study of Aging and Human Development	Retirement Planning and Counseling Program	52,367
Pennsylvania	The Pennsylvania State University Institute for Research on Human Resources	New Roles for the Elderly: Their Integration and Effectiveness in Day Care Centers	119,611
Texas	North Texas State University School of Community Service Center for Studies in Aging	Community Preretirement Education Training Institute	25,137

Needs of Physically and Mentally Impaired

STATE	GRANTEE	PROJECT TITLE	AMOUNT
Illinois	Chicago Hearing Society	Description and Evaluation of a Cooperative Geriatric Hearing Hearing Conservation and Rehabilitation Program	7,651
Kentucky	University of Louisville Kent School of Social Work	Model Demonstration Project for Mini Home Operators	70,200
Michigan	Madonna College	A Model Competency - Based Program Providing Volunteer Personal Assistance to the Aged in Public or Private Centers or Institutions	31,712
New York	New York City Department for the Aging	Community - Based Program for the Mentally Frail Elderly	60,122
	Center for Independent Living New York Infirmary	Development of a Series of Instructional Manuals and Self-Study Courses for Older Visually Impaired Adults	84,500
	Hospital Audiences, Inc.	Evaluation and Provision of Cultural Services to Physically and Mentally Impaired Aged in Long Term Care Facilities	118,783
	New York Infirmary Center for Independent Living	Social Rehabilitation Program for Geriatric Blind	150,000

OMBUDSMAN SERVICES FOR NURSING HOME RESIDENTS

	STATE	AMOUNT
1	Alabama	18,000
2	Alaska	18,000
3	Arizona	18,000
4	Arkansas	18,000
5	California	54,708
6	Colorado	18,000
7	Connecticut	18,000
8	Delaware	18,000
9	District of Columbia	18,000
10	Florida	30,608
11	Georgia	18,000
12	Hawaii	18,000
13	Idaho	18,000
14	Illinois	32,493
15	Indiana	18,000
16	Iowa	18,000
17	Kansas	18,000
18	Kentucky	18,000
19	Louisiana	18,000
20	Maine	18,000
21	Maryland	18,000
22	Massachusetts	18,835
23	Michigan	22,702
24	Minnesota	18,000
25	Mississippi	18,000
26	Missouri	18,000
27	Montana	18,000
28	Nebraska	18,000
29	Nevada	18,000
30	New Hampshire	18,000
31	New Jersey	21,385
32	New Mexico	18,000
33	New York	57,931
34	North Carolina	18,000
35	North Dakota	18,000
36	Ohio	29,574
37	Oklahoma	-
38	Oregon	18,000
39	Pennsylvania	38,188
40	Rhode Island	18,000
41	South Carolina	18,000
42	South Dakota	18,000
43	Tennessee	18,000
44	Texas	30,810
45	Utah	18,000
46	Vermont	18,000
47	Virginia	18,000
48	Washington	18,000
49	West Virginia	18,000
50	Wisconsin	48,000
51	Wyoming	18,000
52	American Samoa	-
53	Guam	-
54	Puerto Rico	-
55	Trust Territory	-
56	Virgin Islands	8,000

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STATISTICAL WORK SHEET

Improved Services to Under-Served Populations

STATE	GRANTEE	PROJECT TITLE	AMOUNT
Arizona	Gila River Indian Community Sacaton	Gila River Indian Community	28,602
	The Papago Council Sells	The Wise Ones	20,000
California	Asociacion Nacional Pro Personas Mayores	Personas Mayores	352,866
	Community Brokerage Systems, Inc.	Establishment of Community Services Cooperative System in Inner City and Rural Target Areas	122,170
	Mobile Mini-Market Food Advisory Service	Mobile Mini-Market	104,598
	Sacramento Concilio, Inc.	Bi-Lingual Response to the Needs of the Migrant Elderly	217,129
District of Columbia	National Caucus on the Black Aged, Inc.	National Center on the Black Aged	75,000
Nevada	Inter Tribal Council of Nevada, Inc.	Home Health Services for Nevada Indians	99,825
New Mexico	Gerontology Center, Institute for Applied Research Services, The University of New Mexico	A Project to Develop Test and Apply a Methodology for Designing and Implementing Tribal Operated Multi-Service Delivery Systems for Elderly Native Americans	119,498
New York	Community Services Society of New York	Dissemination of the Jamaica Model: Services for the Elderly	58,798
	Experimental and Bilingual Institute	EBI-Senior Citizens Education and Training Center	80,035

Improved Services to Under-Served Populations (cont.)

STATE	GRANTEE	PROJECT TITLE	AMOUNT
New York	National Urban League	Minority Aged Services Training Institute	173,659
Oklahoma	Cherokee Nation of Oklahoma Taklequah	Elderly Development Programs	96,390
Oregon	Mid-Willamette Valley Community	Indian Outreach Project	13,850
Texas	Texas Tech University	Model Rural Project for Homemaker Service Aide Program to the Elderly	148,842

Senior Ambulatory Care Day Centers

STATE	GRANTEE	PROJECT TITLE	AMOUNT
California	Chinatown-North Beach Health Care Planning and Development Corporation	On Lok Senior Health Services Model Project	400,365
New York	Lockport Senior Citizens	Elderly Day Care for the Moderately Impaired with a School of Nursing for the Severely Impaired in Multi-purpose Senior Center	30,250

Multiple Priorities

STATE	GRANTEE	PROJECT TITLE	AMOUNT
Arizona	Pima County Council on Aging	Pima County Areawide Model Projects on Aging	1,970
Arkansas	Pulaski County Council	County-Wide Comprehensive Multi-Purpose Center	200,000
California	Unversity of California San Francisco	Information Dissemination Model of Innovations in Aging	171,124
	Western Gerontological Society San Francisco	Organizational Development Program	59,074
Connecticut	State of Conneticut Department on Aging, Hartford	Information Systems Development as the Basis for a Statewide Model in Planning Advocacy Resource Development and Resource Allocation for Institutions Serving the Elderly	141,625
District of Columbia	Department of Human Resources	Model Senior Citizens Services Lounges	158,554
	Gerontological Society	Using the Media in Planning and Service Delivery in Aging	81,860
	International Center for Social Gerontology, Inc.	Vacation Residential Exchange Service for Low-Income Elderly	179,191
	National Association of State Units on Aging	NASUA Liaison Activities	117,600
	National Association Area Agencies on Aging	National Association Area Agencies Inc.	131,594
	National Association of Counties	The Aging: Program for County Resource Development	180,338

Multiple Priorities (cont.)

STATE	GRANTEE	PROJECT TITLE	AMOUNT
District of Columbia	National Association for Human Development	Demonstration Project for Health Education and Training for Physical Fitness	375,475
	National Council on Aging	Operation Independence	340,281
	National Council on Aging	Senior Centers Standard Project	218,933
	National Council on Aging	Advisory Committee Handbook	38,597
Florida	Brevard Community College Cocoa	Interim Catalyst Program	41,112
	United Way of Pinellas, Inc. St. Petersburg	Regional Information and Referral Support System	70,000
Idaho	Eastern Idaho Special Services Agency, Idaho Falls	Disaster Recovery for Older Americans	36,224
Illinois	Board of Trustees of Southern Illinois University, Carbondale	Mutual Help Program for Community Elderly	97,052
Maine	Bureau of Maine's Elderly Augusta	Project Independence	79,151
Maryland	International Association of Chiefs of Police, Gaithersburg	Crime, Safety and the Senior	150,000
Michigan	Michigan Department of Social Services, Lansing	Michigan Human Services Network	200,000

Multiple Priorities (cont.)

STATE	GRANTEE	PROJECT TITLE	AMOUNT
Missouri	Mid-American Regional Council, Kansas City	Aid to Elderly Victims of Crime	105,750
	St. Louis Area Agency on Aging	Tap XX	156,425
	Southwest Missouri Area Agency on Aging, Springfield	Mobile Information and Referral Unit	99,980
New York	Cultural Council Foundation	Evaluation and Dissemination of "Getting on:" Special Information Service TV Programming for the Elderly	185,000
	State Communities Aid Association	Monitoring Social Services for the Aging Provided Under Social Security Act Title in New York State	154,218
	Synogogue Council of America, New York	Technical Assistance to Synagogue Leadership	68,780
	Vera Institute of Justice, New York	Transportation Services for the Elderly	100,000
North Carolina	Duke University Medical Center, Durham	A Statewide Technical Assistance Strategy	70,537
Washington	Washington State Office on Aging, Olympia	Senior Citizens Services Model Project	3,800,000
West Virginia	West Virginia Department of Welfare, Charleston	TRIP: Transportation Remuneration Incentive Program	400,000

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Legal Services

STATE	GRANTEE	PROJECT TITLE	AMOUNT
California	California Office on Aging Sacramento	Paralegal and Senior Advocate Training	85,501
	Senior Adults Legal Assistance, Palo Alto	Senior Adults Legal Assistance	61,772
	University of Southern California, Los Angeles	National Senior Citizens Law Center	227,918
Connecticut	Tolland-Windham Legal Assistant Program, Inc. Willimantic	Connecticut Aging Legal Services	25,600
District of Columbia	National Council for Senior Citizens	Legal Reserach and Services for the Elderly	190,090
	National Paralegal Institute	Senior Citizens and the Law: Technical Assistance and Training for Law Students	190,000
	National Retired Teachers Association/American Association for Retired Persons	Legal Counsel for the Elderly Project	135,450
Michigan	Regents of the University of Michigan, Ann Arbor	Materials Development and Technical Assistance for the Provision of Services to the Elderly	93,635
New York	Presbyterian Senior Legal Services for the Elderly New York	Legal Services for the Elderly Poor	80,000
Pennsylvania	Public Interest Law Center of Philadelphia	Law, Aging and Long Term Care	158,997

Title X, Economic Development Act, Employment Opportunities

STATE	GRANTEE	PROJECT TITLE	AMOUNT
District of Columbia	Farmers Union (Green Thumb, Inc.) (Twenty-three Projects)	Transportation for Rural Elderly Persons and Rural Housing Rehabilitation, Nutrition Services to Rural Communities	571,271
	National Center on the Black Aged, Inc. (one project)	Escort/Security Services for Senior Citizens	98,000
	National Council on Aging	Baltimore Program for the Preservation of Independence; Fort Lauderdale, Senior Opportunities and Services; St. Louis Increased Security of Homes for Elderly; Phoenix, Older Native American Public Service Employment Project; California, Manpower	1,556,657
	National Retired Teachers Association/American Association for Retired Persons (25 Projects)	Senior Employment Program	8,300,000
Florida	Division of Aging Tallahassee (3 Projects)	Home Maintenance Services; Food Service Assistance; Clerical Assistance	499,096
Illinois	Illinois Department on Aging, Springfield (2 Projects)	Operation Spread, Nursing Home Ombudsman Expansion	1,195,932
Indiana	Indiana Commission of the Aging and Aged, Indianapolis (3 Projects)	Home Repair for Older Americans, Project Chauffeurs for Transportation, Project Help for Home Bound Aged	500,000

Title X, Economic Development Act, Employment Opportunities

STATE	GRANTEE	PROJECT TITLE	AMOUNT
Massachusetts	Family Service of Greater Lowell, Inc. (1 Project)	Home Health Services to Elderly	100,000
	Region VIII Agency on Aging Grand Rapids (1 Project)	Home Help Program Expansion	363,302
Mississippi	Mississippi Council on Aging Jackson (1 Project)	Aging Services	300,000
New York	New York City Department for the Aging, New York (1 Project)	Employment Opportunities Program for the Elderly	6,200,000
North Carolina	North Carolina State Office for Aging, Raleigh (1 Project)	Additional Services for Aging	192,557
South Carolina	South Carolina Commission on Aging, Columbia	South Carolina Employment in Aging Services	93,200
Texas	Amigos Del Valle, Inc. Pharr	Expansion of Services for the Elderly	498,624
Virgin Islands	Virgin Islands Commission on Aging, St. Thomas (1 Project)	Extended Aging Services Employment	100,000
Wisconsin	Wisconsin Depratment of Health, and Social Service Madison	Service Programs for the Elderly	424,902

FY 1976 and Transition Quarter Project Awards Training
(Title IV, Part A, Older Americans Act of 1965, as amended)

STATE	GRANTEE	TITLE	AMOUNT
Alabama	University of Alabama University	Career Training and Gerontology	$61,748
	Commission on Aging Montgomery	State Title IV-A Training	96,333
Alaska	Office on Aging Juneau	State Title IV-A Training	30,000
Arizona	University of Arizona Tucson	Retirement Housing Administration	81,586
	University of Arizona Tucson	Model Instructional Program for Long Term Care Administrators	30,034
	Bureau of Aging Phoenix	State Title IV-A Training	57,265
Arkansas	University of Arkansas at Little Rock Little Rock	Training Program in Social Gerontology	24,574
	Office of Aging and Adult Services Little Rock	State Title IV-A Training	67,350
California	Holy Names College Oakland	Master's Program for Training in Gerontology Associated Training Projects	43,039
	San Diego State University San Diego	Education in Aging with Emphasis on Minority Groups	120,779
	University of Southern California Los Angeles	Dual Degree Program in Social Gerontology	127,640

STATE	GRANTEE	TITLE	AMOUNT
California	University of Southern California Los Angeles	Comprehensive Summer Institutes	56,656
	University of Southern California Los Angeles	Environmental Planning for the Elderly	54,603
	University of Southern California Los Angeles	Improving Training in Aging: A Guide to A/V Aids	27,584
	Senior Adults Legal Assistance Palo Alto	Senior Adults Legal Assistance	60,000
	University of California, San Francisco School of Medicine San Francisco	Planning for Multidisciplinary Training in Applied Gerontology	24,840
	Office on Aging Sacramento	State Title IV-A Training	527,861

STATE	GRANTEE	TITLE	AMOUNT
Colorado	Adams State College Alamosa	Social Work Education Project	23,400
	Colorado State University Fort Collins	Nutritional Care of the Aged	42,911
	University of Denver Denver	Planning for Gerontological Excellence in Training, Research and Service	24,997
	Division of Services for the Aging Denver	State Title IV-A Training	82,643
Connecticut	University of Connecticut West Hartford	Career Training Program	58,732
	Department on Aging Hartford	State Title IV-A Training	83,267
Delaware	Division on Aging Wilmington	State Title IV-A Training	30,000
District of Columbia	Federal City College	Institute of Gerontology	165,744
	George Washington University	Improved Health Care Services	89,853
	George Washington University	Training/Export and Legal Education Project in the Field of Aging	171,172
	Antioch College (Law)	Develop a competency-based Modular Course in the Law-elderly citizens	68,861
	Gerontological Society	Development in Environments and Aging	132,658

STATE	GRANTEE	TITLE	AMOUNT
District of Columbia	National Paralegal Institute	Senior Community Services Advisor: Curriculum Design, Training, Technical Assistance and Evaluation	199,690
	National Council on the Aging	Senior Center Training Project	60,599
	National Center for Black Aged	Program for Greater Minority Involvement	100,536
	Division of Services to the Aged	State Title IV-A Training	30,000
Florida	University of Florida Gainesville	Multidisciplinary Program of Career Training	121,306
	University of South Florida Tampa	Center for Applied Gerontology	67,331
	University of Miami Miami	All-University Multidisciplinary Training Program in Gerontology	77,560
	University of Florida Gainesville	Planning Geriatrics Education	24,991
	Division on Aging Tallahassee	State Title IV-A Training	320,927
Georgia	Albany State Albany	Student Training Program in Gerontology	42,776

STATE	GRANTEE	TITLE	AMOUNT
Georgia	Georgia State Atlanta	Graduate Training Program in Sociology of Aging	80,267
	North Georgia College Dahlonego	Career Training in Aging	35,166
	Office on Aging Atlanta	State Title IV-A Training	111,358
Hawaii	University of Hawaii Manoa	Gerontology Training Program	163,452
	University of Hawaii Manoa	Comprehensive Summer Training Institute	79,666
	Commission on Aging Honolulu	State Title IV-A Training	30,000
Idaho	Idaho Office on Aging Boise	State Title IV-A Training	30,000
Illinois	University of Chicago Chicago	Training Program in Work With Problems with Aged	135,900
	Southern Illinois University Carbondale	Planning Model Training Program in Rural Aging Field	19,708
	University of Illinois-Chicago Chicago	All-University Center on Gerontology	24,805
	Department on Aging Springfield	State Title IV-A Training	295,941

STATE	GRANTEE	TITLE	AMOUNT
Indiana	Commission on Aging and Aged Indianapolis	State Title IV-A Training	134,510
Iowa	Commission on Aging Des Moines	State Title IV-A Training	88,915
Kansas	Wichita State University Wichita	Multi-disciplinary, multi-level Education and Training Program	92,961
	Wichita State University Wichita	Gerontology Planning Grant	23,491
	Division of Social Services Topeka	State Title IV-A Training	69,473
Kentucky	University of Kentucky Research Foundation Lexington	MSW-Gerontology Training Program	92,497
	University of Louisville Louisville	Planning Project: Center for Aging Studies and Training	22,192
	University of Kentucky Lexington	University of Kentucky's Planning Group on Aging	25,000
	Aging Program Unit Frankfort	State Title IV-A Training	92,824
Louisiana	Southern University in New Orleans New Orleans	Direct Services to the Aged	58,285

STATE	GRANTEE	TITLE	AMOUNT
Louisiana	Louisiana Center for Public Interest New Orleans	Law/Sobial Work Training Program	$$137,929
	Bureau of Aging Services Baton Rouge	State Title IV-A Training	88,627
Maine	University of Maine Portland	Undergraduate Preparation of Human Service Generalists with Special Emphasis in Gerontology	34,750
	Office of Main's Elderly Augusta	State Title IV-A Training	31,142
Maryland	Antioch College Columbia	Career Training in Gerontology	52,390
	University of Maryland College Park	Career Training, Center on Aging	34,467
	University of Maryland College Park	A Video Tape Project in Human Development	49,994
	University of Maryland Baltimore	Geriatrics and Interdisciplinary Planning at the Baltimore Campus	24,072
	University of Maryland Baltimore	Proposal for Planning a Curriculum for Advanced Preparation in Gerontological Nursing	24,990
	Office on Aging Baltimore	State Title IV-A Training	90,119
Massachusetts	Boston University (Consortium w/Brandeis) Boston	Consortium Gerontology Training Program	186,892

STATE	GRANTEE	TITLE	AMOUNT
Massachusetts	Department of Elderly Affairs Boston	State Title IV-A Training	168,796
Michigan	University of Michigan Ann Arbor	Gerontology Career Training Grant	240,006
	Western Michigan University Kalamazoo	Support Program in Gerontology	29,037
	Madonna College Livonia	A Multidisciplinary Approach	48,006
	University of Michigan Ann Arbor	Training in Law and the Elderly	68,089
	Office of Services to the Aging Lansing	State Title IV-A Training	211,146
Minnesota	University of Minnesota Minneapolis	Training in Aging and Public Policy	55,794
	McAlester College St. Paul	Undergraduate Training Program in Aging	105,855
	Governor's Citizens Council on Aging St. Paul	State Title IV-A Training	108,023
Mississippi	Council on Aging Jackson	State Title IV-A Training	63,033

STATE	GRANTEE	TITLE	AMOUNT
Missouri	Kansas City Regional Council for Higher Education Kansas City	Co-Swap Cooperative Aging Program	116,853
	St. Louis University St. Louis	Career Training Program in Aging	80,095
	University of Columbia-Missouri Columbia	Center for Aging Studies	95,846
	Office of Aging Jefferson City	State Title IV-A Training	147,193
Montana	Aging Services Bureau Helena	State Title IV-A Training	30,000
Nebraska	University of Nebraska Omaha	Gerontology Career Training Program	112,888
	University of Nebraska Omaha	Gerontology Education Data System	33,493
	Commission on Aging Lincoln	State Title IV-A Training	47,127
Nevada	Division on Aging Carson City	State Title IV-A Training	30,000
New Hampshire	Council on Aging Concord	State Title IV-A Training	30,000
New Jersey	Fairleigh Dicksinson University Teaneck	Career Training in Aging for Economically Disadvantaged Minority Students	22,500

STATE	GRANTEE	TITLE	AMOUNT
New Jersey	Rutgers University New Brunswick	Intra-University Program in Gerontology	128,784
	Division on Aging Trenton	State Title IV-A Training	200,093
New Mexico	Commission on Aging Santa Fe	State Title IV-A Training	30,000
New York	Syracuse University Syracuse	Multifaceted Training in Social Gerontology	205,915
	Syracuse University Syracuse	Planning for Summer Residential Institute	41,339
	Hunter College New York	Career Training in Aging at Hunter	132,462
	New York University New York	Interdisciplinary Training Program in Geriatrics and Gerontology for Medical Students	59,128
	City University of New York New York	Planning Proposal for a City University of New York Gerontology Center	24,990
	Office for the Aging Albany	State Title IV-A Training	521,254
North Carolina	Livingstone College Salisbury	Undergraduate Field Instruction Program	44,281
	Wayne Community College Goldsboro	Geriatric Technician Training Program	49,248

STATE	GRANTEE	TITLE	AMOUNT
North Carolina	Duke University Durham	KWIC Training Resources in Aging Project	72,766
	Governor's Coordinating Council on Aging Raleigh	State Title IV-A Training	128,990
North Dakota	North Dakota Consortium on Gerontology-Minot State College Minot	Career Training Program	72,395
	Aging Services Bismarck	State Title IV-A Training	30,000
Ohio	Miami University Oxford	Implementing Career Training	81,185
	Case Western Reserve University Cleveland	Specialization in Aging	110,719
	Commission on Aging Columbia	State Title IV-A Training	272,484
Oklahoma	Special Unit on Aging Oklahoma City	State Title IV-A Training	82,643
Oregon	Portland State University Portland	Responding to Manpower Needs in the Field of Aging	118,835
	University of Oregon Eugene	A Multidisciplinary Center for Gerontology	162,019
	Program on Aging Salem	State Title IV-A Training	66,006

STATE	GRANTEE	TITLE	AMOUNT
Pennsylvania	Pennsylvania State University University Park	Career Training Program in Aging	152,050
	Office for the Aging Harrisburg	State Title IV-A Training	354,978
Rhode Island	University of Rhode Island Providence	Human Sciences and Service Training in Aging	67,945
	Division on Aging Providence	State Title IV-A Training	30,000
South Carolina	University of South Carolina Columbia	Consortium Planning in Gerontology	24,339
	Commission on Aging Columbia	State Title IV-A Training	60,661
South Dakota	Office on Aging Pierre	State Title IV-A Training	30,000
Tennessee	Fisk University Nashville	Graduate Master of Arts Program	81,129
	Commission on Aging Nashville	State Title IV-A Training	112,307
Texas	Bishop College Dallas	Undergraduate Training Program	23,631
	North Texas State University Denton	Multidisciplinary Training in Aging	136,634

STATE	GRANTEE	TITLE	AMOUNT
Texas	Our Lady of the Lake College San Antonio	Chicano Aging Project	57,610
	Governor's Committee on Aging Austin	State Title IV-A Training	295,319
Utah	University of Utah Salt Lake City	Rocky Mountain Gerontological Training Program	206,664
	Division on Aging Salt Lake City	State Title IV-A Training	30,000
Vermont	Office on Aging Montpelier	State Title IV-A Training	30,000
Virginia	Office on Aging Richmond	State Title IV-A Training	111,688
Washington	University of Washington Seattle	Social Work Training in Social Rehabilitation Services	84,942
	University of Washington Seattle	Training Older Adults in Community Organization and Development in Aging	46,675
	University of Washington Seattle	Planning Grant in Geriatric Dentistry	24,999
	Office on Aging Olympia	State Title IV-A Training	92,163

STATE	GRANTEE	TITLE	AMOUNT
West Virginia	University of West Virginia Morgantown	Social Work Career Training Program	54,463
	Parkersburg Community College Parkersburg	Administration on Aging Training Support	20,393
	Commission on Aging Charleston	State Title IV-A Training	54,302
Wisconsin	University of Wisconsin-Madison Madison	Expansion of Interdisciplinary Components of Training in Gerontology	172,578
	Division on Aging Madison	State Title IV-A Training	127,458
Wyoming	University of Wyoming Laramie	Social Work Education-Aging	22,749
	Aging Services Cheyenne	State Title IV-A Training	30,000
American Samoa	Governor of American Samoa Pago Pago	State Title IV-A Training	10,000
Puerto Rico	Gericulture Commission Santurce	State Title IV-A Training	53,021
Trust Territory	Office of Aging Saipan	State Title IV-A Training	15,000
Virgin Islands	Commission on Aging St. Thomas	State Title IV-A Training	15,000

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CONFERENCES

Fiscal Year 1976 - Includes Transition Quarter

GRANTEE	TITLE	AMOUNT	SOURCE	PROJECT PERIOD
1. Florida State University Tallahassee	National Conference on Transportation for the Elderly and Handicapped	$10,000	IV-A	12/8/75-9/7/76
2. State Agency on Aging State of Hawaii	The Hawaii Governor's Bicentennial Conference on Aging	17,551	IV-A	1/1/76-9/30/76
3. National Tribal Chairmen's Association Washington, D. C.	National Indian Conference on Aging	192,244	IV-A	2/20/76-2/19/77
4. National Association of Area Agencies on Aging Washington, D.C.	National Conference for Area Agencies on Aging	17,496	IV-A	4/20/76-10/19/76
5. National Academy of Sciences Washington, D.C.	Anglo-American Conference on the Care of the Elderly: Meeting the Challenge of Dependency	50,000	IV-A	4/15/76-4/14/77
6. Georgetown University Washington, D.C.	Seminars for Development of a National Health Activation Program for the Elderly	17,035	IV-A	6/30/76-11/30/76
7. Council of State Governments Lexington, Kentucky	Studies in State Policy on Aging	22,082 (Partial)	IV-A	2/1/75-9/30/77
8. United States Conference of Mayors Washington, D. C.	Mayoral and Municipal Government Responses to the Urban Elderly	45,870 (Partial)	IV-A	3/1/75-8/31/77

CONFERENCES (Continued)

Fiscal Y ear 1976 - Includes Transition Quarter

GRANTEE	TITLE	AMOUNT	SOURCE	PROJECT PERIOD
9. National Interfaith Coalition on Aging Athens, Georgia	Planning Conference on Education in Gerontology in the Religious Sector	45,870	IV-A	9/15/76-3/15/77
10. National Association of Counties Research Foundation Washington, D. C.	National Program for County Resource Development	160,831	Title III, Section 308	9/15/75-9/15/77
11. International Center for Social Gerontology Washington, D. C.	National Conference on Congregate Housing	8,500	Title III, Section 308	9/22/75-3/31/76

FY 1976
PROJECT AWARDS
RESEARCH AND DEMONSTRATIONS
(Title IV, Part B, Older Americans Act of 1965 as amended)

APPENDIX II-D

I. NEW AWARDS
A. Program on Policy Issues Affecting the Elderly

STATE	GRANTEE	TITLE	AMOUNT
District of Columbia	Sam Harris & Associates Washington, D. C.	State of the Art: Alternatives to Institutionalization of the Elderly	$34,002 (Contract)
	Urban Institute Washington, D. C.	Development of an AoA Strategy for Policy Research	148,441
	Urban Institue Washington, D. C.	Development of an AoA Strategy for Policy Research on Aging: Community Services and the Elderly	157,028 (Contract)
Illinois	Northern Illinois University Dekalb, Illinois	Development and Adoption of Policies for the Elderly: The Legislative Process	144,619
	University of Chicago School of Social Services Chicago, Illinois	The Impact of National Health Insurance on Health Care for the Elderly	107,174
Maryland	The Orkand Corporation Silver Spring, Maryland	An Inventory of Federal Outlays for the Elderly	90,330 (Contract)

STATE	GRANTEE	TITLE	AMOUNT
Nebraska	University of Nebraska at Omaha Omaha, Nebraska	Development of an AoA Strategy for Policy Research on Aging: Housing and the Elderly	$93,789
New York	Joseph A. Davis Consultants, Inc. New York, New York	State of the Art: Attitudes Toward the Elderly in Professional Education Schools	61,881 (Contract
	Logical Technical Services Inc. New York, New York	State of the Art: Technology Transfers to the Problems of the Elderly	36,991 (Contract)
	Research Foundation for Mental Hygiene Albany, New York	A Cross-National Comparison of theInstitutional Elderly; Including Costs, Quality and Outcome of Their Long-Term Care	100,054
North Carolina	Duke University Durham, North Carolina	Changing Household Patterns Among the Elderly	119,729
Pennsylvania	Philadelphia Geriatric Center Philadelphia, Pa.	The Elderly and their Housing	63,744
Utah	Melvin A. White University of Utah Gerontology Center Rocky Mountain, Utah	Impact of Inter-Institutional Relocation on Geriatric Patients	78,466

STATE	GRANTEE	TITLE	AMOUNT
Virginia	Kappa Systems, Inc. Arlington, Virginia	Utilization of General and Specialized Revenue Sharing Funds for the Elderly	$76,012 (Contract)
	Mitre Corporation McLean, Virginia	Technology in the Service of the Aged Through the Retirement Cooperative Concepts	198,503
Wisconsin	University of Wisconsin Madison, Wisconsin	Development of an AoA Strategy for Policy Research on Aging: Employment, Retirement, and the Elderly	102,536

In addition, five dissertation research grants pertinent to this subject were awarded in FY 1976. ($5,000 per grant).

B. STRUCTURE, DELIVERY, AND PROVISION OF SERVICES TO THE ELDERLY

STATE	GRANTEE	TITLE	AMOUNT
California	Homitz, Allen & Associates Oakland, California	Educational Institutions: Resources for Planning, Coordinating and Delivery of Community Based Services to Older Persons	$73,095 (Contract)
	Institute for Scientific Analysis San Francisco, California	An Analysis of the Implementations of Title XX Service Plans for the Nationwide Development of Local Comprehensive Service Delivery Systems for the Aged	48,391
	Special Service for Groups Los Angeles, California	Research Relating to Service Delivery Models for Pacific Asian Elderly	131,561
	University of California San Francisco, California	Funding Practices, Policies and Performance of State and Area Agencies on Aging	263,368
Connecticut	Yale University New Haven, Connecticut	Effects of Jurisdictional Conflicts on Areawide Coordination of Service Planning and Delivery to Older Persons	109,821 (Contract)
District of Columbia	The Catholic University of America, National Catholic School of Social Work Washington, D. C.	Informal Social Networks and Assistance Among the Aging	135,822

STATE	GRANTEE	TITLE	AMOUNT
Kansas	University of Kansas Lawrence, Kansas	Attitudes Toward Older Persons on the Part of Service Delivery Professionals	$69,274
Maryland	Center for Public Management Potamac, Maryland	Strengthening Decision Making for Alternative Approaches to Conducting In-Service Training	110,980
New Jersey	Division of Youth and Family Services; Department of Institutions and Agencies, Trenton, New Jersey	The Utilization of the Elderly in Child Welfare Services	99,975
New York	Boone, Young & Associates New York, New York	Analysis of Consumer Participation in Planning Process of State and Area Agencies	149,358 (Contract)
	Community Research Applications, Inc. New York, New York	Technical Assistance to the National Network on Aging: Handbook on Priority Services for Older Persons	257,828 (Contract)
Oregon	Institute on Aging Portland State University Portland, Oregon	Attitudes Toward Older Persons on the Part of Service Delivery Professionals	99,994
	Portland State University Portland, Oregon	Analysis of Coordination & Organization Change	159,342
	Portland State University Portland, Oregon	Testing a Community Intervention Model	159,709

STATE	GRANTEE	TITLE	AMOUNT
Pennsylvania	Albert Einstein Medical Center Philadelphia, Pennsylvania	Strengthening Decision Making for Alternative Approaches to Conducting In-Service Training	$160,000
	Penn State University University Park, Pennsylvania	Simulating Demand and Costs for Statewide Services to the Aging	165,682

Additionally, three dissertation research grants related to this subject were awarded in FY 1976 ($5000 per grant).

C. AGING PROCESSES AND DESCRIPTIONS OF AGING POPULATIONS

STATE	GRANTEE	TITLE	AMOUNT
California	Andrus Gerontology Center University of Southern California Los Angeles, California	Cohort Experience and the Aging Population	$85,355
	Western Behavioral Sciences Institute San Diego, California	Cohort Experience and the Aging Population	108,280
District of Columbia	Roy Littlejohn & Associates Washington, D. C.	Prediction of Needs Throagh Analysis of Pre-Elderly Population Cohorts	210,980 (Contract)
	Roy Littlejohn Associates Washington, D. C.	State of the Art Paper - Aging Population Groups: Problems of Definition and Classification	34,112 (Contract)
Maryland	Morgan Management Systems Columbia, Maryland	Factors Relating to Functional Dependency Among Older Persons	89,961 (Contract)
	U. S. Bureau of the Center for Census Studies Suitland, Maryland	The Racial and Ethnic Elderly Characterization Study	65,200
	University of Maryland College Park, Marylad	Aging Competency	84,505

D. ECONOMICS OF AGING

STATE	GRANTEE	TITLE	AMOUNT
California	Judith Treas University of Southern California Los Angeles, California	Successful Work Options of Aging Women	$50,354
District of Columbia	American Institutes for Research Washington, D. C.	Impact on Unemployment Climate on Older Worker's in two Labor Markets with Contrasting Unemployment Rates	209,000
Maryland	Bradley Schiller University of Maryland College Park, Maryland	Private Pension Plans and the Older Worker	95,600
Massachusetts	Brandeis University Waltham, Massachusetts	Approaches to Determining the Cost of a Home Care Alternative to Nursing Home Care: The Diversion Strategy	94,923
Michigan	University of Michigan Ann Arbor, Michigan	Meaning and Correlates of Life Satisfaction in Older (and Middle Age) Blacks: A Secondary Analysis	58,071
Pennsylvania	University of Pittsburgh Graduate School of Business Pittsburgh, Pennsylvania	Consumerism and the Aging: The Elderly Victims of Fraud	121,539

STATE	GRANTEE	TITLE	AMOUNT
Michigan	Wayne State University Detroit, Michigan	A Study of Opportunities for Socialization to Old Age	$129,090
North Carolina	Duke University Durham, North Carolina	A Study of Opportunities Socialization to Old Age	50,591

Additionally, eight dissertation research grants related to this subject were awarded in FY 1976 (5,000 per grant).

STATE	GRANTEE	TITLE	AMOUNT
Virginia	Thurlow R. Wilson Human Resources Research Organization Alexandria, Virginia	An Analysis of Employment Services to Older Job Seekers	$149,200
	William J. Serow University of Virginia Charlottesville, Virginia	Implications of Prospective Population Change for Older American Workers	32,280
Washington	Battelle Human Affairs Research Centers Seattle, Washington	Consumerism and the Aging: The Elderly as Victims of Fraud	124,295

Additionally, two dissertation research grants to this subject were awarded in FY 1976 (5,000 per grant).

E. RESEARCH METHODOLOGY IN THE FIELD OF AGING

STATE	GRANTEE	TITLE	AMOUNT
District of Columbia	Roy Littlejohn Associates Washington, D. C.	Aggregation of the Elderly	$68,997 (Contract)
Maryland	Westat, Incorporation 11600 Nebel Street Rockville, Maryland	Sampling of the Elderly Population	85,214 (Contract)
Missouri	Midwest Council for Social Research on Aging Institute for Community Studies Kansas City, Missouri	Instrument Bank: Assessment of Research and Measurement Scales for the Study of Aging and the Elderly	95,686 (Contract)
Virginia	JWK International Annandale, Virginia	Data Collection Problems and the Elderly	97,911 (Contract)

In addition, one research dissertation grant was awarded in this area. ($5,000 per grant).

F. OTHER

STATE	GRANTEE	TITLE	AMOUNT
California	Documentation Associates Los Angeles, California	Comprehensive Inventory and Analysis of Past and Current Federally-Supported Research in Aging	$322,355 (Contract)
	Human Resources, Corporation San Francisco, California	State of the Art Paper: Theoretical Developments in Social Gerontology	49,914 (Contract)

II. CONTINUATION PROJECTS

AGING PROCESS

STATE	GRANTEE	TITLE	TOTAL
California	American Institute for Research Palo Alto, California	Identifying Opportunities for Improving the Quality of Life of Elderly	$179,952
	University of Southern California Los Angeles, California	Non-Chronological Definitions on Aging	$98,750
District of Columbia	Catholic University of America Washington, D.C.	Impact of Needs, Knowledge, Ability and Living Arrangements on Decision-Making	$139,896
	National Catholic School of Social Service Washington, D.C.	Decision-Making Among Older Americans: An Analysis of Econological, Psychological, and Biological Determinants	$7,500 supplemental
Florida	University of Florida Gainesville, Florida	Organization of Cognitive Abilities and Old Age	$45,554
Illinois	University of Chicago Chicago, Illinois	Crises and Adaption in the Middle and Late Years	$126,961
	University of Chicago Chicago, Illinois	Decision-Making and the Elderly	$100,731

AGING 2

STATE	GRANTEE	TITLE	AMOUNT
Maryland	University of Maryland College Park, Maryland	Individual and Community Competence: A Study of the Successfulness of Coping Mechanisms of the Aged	$69,133
Missouri	University of Missouri-Columbia Columbia, Missouri	Local-Socio-Environmental Contexts and Personal Moorings Relating to Decision-Making	$120,824
New York	New York State Department of Mental Hygiene New York, New York	Diagnosis of Mental Disorders in the U.S. and U.K.	$138,330

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DESCRIPTIONS OF THE OLDER POPULATION

STATE	GRANTEE	TITLE	AMOUNT
Illinois	University of Illinois Chicago, Illinois	National Survey of the Aged at Chicago Circle	$124,840
New York	Research Foundation of the State University of New York Geneseo, New York	Predicting Accuracy of Perceiving the Aging Person	$13,034

SOCIAL AND ENVIRONMENTAL

CONDITIONS AFFECTING THE ELDERLY

STATE	GRANTEE	TITLE	AMOUNT
California	Regents of the University of California	Life Styles of the Aging and Consumer Behavior	$45,303
Michigan	Regents of the University of Michigan Ann Arbor, Michigan	Factors Influencing the Abandoning of Private Homes by the Elderly	$66,703

INTERVENTION MECHANISM

STATE	GRANTEE	TITLE	AMOUNT
California	Andrus Gerontology Center University of Southern California	A Study of Funding Regulations Program Agreements and Monitoring Procedures Affecting the Implementation of Title III of the Older American Act	$80,598
District of Columbia	The Urban Institute Washington, D.C.	Client Oriented Community Assessments of Long-Term Care Facilities	$40,440
	Institute of Public Administration Washington, D.C.	Analysis of Transportation Demonstrations for the Elderly	$76,367
Massachusetts	Massachusetts Institute of Technology Boston, Massachusetts	Design Evaluation-Social Use of Elderly Housing	$98,860
	University of Massachusetts Boston, Massachusetts	Planning for the Health Care Needs of the Elderly	$60,422
			$211,319
Minnesota	Govenor's Citizen Council on Aging St. Paul, Minnesota	A Comparison of In-Home and Nursing Home Care for Older Persons in Minnesota	

OTHER

STATE	GRANTEE	TITLE	AMOUNT
California	University of Southern California Los Angeles, California	Integration of Information on Aging: Handbook Project	$8,492
	University of Southern California Los Angeles, California	Foundations for Research in Social Problems of Aging	$317,372
District of Columbia	The Gerontological Society Washington, D.C.	Committee on Research and Development Goals in Social Gerontology	$183,997
	The Gerontolgoical Society Washington, D.C.	Development and Utilization of Relevant Cross-National Research in Aging	$68,280
Texas	Governor's Committee on Aging Austin, Texas	Better Services for Aging Through Research Utilization	$30,000

STATE	GRANTEE	TITLE	AMOUNT
New York	Center for Community Research of the Associated YM-YWHA's of Greater New York-Montiefiore Hospital and Medical Center New York, New York	Day Care Center for the Elderly	$29,176
	New York Infirmary New York, New York	Rehabilitation of Adults and Geriatric Blind	$150,000
Pennsylvania	The Public Interest Law Center of Philadelphia Philadelphia, Pennsylvania	Planned Crisis Disaster-Nursing Home Closings	$72,809
	Philadelphia Geriatric Center Philadelphia, Pennsylvania	Need, Cost, and Effects of Home Services for the Aged	$172,509
Wisconsin	Curative Workshop of Milwaukee Milwaukee, Wisconsin	Avocational Counseling for the Elderly	$34,298

APPENDIX II-E

Title IV-C Multidisciplinary Centers of Gerontology Grants, Fiscal Year 1976

Alabama	
University of Alabama Center for the Study on Aging University, Alabama	$61,172
The University of Alabama in Birmingham University Station Birmingham, Alabama 35294	62,938
California	
University of Southern California Andrus Gerontology Center Los Angeles, California	195,463
Colorado	
Davis Institute for the Care and Study of the Aging Denver, Colorado 80204	67,314
Connecticut	
University of Connecticut University Program in Gerontology Storrs, Connecticut	49,798
Florida	
Florida State University Institute for Social Research Tallahassee, Florida 32306	65,792
University of Miami Institute for the Study of Aging Coral Cables, Florida	64,062

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Hawaii

University of Hawaii at Manoa Pacific Biomedical Research Center Honolulu, Hawaa 96822	$74,687

Illinois

University of Illinois at Chicago Circle All University Gerontology Committee Chicago, Illinois 60680	67,271

Iowa

University of Iowa School of Social Work Iowa City, Iowa 52240	69,162

Kentucky

Sanders-Brown Center, College of Medicine University of Kentucky Research Foundation Lexington, Kentucky 40506	75,000

Massachusetts

Boston University Gerontology Center Boston, Massachusetts	193,782

New York

Syracuse University All-University Gerontology Center Syracuse, New York 13210	175,347
City University of New York Research Foundation New York, New York	70,941
North Country Community College Life Sciences - Social Sciences Saranac Lake, New York 12983	47,600

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North Carolina

Duke University Center for the Study of Aging and Human Development Durham, North Carolina	$171,211

Ohio

Miami University Scripps Foundation Gerontology Center Oxford, Ohio 45056	65,916

Pennsylvania

University of Pennsylvania 3451 Walnut Street Philadelphia, Pennsylvania 19174	72,515
Pennsylvania State University Gerontology Center University Park, Pa. 16802	185,255

Texas

North Texas State University Center for Studies in Aging Denton, Texas 76203	164,286

APPENDIX II-F

Title V-Multi-Purpose Senior Centers, Funding Distribution FY'76

		# of Grants Awarded	Grant Amounts Awarded				
	TOTALS						
1	Alabama	21	80,878				
2	Alaska	2	10,000				
3	Arizona	9	47,721				
4	Arkansas	7	54,832				
5	California	63	437,275				
6	Colorado	6	45,336				
7	Connecticut	8	69,388.20				
8	Delaware	8	25,000				
9	District of Columbia	2	19,545				
10	Florida	7	267,440				
11	Georgia	5	92,798				
12	Hawaii	4	25,000				
13	Idaho	8	25,000				
14	Illinois	16	265,869				
15	Indiana	17	97,285				
16	Iowa	5	74,096				
17	Kansas	18	57,889				
18	Kentucky	20	77,822				
19	Louisiana	6	73,785				
20	Maine	9	25,951				
21	Maryland	13	77,370				
22	Massachusetts	6	140,663				
23	Michigan	7	175,955				
24	Minnesota	6	90,019				
25	Mississippi	2	52,527				
26	Missouri	13	122,661				
27	Montana	22	25,000				
28	Nebraska	6	39,273				
29	Nevada	2	25,000				
30	New Hampshire	3	25,000				
31	New Jersey	6	192,460				
32	New Mexico	6	25,000				
33	New York	30	433,508				
34	North Carolina	4	107,000				
35	North Dakota	11	30,000				
36	Ohio	13	235,125				
37	Oklahoma	20	62,020				
38	Oregon	5	55,005				
39	Pennsylvania	17	295,890				
40	Rhode Island	2	25,000				
41	South Carolina	6	50,551				
42	South Dakota	6	29,160				
43	Tennessee	16	93,589				
44	Texas	18	257,645				
45	Utah	6	30,690				
46	Vermont	5	25,000				
47	Virginia	7	93,074				
48	Washington	24	91,803				
49	West Virginia	6	45,127				
50	Wisconsin	13	107,008				
51	Wyoming	2	9,150				
52	American Samoa						
53	Guam						
54	Puerto Rico	4	44,184				
55	Trust Territory						
56	Virgin Islands						

PHS-24-3 (Formerly HSM-705-3)
8-73

STATISTICAL WORK SHEET

B. REHABILITATION SERVICES ADMINISTRATION

The major goal of the Rehabilitation Services Administration's program for the Aging is to rehabilitate as many older handicapped individuals as possible into gainful employment through activities of the State-Federal rehabilitation program administered by the agency.

The State Rehabilitation agencies endeavor to assist each individual to reach his most adequate functioning level and highest vocational potential. This is accomplished through a diagnosis of his condition followed by various services designed to overcome his specific handicap. Throughout the process, the emphasis is on helping the individual to help himself. These services include: evaluation and medical diagnosis to determine the nature and extent of the disability to ascertain capacity for work; counseling to help in developing a good vocational plan; medical care to reduce or remove the disability; vocational training and placement into employment; and follow-up to ensure satisfactory placement.

The Rehabilitation Services Administration cooperates with the Administration on Aging in various activities and projects and will continue to do so. A Cooperative Agreement has been established between the Administration on Aging and the Rehabilitation Services Administration, which is designed to bring about improved coordination between the resources of the State-Federal program of vocational rehabilitation and the resources available under provisions of the Older Americans Act of 1965, as amended.

Several Innovation and Expansion Grants are focused on rehabilitation of the disabled aged. These include a project in Wisconsin which provides services by mobile van to counties in the northern part of the State that are not easily accessible, two projects in New Jersey -- each focused on expansion of staff to serve the elderly, and a work opportunity project for the blind in the District of Columbia.

The aging handicapped receive particular attention in Section 304(b)(1) of the Rehabilitation Act, which cites the older blind as an appropriate target population for the special projects authorized under that section of the Act. In 1976, projects designed to expand and improve rehabilitation services for blind people who are at least 55 years of age are being supported by this grant program in Arkansas, Colorado, Oregon, Texas, Virginia, West Virginia, Nevada and Hawaii.

The Rehabilitation Services Administration coordinates with the Social Security Administration in utilizing the Social Security disability insurance and Supplemented Security Income disabled and blind applicant load as an important referral source of older disabled persons for State vocational rehabilitation services.

It is estimated that there are over 4 million people 45 years of age and over eligible for, and in need of, rehabilitation services, of whom nearly one million are aged 65 and beyond. In an effort to alleviate this situation, State rehabilitation agencies have been intensifying their efforts

to serve aging handicapped.

Rehabilitated persons 45 years of age and over, and 65 years of age and over

Fiscal Year	All Rehabilitants	45 years of age and over	65 years of age and over
1974	361,138	72,291	5,942
1975	324,039	69,836	5,546
1976 1/	303,328 1/	65,400 1/	5,800 1/
1977 1/	295,000 1/	65,600 1/	6,200 1/
1978 1/	286,000 1/	65,200 1/	6,000 1/

1/ Estimate

C. OFFICE OF NATIVE AMERICAN PROGRAMS

The Office of Native American Programs, under Title VIII of the Community Services Act of 1974, was established for the purpose of promoting the goal of economic and social self-sufficiency for Native Americans while recognizing the special and complex relationship existing between the Federal Government and Indian people and the issues and conditions unique to this vulnerable target group.

Under the new legislation, the long-range goals for the Native American Programs are (1) to develop the capacity of Native Americans and their organizations to focus on planning as the basic method to improve resource allocations and effectiveness of services in Native American communities; (2) to achieve the development of the necessary social and economic infrastructure in Native American communities to increase self-sufficiency, and (3) to eliminate the most critical gaps in the range of social and human development services necessary for self-sufficiency.

Currently, the grants and contracts are not specifically oriented toward serving elderly Indians, although, of course, the elderly Indian is part of the service population with all other Indians residing in the community.

In FY 1976 the Office of Native American Programs entered into an intra-agency agreement with Administration on Aging to do basic data gathering research on the elderly Native American population. In FY 1977 it will attempt to draw other government agencies into this type of agreement and dollar commitments.

D. OFFICE OF RURAL DEVELOPMENT

The Office of Rural Development was established by Secretary Weinberger in June, 1973 for the purpose of "catalyzing and institutionalizing throughout HEW a concern for meeting the needs of rural America." The Office recognizes that the elderly comprise a particularly important group in rural areas. Although the elderly comprise ten percent of U.S. population in 1970, they made up approximately sixteen percent of all Americans living in non-metropolitan areas. Nearly one-third of these rural elderly live in poverty.

The Office is not an operating agency and has no program budget. Instead it is organized to impact on the institutional process of HEW which may improve the use of the Department's resources for delivering human services to rural residents. Examples of such processes include: intergovernmental relations, intra-departmental coordination, policy development, information sharing and capacity building through training and technical assistance.

The Secretary's mandate to the Office covers four specific areas of activity:

- To identify barriers to the delivery of HEW services in non-metropolitan areas;
- To design and recommend human service delivery systems for rural areas;
- To establish an internal network and coordinate those efforts with other Federal agencies for the purpose of delivering human services to target areas;
- To represent the Department on interdepartmental task forces concerned with rural development.

The Office is located within the Office of the Assistant Secretary for Human Development together with the Administration on Aging and other units serving special target populations. During FY 1974, the Office established a Department-wide Rural Network, which includes representation in each HEW Regional Office, and has worked with representatives from the major agencies within the Department on an ad hoc basis. The Office works to build the capacity of this Network to provide information and referral services with respect to HEW programs available to support rural development.

Other activities of the Office which may have indirect benefits for the rural elderly include:

1. A study was published of 10 selected rural human service projects (9 of 10 providing services to the elderly) describing principal barriers to rural service delivery and highlighting characteristics of successful systems.

2. A computer program on Federal Assistance to Counties and States has been initiated to analyze how HEW program resources are distributed between metropolitan and non-metropolitan areas; included will be a section on programs for the elderly.

3. The Intra-Department Rural Health Coordinating Committee, with assistance from ORD, adopted a national health goal promoting the improvement of and equal access to health care in rural areas.

4. The Office has undertaken efforts to increase the awareness and participation of rural individuals and organizations in the planning and development of human services under the National Health Planning and Resource Development Act and Title XX of the Social Security Act.

5. USDA's Federal Assistance Program Retrieval System(FAPRS) is currently being examined to add some 400 plus human service programs; a special section on services to the elderly is included.

6. ORD, through the Assistant Secretaries Working Group for Rural Development, assisted in increasing the awareness of rural health concerns in the operation of the National Influenza Immunization Program.

7. ORD completed its role as HEW Coordinator of the Human Services Section of the 1976 Rural Development Report of the Secretary of Agriculture to the Congress. The report will include a paper on the current status of the rural elderly.

E. Architectural and Transportation Barriers Compliance Board

The A&TBCB was established with the enactment of Public Law 93-112, as amended, to ensure compliance with those prescribed standards pursuant to the Federal acts mandating accessibility and usability of buildings and facilities constructed with Federal funds by physically disabled and elderly people.

The A&TBCB has not designated funds for programs which address the issue of barriers that specifically confront the elderly population in this country. The thrust of the Board's program is the elimination of architectural and transportation barriers in an effort to maximize each handicapped individual's independence, whether that handicap be the result of a congenital defect, disease, injury, as well as the process of aging. Hence, in developing the compliance and regulatory processes, the needs of elderly individuals are addressed as they relate to man-made barriers which impede their mobility.

II. SOCIAL SECURITY ADMINISTRATION

Programs Administered by the Social Security Administration

The Social Security Administration (SSA) administers programs which provide protection against loss of earned income due to retirement, disability or death for over 90 percent of the workers and their families in the United States. It also administers the Medicare programs, which provide hospital insurance and voluntary supplementary medical insurance protection for virtually all individuals in the United States who are age 65 or older, as well as for eligible disabled persons under age 65. Beginning January 1, 1974, the SSA also has been responsible for payments to aged, blind, and disabled persons under the Supplemental Security Income program which has replaced the State programs of aid to the aged, blind, and disabled formerly administered as grant programs by the Social and Rehabilitation Service.

Benefits to Older Persons

Under the retirement, survivors and disability insurance programs (title II of the Social Security Act) monthly cash benefits are paid to aged or aging persons, their dependents and their survivors. The following categories of older persons can receive monthly cash benefits:

--Insured workers between the ages of 62 and 72 who have substantially retired from gainful employment.

--Insured workers age 72 and over, without regard to work status.

--Insured workers up to 65 years of age who have worked a specified period of time in covered employment and have a medically determinable disability, which can be expected to last for a continuous period of 12 calendar months, and which prevents them from engaging in any substantial gainful activity.

--Certain individuals age 72 and over who are not insured under the regular social security program.

--Wives or dependent husbands aged 62 or over of retired or disabled insured workers.

--Widows or dependent widowers of insured workers age 60 and over.

--Certain disabled individuals age 50 and over who qualify as widows, widowers, or divorced wives of insured workers.

--Dependent parents, age 62 or older.

On December 30, 1969, the President signed into law the Federal Coal Mine Health and Safety Act of 1969. The Act was amended on May 19, 1972. Benefit payments are made under this law from general revenues to coal miners who are totally disabled due to pneumoconiosis ("Black lung disease") and to widows of coal miners who died due to pneumoconiosis. These benefits are increased if the beneficiary has eligible dependents. Benefits also are payable to orphans, and in certain circumstances to totally dependent surviving parents, brothers and sisters. Many of the beneficiaries are aged because the Act permits former coal miners and widows to qualify without limitations on either aged or how long ago the disability occurred. In fiscal 1976, benefits paid to persons age 65 and over under this program were $645 million and in fiscal 1977 payments to such persons are expected to be $664 million and $695 million in fiscal 1978.

Health Insurance Benefits

In fiscal 1977, an average of 22,600,000 persons aged 65 and over and 2,600,000 disabled persons in the United States will be afforded basic Medicare protection. Under Medicare, hospital insurance beneficiaries are protected against the costs of inpatient hospital services, post-hospital skilled nursing facility services and home health services. In addition, the voluntary supplementary medical insurance program covers the cost of physicians and related services. Both parts of the Medicare program provide for payment of these costs subject to certain deductible and co-insurance amounts.

Payments to hospitals, extended care facilities and home health agencies for persons aged 65 and over under the hospital insurance program are expected to total an estimated $13.4 billion in fiscal 1977 and $14.2 billion in fiscal 1978. Supplementary medical insurance payments for aged persons in fiscal 1977 and fiscal 1978 are estimated to amount to $4.9 billion and $5.9 billion respectively.

Services to Aged Individuals and to Community Groups

The social security programs are administered through a network of district and branch offices. Local communities are served by 632 district offices, 682 branch offices, 48 resident stations, over 3,000 contact stations, and 30 teleservice centers. Every attempt is made to tailor services to individual needs and desires.

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Of the 32,671,000 beneficiaries receiving monthly retirement, survivors or disability insurance benefits at the end of September 1976, about 24,282,000 were age 62 or over. According to statistics updated to include January 1976 approximately 93 percent of all persons age 65 and over either receive retirement, survivors or disability insurance benefits or are eligible for benefits on retirement. This proportion will grow until practically all aged persons are protected. The minimum monthly benefit for a retired worker who meets the regular insurance requirements is $107.90 under present law. For retired couples the present minimum is $161.90. This is subject to actuarial reduction if the benefit is taken prior to age 65. For those persons age 72 and older who qualify for uninsured (Prouty) benefits the payment to a single person is currently $74.10 a month and for a couple $111.20 a month. The average monthly benefit being paid at the end of December 1976 for retired workers was $225.00; for retired workers and their wives $374.00; for aged widows $209.00; and for disabled workers $245.00.

Title XVI of the Social Security Act as amended, now provides for a federally administered and financed Supplemental Security Income (SSI) program for persons aged 65 and over and for the blind and totally disabled. This program was effective January 1, 1974. It assures income of at least $167.80 per month for an individual and $251.80 per month for a couple. Under present law, in July 1977 the support levels are estimated to increase to $176.10 and $264.20 respectively. Certain income disregards included in the law allow some limited additional income, and encourage beneficiaries to work when they are able to do so. Lien laws are not applicable and, generally, beneficiaries may retain their homes and automobiles. Eligibility requirements and support levels are the same in all States. To assure that recipients of benefits under the former State administered programs for the aged, blind, and disabled suffer no loss of income under the Federal SSI program, States are required to supplement the Federal benefit. States may also supplement the Federal benefit payment to SSI recipients regardless of whether they are recipients "converted" from State assistance rolls to the Federal SSI program or newly eligible. States may administer their own supplementation payments or choose Federal administration. States which choose Federal administration have two advantages. First, the Federal Government pays all administrative costs of making the supplementation payments; and second, States are protected, generally, from paying more out of State funds than they paid in calendar year 1972. Estimated Federal benefit payments to the aged, blind and disabled under this program in fiscal 1978 will amount to $5.0 billion, of which $1.73 billion will be to persons age 65 and over.

III. PUBLIC HEALTH SERVICE

A. NATIONAL INSTITUTE ON AGING

The vast increase in the absolute number and relative proportion of older people is the most startling demographic characteristic of the twentieth century. Individuals over 65 comprised 3% of the population in 1900, nearly 10% by 1972, and will comprise a projected 17% to 20% of the population in 2020. In only 45 years, it is possible that one out of every five Americans will be over 65. This explosion in numbers will have serious social, economic, and personal consequences if plans are not made well in advance.

Congress demonstrated great wisdom and foresight in establishing the National Institute on Aging (NIA). The research conducted and supported by the NIA will help improve the quality of life, enhance service delivery, and contain costs. The major commitment of time and effort necessary to unravel the mysterious process of aging is rightfully undertaken now, before the post-World War II "baby boom" reaches age 65, if we are to prevent unnecessary suffering and hardship. Time and money invested in research today will pave the way for more efficient services at less cost in the future.

Fundamental to all good health care and social services is research--biomedical, behavioral, and social research. Yet often, criticism of our health care system frequently extends to a questioning of the value of continuing research. This questioning is more than anti-intellectual; it is part of a real national anxiety to commit public resources toward immediate social ends, instead of making a long-term investment to acquire useful information. The demand for some justification in economic terms of the return on research is a fair one, but one that is not always easy to satisfy. How, for example, can savings of suffering brought about by the development of a new drug be quantified?

We no longer rely on leeches and the purge to protect us from periodic outbreaks of plagues. Both the practice of medicine and our health care system are still based a good deal on trial and error; without research they would not progress.

The ultimate purpose of research is the same as social welfare: to improve the well being of man. In the case of research, this is done by promoting a greater understanding of the nature of life. At the most basic level, we gather knowledge about the functioning of life-giving systems and about the processes of growth, development, and decline. Combining and developing this basic information leads to ways of understanding, preventing, and curing disease and disability.

Our lives are influenced every day by mass social actions such as the fluoridation of water, mandatory sanitation, and pollution control practices, all of which have resulted from information gotten in basic laboratory studies. Individuals also participate directly in the application of research to health when they change life styles by improving eating habits or stopping smoking.

Perhaps one of the biggest problems we face is the enormous educational process which needs to take place in this country before we can eradicate negative attitudes toward aging. These attitudes carry over into our medical schools and research institutions. Unbelievably, there is minimal teaching of geriatric medicine in United States medical schools. There is no greater need for research than in the field of aging. The creation of the National Institute on Aging by the Congress two years ago is indicative of Federal recognition of this need.

a. The Research Plan

Recognizing the necessity for an orderly approach to the various aspects of aging in America, the Research on Aging Act directed the Secretary of DHEW to develop a plan for research on aging. The Secretary designated NIA as the lead organization in the preparation of the research plan. NIA, working in conjunction with the National Advisory Council on Aging, has now completed its recommendations to the Secretary. The Secretary has in turn transmitted this plan to Congress.

Any well-conceived research plan must necessarily deal with specifics. But research on aging is particularly vulnerable to fragmented approaches. The plan, therefore, is conceived as a holistic approach to discovery of information about aging.

In the course of developing this plan, the NIA was able to begin defining its mandate in more specific terms. Its mission extends the study of aging beyond decline, loss, and decrement, to an examination of the normal processes of development that contribute to the quality of life in later years. By investigating the wide variety of factors that constitute and affect the aging process, the NIA hopes to be able to translate the accumulated knowledge into ways of preventing, modifying, or reversing these factors. The ultimate goal of the Institute is to improve the quality of life, and extend the healthy, productive middle years of life.

In some cases, we can move ahead fairly rapidly, with applicable returns on our research investment possible within five years; for other issues, their very complexity demands a longer, more sustained effort, although significant improvement in our understanding is possible within several years.

The Institute is divided into intramural and extramural programs. At its intramural research facility in Baltimore (commonly known as The Gerontology Research Center), the Institute conducts studies ranging from investigations of the tiny molecular building blocks of life to the broad age-related changes that occur over long periods of time, such as the decline in the body's ability to resist disease. A longitudinal study of aging uses a sample of 650 men to examine the effects of aging on metabolism, organ function, hormone biochemistry, psychology, and genetics. Plans are now being made to include women in the longitudinal study.

Grant- and contract-supported research covers a wide variety of areas, such as cellular aging, endocrine changes with age, immunologic aging, the pharmacology of aging, the use of experimental animals in aging research, cognitive changes with age, and societal aspects of aging. Extramural research (supported by grants to universities and medical centers) is administered by the Adult Development and Aging Branch. The extramural program is evaluating the need for the development of centers for aging research. These centers would permit a multidisciplinary approach to the study of aging, ranging from biology to geriatric medicine and behavioral studies.

The need for tangible and immediate improvement in the quality of life for the aged has shifted research away from its exclusive disease orientation, with its study of the sick and institutionalized, to a broader inquiry into normal physiological changes occuring with age, the behavioral constitution of the aged, and the social, cultural, and economic environment in which the elderly live.

To identify issues amenable to research or requiring additional effort, the National Advisory Council on Aging sought the advice of the research community. In so doing, it identified the following:

Biomedical issues amenable to a short-term effort include:

1. The decline in immunological competence with aging, and its implications.

2. Variations in the process of aging, life expectancies, and the patterns of disease among the aged of different ethnic, racial, and cultural groups, as well as between the sexes.

3. The interaction of aging and its accompanying diseases with such external factors as nutrition, physical fitness, and response to medicines.

4. Collaborative studies with other Institutes of the NIH and with other DHEW agencies of diseases more common to the aged, including diabetes mellitus, senile dementia (organic brain syndrome), atherosclerosis, and osteoporosis.

5. The effective diagnosis and management of the reversible forms of senility.

Long-term studies needed in the biomedical area are:

1. The criteria for healthy and successful aging.

2. The mutually interacting influences of aging and disease.

3. The influence of cultural background on successful aging.

4. Personal and economic costs of major diseases in old age.

5. Prosthetic technology as an aid to the maintenance of an independent life.

Short-term investigations in the behavioral and social areas include:

1. The social costs, system costs, and socioeconomic impact of an increased population of the old on communities, public and private services, and the old themselves.

2. The advantages and disadvantages of flexible retirement policies to society as a whole and to the aged in particular.

Short-term investigations in the behavioral and social areas (continued):

3. Occupational and social roles for older people.

4. Adjustments to crises in the life cycle.

5. The impact of income-maintenance programs.

Long-range projects that merit study are:

1. Relationships among family structure and support, life styles, and patterns of aging.

2. Middle age as a transition to old age.

3. Personality changes during life, from young adult to very old age.

4. Improvement and maintenance of memory.

5. The meaning and impact of the new age structure on American society.

Many issues in the area of human service and delivery were also identified for the use of the Department of Health, Education, and Welfare and are improving the quality of services to the aged.

b. Advances In Aging Research

At the same time that identification of research directions was being conducted, the NIA was actively engaged in organizing, staffing, and performing research. One of the Institute's most valuable and productive endeavors is the Baltimore Longitudinal Study, conducted at the NIA's Gerontology Research Center (GRC). The study is specifically designed to collect medical data on a number of individuals over a long period of time and see how these data change with age.

The Baltimore Longitudinal Study was begun in 1958, before the formation of the NIA. Every 18 months, approximately 650 men, ranging in age from 20 to 96 years, come to GRC and undergo 2 1/2 days of extensive examinations that include clinical, biochemical, and psychological tests.

NIA sponsored 52 projects in its intramural research program in addition to the Baltimore Longitudinal Study last fiscal year, and expects to increase its program significantly in Fiscal Year 1978. Those activities produced many advances, including the following findings:

* Older men generally handle alcohol as well as younger men physiologically, but there are differences in metabolism. The same amount of alcohol, for example, produces a higher peak blood alcohol level in older men, a finding which is consistent with a reduced body mass and total body water content known to occur with aging.

* Physiologically, older men appear less intoxicated than their younger counterparts, but testing showed that their memory and decision-making ability was impaired more than in younger subjects. Since alcohol has greater psychological effects on the old and they perceive those effects to a lesser degree, the drug is potentially more risky for older men than for younger ones.

* Older hearts tend to have thicker walls and fill slower than younger hearts, but the changes apparently have little to do with function. Both under stress and at rest, old hearts are just as good as young hearts, all other factors being equal.

* Cells from older donors grown in tissue culture have larger volumes than similarly cultured cells from younger men, but they tend to reproduce themselves much more slowly and they don't live nearly as long as "younger" cells. On the basis of these and other findings, investigators conclude that there is probably a highly regulated mechanism inside cells which is responsible for aging at the cellular level.

It is clear that the NIA will have to excite the interest and then support many more investigators if it is to carry out satisfactorily the mission that Congress has given it. The question, of course, is where these investigators will come from. There are several possible sources. Investigators in other fields may shift to aging research. Newly trained scientists may take postdoctoral training that launches them in research on aging. Predoctoral students can conduct their research in an area of their discipline that bears on aging processes or the problems of the aged. NIA plans to recruit scientists from all these sources.

c. Future Plans

Fundamental Biology of Aging: Studies of the aging process at a fundamental level are essential if the National Institute on Aging is to responsibly address public expectations of an improved quality of life throughout the lifespan. The basic mechanisms of the aging process are still unknown. Any attempt to ameliorate age-correlated health problems, such as are seen in the organic brain syndrome and osteoporosis, may ultimately depend upon knowledge of the aging process at the molecular and cellular levels. Furthermore, knowledge achieved at this basic level must then be integrated with knowledge of more complex biological systems within the organism. Current theories, hypotheses, and concepts within the field of biological gerontology are inadequate to justify a highly directed research program on the mechanisms of aging. In order to insure growth in the field, we must stimulate new ideas among competent researchers. Although most experimental work must be conducted on laboratory organisms, studies should be conducted on humans or human materials wherever possible, or on animal model systems which approximate human aging phenomena if humans cannot be used. A great deal would be gained by comparing the characteristics and bases of the aging process in selected organisms throughout the animal kingdom. Such studies might be expected to indicate which phenomena are basic to all animal life, and consequently provide a clearer insight into the human aging process.

Senile Dementia: One of the most disturbing aspects of aging is a condition related to the mental deterioration of the old generally known as "senility." Although called by this single name, the condition is probably a mixture of disease-derived changes coupled with less specific and poorly understood deteriorative changes associated with growing old. We now know that there are approximately one hundred, if not more, causes of "senility," many of them reversible. They range from malnutrition to excessive medication, unrecognized congestive heart failure, walking pneumonia, to anemia. All too often, doctors dismiss confusion and forgetfulness as an irreversible and inevitable part of the aging process, when in fact many cases are treatable. But there are presently severe irreversible organic brain diseases that develop among older people. One such condition is commonly called senile dementia and accounts for the presence of perhaps one-half of the 1.2 million persons in American nursing homes. It results in enormous social and health costs, as well as personal and family anguish. Research in the causes and treatment of these various dementias would improve care and reduce institutionalization.

Drugs and Aging: An immediate contribution to the prevention of disabilities and institutionalization of the elderly would be the support and conduct of research in pharmacology and aging. The basic concepts and tools for developing the pharmacokinetics (absorption, distribution, etc.) and pharmacodynamics (e.g., paradoxical reactions, toxicity) of aging are available, but the work has not been done. The classic text in pharmacology does not even have age in the index. Nor do the National Library of Medicine's reference volumes of "Drug Interactions." The absence of a comprehensive body of knowledge on drugs and aging poses a serious problem. Physicians inadequately educated in the special considerations of the old have no prescription guidelines on which to rely, and often drug overuse and misuse result in unnecessary falls and fractures, episodes of confusion (often misdiagnosed as "senility"), excess hospitalization, and expensive institutionalization in nursing homes.

Retirement: The current system of mandatory retirement results in economic and human loss to society. It makes no sense whatsoever to decrease the productive contribution of any segment of the population and then pay out money for its care and support. Just as we have flexible ways of promoting people, so too should we have flexible ways of retiring them. In order to work, however, this system must be based on a set of standards of health and well-being which are both measurable and reproducible. The NIA could contribute by collecting the necessary psychological and social assessment data on which to base a retirement test battery.

In 1975, the Federal Government paid out $36 billion in social security income benefits to the elderly, and $6 billion in civil service benefits to annuitants. Flexible retirement procedures would potentially save some of these billions of dollars. With more people working past the age of 65, there will be fewer collecting annuities. Moreover, as the impact of the changing age structure is felt and the number of working generations decreases, older people will be an increasingly valuable component of the national work force, reducing the present dependency of the old on younger workers.

Prosthetics: The technology which put men on the moon and created flying belts for astronauts can be adapted and applied to the development of prosthetics to assist older people who are severely disabled by stroke, arthritis, and muscular weakness. Advances in

bioengineering in recent years have not been sufficiently harnessed for use in prosthesis.

Information Dissemination: The broad mission of the NIA and the size and high motivation of the aging constituency require that public information and health education programs of the Institute be given high priorities. The NIA will try to make up some of its deficit in information production capacity by working with voluntary organizations that already have well-established channels of communication, such as the American Association of Retired Persons, the National Council on the Aging, and the National Council of Senior Citizens.

Informational materials will emphasize the need for research on aging, as this need is not entirely recognized or understood by all those interested in aging and the aged. Informal fact sheets are also planned on areas of general interest to the public, such as research on senility, retirement, sexual potency with age, immunologic aspects of aging, grief as a part of aging, the medical aspects and social implications of the longer life expectancy for women, drug-drug and drug-age interactions, and self-care habits for the old.

Philosophically, the goals of the information program include a desire to promote a better image of aging and the aged and to foster an interest among professionals and paraprofessionals in choosing a career dedicated toward the needs and special interests of the aged.

Self-Help and Self-Care: Self-help (an organizational approach to aftercare education) and self-care (the individual's desire and ability to care for himself, based on learning proper procedures and skills) have been practiced since the earliest history of man. However, during the 1970's these intervention approaches have received increased recognition as a means for improving the nation's health care. They are seen as a means for reducing preventable illness, disability, and death, and thereby reducing the cost of health care. The emphasis is on the individual's responsibility for achieving better health through his/her own efforts. Yet there is little evidence that the public wishes to be free of medical judgment. Are the old, in particular, less motivated to be independent of a medical care system? Research is needed regarding the transfer of functions for health care and prevention to the patient, especially the older patient, to determine whether this leads to better utilization of the health care system and to improved well-being of the individual.

Regional Aging Animal Models and Colonies: The lack of aged experimental animals is a major limiting factor to the study of aging. Until recently aging studies in animals, particularly rodents, were usually limited to those animals hardy enough to survive the stress of infectious disease and a fluctuating physical environment. Respiratory disease, parasitism, and the environmental stresses of nutritional, temperature, and humidity variability reduced the numbers of aged animals so that few--if any--animals survived to natural senescence.

Those that survived were so debilitated by infectious disease, stress, and pathologic lesions that it was virtually impossible to separate physiologic and morphologic concomitants of aging from disease, stress, and induced pathology.

In recent years sophisticated methods for excluding microbial pathogens and controlling environmental changes within reasonable limits have evolved. These include caesarian derivation to separate the animal from the disease of the maternal parent and rearing the offspring in a barrier containment room in which personnel can enter only through locks, with work materials autoclaved and food pasteurized before entry into the barrier room.

The development of resource colonies of aged animals in several defined strains and species under the conditions necesary for rearing aged animals is beyond the usual capability of university-based investigators, who are not usually willing to commit available space to long-term holding (2 to 5 years) of aging animals. Commercial animal breeding laboratories are also reluctant to commit space and funds to long-term projects in which turnover of animals is low, species and strains may change, and commercial experience is limited.

In view of the risk of infectious disease or environmental accident that may wipe out or compromise the entire holdings of aged animals at a central location, it is desirable to separate the aged colonies to minimize risks. The dispersal of colonies will increase availability and accessibility of the animals to more investigators. Also, it will minimize excessive mortality and morbidity that may result from extended transit time to the investigator. Finally, the flexibility to develop special models common to a particular laboratory or locale can be readily accomplished in collaboration with scientists interested in a unique species or strain.

Because of the special facilities required, the long-term commitment to rearing aged animals at research institutions and the reluctance of commercial breeding laboratories to develop aging animal colonies, it is incumbent upon the National Institute on Aging to develop colonies of commonly used strains and species of animals as well as selected animal models that may have special value for answering questions about aging processes. The prudence of developing regional colonies is evidenced by the all-too-frequent loss of valuable strains and species due to disease or environmental accident.

B. NATIONAL INSTITUTE OF MENTAL HEALTH

Since 1900, the percentage of the U.S. population aged 65 and over has more than doubled. In actual numbers, the increase has been from 3 million in 1900 to 20 million during the current decade. Some 5 percent of the aged live in institutions. Of these, about 12 percent are in mental hospitals, with the remainder in nursing and other types of homes for the aged and chronically ill. The elderly comprise 8 percent of additions to state and county mental hospitals, and 28 percent of the resident patients. Approximately 75 percent of patients 65 and over who live in nursing and personal care homes have some degree of mental impairment. The death rate from suicide among the elderly is nearly double the national average (21 per hundred thousand, as opposed to 12 per hundred thousand).

a. Research

Mental Health research has played a unique role in dealing with problems of aging. Until comparatively recent times, there was a general persuasion that the deteriorative mental processes associated with aging were almost exclusively the product of physiological change. Although this premise is frequently true, mental health research has demonstrated increasingly that social, cultural and economic conditions also have a major impact on the personality changes associated with the aging process. Originally, many of the prevailing notions about aging and the elderly came from studies of the sick and institutionalized. As a result, the inference that mental impairment was a customary by-product of old age was rather strong. Beginning in 1955, the NIMH conducted a five year study of 47 males, carefully selected so as to find a healthy cohort of older persons who were functioning normally in their communities. The purpose of the study was to trace the effect of the passage of time on a group of this type. As expected, there

was some slowing of brain and sensory function resulting from arteriosclerosis. However, the group as a whole remained vigorous, alert, and deeply involved in everyday living. There was strong evidence to indicate that the relative social and economic independence of this group was a major factor in its continued ability to function. Conversely, personal or economic setbacks produced depression and other more severe psychological symptoms. From these findings, it was inferred that professional mental health services, if made available during and after periods of personal crisis, significantly alleviated behavioral problems previously considered to be almost exclusively physiological in origin.

NIMH research relevant to the mental health of the aging include projects dealing with (1) the etiology, diagnosis and treatment of mental disorders; (2) the development and delivery of mental health services; and (3) the prevention of mental disease. One project currently underway in Minneapolis involves the demonstration and evaluation of a service model for mentally impaired aged persons who are institutionalized. Every member of the institutional staff is being trained to create a therapeutic surrounding in which to maintain the current level of patient functioning. The program is being carried out through careful selection of staff to work with aged persons, with the intent that such staff will relate to him until he is able to develop other relationships. Both the aged person and his family are involved in a variety of treatment activities. The project has significance in development of a social model for treatment of aged impaired persons through focus on utilization of the residual strength and health of the impaired person.

A community-based program for the mentally frail elderly, sponsored by the New York City Office for the Aging, involves the development of coordinated service to deliver physical, mental and social supports in order to enhance the ability of mentally frail elderly persons to remain independent. The core of the program will be a coffee house center, provided by Bellview Hospital. The Community Service Society of New York will offer social supports. This project will be evaluated as a model for sustaining frail elderly persons in the urban community, thereby reducing unnecessary institutionalization, or delaying it until absolutely necessary.

A recently completed project, involving the New York State Department of Mental Hygiene, represented a cooperative effort between the United States and United Kingdom. This cross-national program addressed differences in the diagnostic practices between

the United States and United Kingdom. An important part of the work was the development of reliable and valid methods of classifying patients in both countries. One of the several publications of this study reports on the difficulties of diagnosing mental disorders in the elderly; compares psychiatric and psychological assessments; and suggests that the structured interview may yield more reliable data because of the difficulties of determining what is abnormal in the aging person.

The NIMH -funded hospital improvement program has enabled specific state mental hospitals to develop improved programs of care and rehabilitation for the large populations of the aged in state mental hospitals. Projects have included improved diagnosis and treatment, physical and social rehabilitation, treatment of emotional problems, and coordination with community agencies, and outreach services.

b. Training

The NIMH awards training grants for development of workers to deliver services to the aged; upgrading the staff of long-term care facilities; and for predoctoral and postdoctoral training in biomedical and behavioral research on aging.

c. Services

Mental health services to the elderly represent a mandatory requirement for Federal grant support to a Community Mental Health Center, under the Community Mental Health Centers Act.

d. Center for Studies of Mental Health of the Aging

The NIMH Center for Studies of Mental Health of the Aging was established in August of 1975.

The mission of the Center is to centralize the institute's efforts on behalf of the mental health of the aging persons. The Center coordinates NIMH programs affecting aging persons in the area of research, training and services. It collaborates with other government agencies, in particular the Administration on Aging and the National Institute on Aging. It also relates to public and private agencies at the national, regional, state and local levels. The goals of the Center are carried out through technical assistance, and its efforts are directed toward (1) research into areas in which knowledge is needed; (2) incorporation of mental health consideration in programs for aging in which mental health components have been neglected; (3) develop-

ment and evaluation of innovative programs for the delivery of mental health service to the aged; and (4) development and dissemination of information about mental health of the aged.

e. Cooperative Efforts with Other Agencies

A considerable array of formal and informal relationships exists between the NIMH Center for Studies of Mental Health of the Aging and the National Institute on Aging. The two organizations have worked out an arrangement by which research applications of interest to both organizations should be dually assigned. Following each assignment, responsibility is given to the Institute having the greater interest in the project. On occasion, projects with dual assignments, approved by the primary institute but for which sufficient funds are not available, have been transferred to the secondary institute for funding consideration. During the current fiscal year, NIMH, NIA, and the National Institute of Neurological and Communicative Disorders and Strokes (NINCDS) will be jointly sponsoring a research conference on senile dementia. The NIMH Center on Aging is also collaborating with the Administration on Aging, which is undertaking an inventory and analysis of all Federally supported, relevant research and demonstration projects related to aging.

f. Legislative Developments

Section 603 of the Community Mental Health Centers Act of 1975 (Public Law 94-63) directed the Secretary of Health, Education, and Welfare to appoint a committee on mental health and illness of the elderly. The committee was charged with the task of making recommendations respecting (1) the future needs for mental health facilities, manpower, research, and training to meet the mental health care needs of elderly persons; (2) the appropriate care of elderly persons who are in mental institutions or who have been discharged from such institutions; and (3) proposals for implementing the recommendations of the 1971 White House Conference on Aging respecting the mental health of the elderly. The Secretary was directed to report the findings of the committee within one year from the date of enactment of the law. Development of the Committee has been an NIMH responsibility. The committee members have been chosen, are currently meeting, and are expected to produce their findings during the current fiscal year.

C. HEALTH RESOURCES ADMINISTRATION
1. DIVISION OF FACILITIES DEVELOPMENT

A primary objective of the Division of Facilities Development (Hill-Burton program) is to stimulate the modernization and construction of facilities needed to buildup an efficient, well-coordinated network of services for the acute care, ambulatory care, long-term care, and rehabilitation of all persons, including the aged and aging. Since the enactment of the Hill-Burton program, the Division has provided assistance for the modernization and construction of 104,098 long-term care beds in chronic disease hospitals, nursing homes, and units of general hospitals.

The need for modernization and construction of long-term care facilities continues at a high level. As the aging population continues to increase, the demand for adequate nursing home care for them must be met. In addition, the enactment of the Medicare, Medicaid and other programs partially removed the economic barriers to care of the aged. State agencies report that 354,000 long-term care beds, including extended care facility beds, need to be modernized or added.

P.L. 93-641, signed on January 4, 1975, extended and extensively revised the Hill-Burton Program. Long-term care facilities will no longer be aided as a separate formula grant category. However, they will be eligible under two types of formula grant assistance: (1) modernization of health facilities, and (2) construction of new inpatient medical facilities in areas which have experienced recent rapid population growth. The same facilities are also eligible for loans or loan guarantees with interest subsidy. A third type of grant assistance (Sec. 1625) is project grants for construction and modernization projects designed to prevent or eliminate safety hazards in medical facilities or to avoid noncompliance by such facilities with licensure or accreditation standards. Grant or loan assistance from FY 1976 and 1977 appropriations (except Sec. 1625 grants) are awaiting the publication of regulations for Title XVI. At that time, $40.1 million in formula grants and $250 million in loan or loan guarantee authority will be available for the priority projects in each State. Section 1625 public facility project grants have already been opened for initial applications for the $11.4 million.

In addition, the following services provided by the Division of Facilities Development contribute to improved health care of the aged and others throughout the Nation: (1) technical and professional consultation regarding all aspects of facility functional planning, design, maintenance, and construction, which is available to all public agencies, and nonprofit organizations; and (2) guide material relating to the planning, design, equipping, and construction of health facilities, which is continually being developed and distributed.

2. NATIONAL CENTER FOR HEALTH STATISTICS

All health statistics prepared by the National Center for Health Statistics (NCHS) can be presented in terms of specific age groups.

Measures of morbidity among the noninstitutional population include the incidence of acute conditions and injuries, number of days of disability, prevalence of chronic conditions, and the number of persons whose activities are limited due to chronic conditions. The latter category is the measure of health status which increases most rapidly among the elderly.

These data from the household Health Interview Survey are usually presented for the broad age groups 45-64 and 65 and older so that some other characteristics which are related to both age and health can also be shown: family income, educational attainment, and living arrangements. Also reported in the interview survey are number of visits to physicians, medical specialists and dentists, episodes of hospitalization, and expenditures for various types of health services.

The Health and Nutrition Examination Survey is one of the continuing NCHS programs. This program is designed to obtain that type of health information which can be best or only obtained by direct physical examinations, tests, and measurements performed on national probability samples of the population. Nutritional assessment and general health including anemias are made for persons 6 months through 74 years of age, and specifically for population groups at high risk of poor nutrition, e.g., preschool children, the aged, the poor, and women of childbearing age. Diabetes and liver disease are assessed on adults 20-74 years of age; arthritis of the back and spine, and heart disease are assessed on adults 25-74 years of age; kidney disease is assessed in the group 4-74 years of age; respiratory function and hypertension are assessed on sample persons 6-24 years of age; allergies and hearing are assessed on sample persons 4-74 years of age; and speech defects are assessed on 4, 5, and 6 year olds.

The National Center for Health Statistics completed data collection and processing for the first national survey of 2,000 nursing homes in December 1974. This survey provides data on the operating costs of the homes and on the characteristics of employees on their staffs, including staff attitudes as an indication of quality of care. In addition, data were collected on approximately 20,000 resident patients in these homes. These data include sociodemographic characteristics, mental status, health status, assistance needed in performing activities for daily living, diagnosis, medical history and last examination, charges and source payment, and any discharge plans currently being analyzed and published.

Reports which have been completed are "Financial and Operating Characteristics of Nursing Homes"; "Characteristics and Social Contacts and Activities of Nursing Home Residents"; "Utilization of Nursing Homes"; and "Nursing Homes in Profile." Other reports on residents' health status, charges for care, medical services received, and staff characteristics are being prepared, as is an indepth analysis of financial characteristics. The second National Nursing Home Survey is scheduled for the spring and fall of 1977.

The Hospital Discharge Survey measures morbidity associated with hospitalization in short-stay hospitals. Information is obtained from the medical record of patients including detailed diagnosis and surgical procedures. Utilization measures including discharge rates and average lengths of stay are reported annually by diagnostic categories, by type of surgery, by characteristics of the patient and by characteristic of the hospital. Data are usually presented by broad age groups but data by any grouping are available on special request. "Utilization of Short-Stay Hospitals: Annual Summary for the United States, 1974" presents the latest published data from the Hospital Discharge Survey.

The National Ambulatory Medical Care Survey, another continuing program of the Center, is designed to explore the provision and utilization of ambulatory medical care in the doctor's office. Data are provided on the number and rate of office visits, by physician's specialty, type of practice, and geographic location, and by the patient's age, sex, and race. Also provided are the number of visits by patient's medical problems, and physician's diagnosis, treatment, and disposition decisions. One forthcoming report on 1975 data will be concerned with the visit experience of persons 65 years and older and how their experience differs from that of other age groups. Other reports nearing completion deal with visits to internists, pediatricians, obstetricians and gynecologists, general surgeons, general and family practitioners, osteopaths, and a summary report on all data collected in 1975.

3. BUREAU OF HEALTH MANPOWER

Training programs to prepare registered nurses as geriatric nurse practitioners to deal with the problems and diseases of the aged and provide primary care for the elderly are supported under the Nurse Practitioner program.

D. HEALTH SERVICES ADMINISTRATION

1. BUREAU OF MEDICAL SERVICES

The Department of Health, Education, and Welfare has a legislative mandate to provide direct health care services to specified beneficiaries under provisions of the Public Health Service Act and the Dependents' Medical Care Act. This responsibility is discharged, in part, through the Bureau of Medical Services (BMS) of the Health Services Administration and, within the Bureau, through its Division of Hospitals and Clinics and Division of Federal Employee Health. The program authorities of the Bureau's Divisions of Emergency Medical Services and Health Maintenance Organizations do not encompass the direct delivery of health care services.

The Division of Hospitals and Clinics provides comprehensive health care services to American Seamen, active duty members of the U. S. Coast Guard, members of the National Oceanic and Atmospheric Administration, and to active duty Commissioned Officers of the U. S. Public Health Service. Services may also be provided to retired members of the uniformed services and to dependents of active duty and retired members of the uniformed services under the authority of the Dependents' Medical Care Act.

In addition, the Public Health Service Act permits the providing of limited health services to Federal employees by the Bureau's Division of Federal Employee Health.

Health care services within the Division of Hospitals and Clinics (DHC) are provided by eight general medical-surgical hospitals, one specialized treatment center (Hansen's Disease), 26 free-standing outpatient clinics, and more than 400 contract physicians and hospitals located throughout the United States. This major system constitutes a nationwide network within the Department for the delivery of comprehensive health care services, for training, and for research. In addition, the Division of Federal Employee Health operates 136 clinics in Federal installations across the country.

As compared to Fiscal Year 1975, total workload increased throughout the system, particularly with respect to ambulatory care visits which registered 7.9% increase during Fiscal Year 1976.

Funds for clinical research studies are distributed through the Central Clinical Investigations Committee of the Division of Hospitals and Clinics, a formally-constituted body, that is also responsible for monitoring and evaluating research programs. During the year,

approximately $300,000 of Fiscal Year 1976 funds of the Division of Hospitals and Clinics were expended for clinical research, of which $225,000 was allocated to research in Aging. Other studies in PHS hospitals received $1,028,000 from the National Institutes of Health and $389,000 from the National Center for Health Services Research during Fiscal Year 1976 for research projects not related to Aging.

Most of the PHS beneficiaries are adults and the proportion of beneficiaries who are 60 years old and.older is increasing, as is true in the general population. While it is known that all of the USPHS hospitals and outpatient clinics treat persons aged 60 and over, precise data regarding the number and services rendered to this age group on an outpatient basis cannot be obtained at this time. During F.Y. 1976 of the 31,819 discharges from USPHS hospitals in 7,646 instances the patient was over 60 years of age and 157,671 patient days were utilized by this group. The estimated cost of these services was $17,659,152 based on an average daily rate of $112. The average length of stay for this age group is somewhat longer than for younger individuals. American seamen constitute a major PHS beneficiary group and there are probably more single males in this category than in the population at large. As a consequence, finding suitable nursing homes for those in need of long-term care constitutes one of the major difficulties in discharge planning.

Early in the calendar year 1976, the Geriatric Day Treatment Center (GDTC) located on the campus of the USPHS Hospital in Baltimore became operational. Services are delivered by a multidisciplinary staff and this program provides an alternative to institutionalization and is structured around an organized regime of activities of daily living (ADL) and health services during the day in a protective group setting. Additional important program components include nutrition, counselling and transportation. Program participants are persons 60 years of age and older referred from PHS beneficiary groups, the Geriatric Evaluation Service of the Baltimore City Health Department, community organizations and private physicians. Program objectives are:

1. Enhance activities of daily living by providing instruction in self care, health maintenance, consumer education and/or referral to other services required to assist the aged to remain in or return to their homes or communities.

2. Increase effectiveness of the individual through the service and consultation of experts provided by the hospital to develop health care plans to meet the needs of individual applicants or development of general program.

3. Improve health status by providing necessary diagnostic, remedial or treatment services and arrangements for obtaining physician or hospital services in case of emergency and by maintaining necessary liaison with other providers of health services to assure the provision of services necessary to carry out medical recommendations.

4. Reduce isolation by providing the means for aged persons restricted in their mobility to get out of the house; and encourage regular attendance on individually scheduled days providing transportation.

5. Promote socialization by offering companionship in a pleasant, safe and comfortable environment and stimulate interests by offering satisfying leisure time activities.

6. Conserve family interest and support by offering respite as required during part or all of the work week and by providing individual and group counselling.

When the GDTC was established it was anticipated that it would offer extensive opportunities to serve as a demonstration model and research laboratory in the development and operation of day care programs for older persons. This hope has already begun to be realized through the consultation and technical assistance that the GDTC has been able to offer to staff at several other USPHS hospitals, associates working on various levels of local and state government and colleagues who are program managers of other geriatric programs in Baltimore and in other parts of Maryland.

The GDTC staff is very much interested in enlarging the participant group and in formally testing the viability of certain observations and theories as they apply to the care and treatment of this population group. The USPHS Hospital in Baltimore recently submitted an application to the Administration on Aging (AoA) for Title III funds to partially support a demonstration program with this expanded scope. Several other hospitals in the USPHS system are interested in developing similar programs and are currently engaged in preliminary program development.

During F.Y. 1976, 21 clinical research projects indirectly related to aging were operational in six USPHS hospitals (in Baltimore, Boston, New Orleans, San Francisco, Seattle and Staten Island). These projects were supported by $225,317 of DHC/CCIC funds. Potentially, the multiple facilities of DHC could be used to study, develop and/or apply in new ways, various methods and techniques leading to the improvement of the delivery of services to older persons. In this regard, the Division believes it could play a significant role in a vigorous intergovernmental effort.

IV. SOCIAL AND REHABILITATION SERVICE

A. ASSISTANCE PAYMENTS ADMINISTRATION

Under the maintenance assistance programs, cash payments are made to needy persons for the cost of food, shelter, clothing and other necessary items of daily living.

P.L. 92-603, enacted October 30, 1972, established a national program to provide supplemental security income to individuals who have attained age 65 or are blind or disabled. The national program became effective as of January 1, 1974, since which time the Social Security Administration has been responsible for making Federal payments to eligible recipients.

Prior to that date, the maintenance assistance program supporting aged persons was old age assistance. Additionally, there were some persons over age 65 who were recipients under the aid to the blind and aid to the permanently and totally disabled programs, plus aged persons in the aid to families with dependent children program. Since January 1, 1974, these programs have continued in effect in Guam, Puerto Rico, and the Virgin Islands, and the Assistance Payments Administration retains responsibility for administering them in these areas.

The number of aged persons and the total Federal share of cash payments for maintenance assistance programs affecting the aged are shown in Table 1 below for fiscal years 1974 through 1978.

Table 1. -- Number of aged and Federal share of payments

Fiscal Year	Number of Recipients	($ in thousands) Federal Payments	($ in thousands) Administrative Cost	Average Annual Payment Rate Per Recipient
74 Actual 1/	1,959,670	$575,427	$59,982	$576.01
75 Actual 2/	20,189	1,994	1,768	197.50
76 Estimate 2/	21,677	2,340	1,851	215.90
TQ Estimate 2/	21,700	600	480	221.20
77 Estimate 2/	21,900	2,433	1,825	221.90
78 Estimate 2/	21,800	2,400	1,725	220.20

1/ Includes one half-year payments and costs for programs affected by P.L. 92-603.

2/ Adult programs in Guam, Puerto Rico, and Virgin Islands only.

B. PUBLIC SERVICES ADMINISTRATION

The Public Services Administration has responsibility for administering the Social Services program authorized under Titles I, IV-A, X, XIV and XX of the Social Security Act, as amended. Except for Guam, Puerto Rico, and the Virgin Islands, Title XX superseded all of the authorizing Titles cited above as of October 1, 1975.

Under Title XX, grants are made to States for services to eligible individuals based on income or public assistance status. States may choose the services they will provide, as long as each service conforms to at least one of the five goals stated in the Act.

A variety of services directed at assisting needy aged persons to attain or maintain the maximum level of self-care and independence are provided through the Social Services program. Included are such services as day care, foster care, protective services, health related services, homemaker, chore, transportation, and other services that assist elderly persons to remain in their own homes or in community living situations. Services are also offered which facilitate entry into institutional care when needed and to help the individual move out of institutional care whenever possible. In fiscal year 1978 it is estimated that States will expend $318,000,000 Federal dollars under the Social Services program on services to the aged.

C. MEDICAL SERVICES ADMINISTRATION

Title XIX, known as Medicaid, provides Federal matching payments for State expenditures for health care for the poor. In FY 1976, fifty-three States and jurisdictions were participating in Medicaid (Arizona is the only state not participating; however, Arizona plans to begin its Medicaid program on July 1, 1977.)

With the federalization of the adult categories on January 1, 1974, under the Supplementary Security Income (SSI) program, States are not in all cases required to provide Medicaid to all adult recipients of cash assistance under Title XVI, as was the case in the past under Titles I, X, XIV, or XVI. Limited Medicaid coverage of SSI cash assistance recipients will apply in States which, in determining Medicaid eligibility, opt to apply any eligibility criteria from the January 1, 1972, medical assistance standard which is more restrictive than the eligibility requirements for the Federal Title XVI program for aged, blind, and disabled individuals. States which retain any eligibility factor(s) from their January 1, 1972, standard which is (are) more restrictive than the Title XVI eligibility factor(s) must deduct a person's medical expenses from his income in

determining eligibility. (They are not required to cover Title XVI cash assistance recipients who have higher income or resources, or who otherwise do not meet the January 1972, medical assistance standard.) Fifteen States have restricted Medicaid eligibility of SSI recipients under this option.

Thirty-six States extend Medicaid coverage to all recipients of cash assistance under the SSI program. States also have the option of providing Medicaid coverage to persons receiving a State Supplemental payment, subject to certain limitations. In addition, States may still elect to cover certain medically needy persons who are eligible for help only with their medical bills and who do not receive maintenance payments.

States are required to provide in their Title XIX program: inpatient hospital care, outpatient care, skilled nursing home care for individuals 21 and over, early and periodic screening, diagnosis and treatment services for children under 21, family planning, physicians services, lab and x-ray services and home health services, as well as, by regulation, transportation to medical care where needed. Use of skilled nursing home services, particularly, is primarily by the aged. In addition, States may cover optional services, many of which are particular concern to the elderly; for example, 50 offer prescribed drugs, 36 cover eyeglasses, 32 finance physical therapy, and 41 pay for prosthetic devices. Additionally, Title XIX in FY 1974 contained several provisions directed solely to those over 65: payment of Medicare premium, copayment and deductible amounts (for cash assistance recipients), and coverage of inpatient hospital services in institutions for mental diseases.

The aged account for a significant portion of Medicaid expenditures. About 39 percent of the $14.6 billion Federal, State and local program dollars was spent on care for the aged in FY 76, and it is estimated that 4 million people over age 65 received Medicaid services. For most of these persons, Medicaid was providing services which supplemented and complemented those provided by Medicare.

D. OFFICE OF PLANNING, RESEARCH, AND EVALUATION

No SRS programs are targeted on the aged population per se, but elderly persons make up a large percentage of the client population in the Medicaid and Social Services programs. The evaluation and research activities of SRS, therefore, consider the aged as a significant subgroup of the client population.

The demonstration projects program in public assistance under Section 1115 of the Social Security Act has provided waivers to State public welfare agencies for several projects during Fiscal 1975, 1976 and 1977 which are totally or partially concerned with providing a variety of services to elderly recipients in public welfare.

Housing allowances are being made to the elderly in eight experiments which are being carried out by the Department of Housing and Urban Development. Waiver of plan requirements were granted by the Secretary to enable Supplemental Security Income (SSI) recipients to participate in the experiments without having their grant entitlement reduced.

A project in Alaska permitted the exclusion from income for the purpose of determining SSI eligibility of monthly benefits which are paid by the State of Alaska to elderly people who have lived there more than 25 years. Federal legislation has made it possible for this project to continue.

For these projects no additional Federal funds were provided as the State agencies assumed the cost.

As long-term care is a particular area for the aged which has not been included in this narrative, see special report on Long-Term Care.

V. EDUCATION ACTIVITIES

A. OFFICE OF EDUCATION

1. LIBRARY RESOURCES

Federal support for library and information services for the aging is provided by the Library Services and Construction Act (LSCA). Although the 1973 Amendments to the Older Americans Act included opportunities for strenghtening library services to older adults through a new LSCA Title IV, this new title was never funded. Such services therefore, continue to be provided from funding available under LSCA Title I.

Since the elderly reader represents one of the highest user groups of public libraries (according to a 1973 LSCA-support national study) and "aging" is a special project area designated in LSCA program guidelines, numerous library projects are carried out to serve this vital and often neglected segment of the population.

Librarians are responding to the social, economic and physiological problems of the aging in many ways. By providing information and education on aging to professionals and laymen working with senior citizens, and by fostering cooperation among agencies concerned with the elderly's needs, the libraries contribute substantially to the achievement of a positive attitude towards the aged. Library-sponsored pre-retirement counseling and information has smoothed the transition from full-time work to productive and satisfying leisure for many older adults.

Involvement of the elderly in the planning process; employment of senior citizens in programs specifically designed to serve this group; volunteer work; and participation on library boards and advisory councils are all means by which libraries utilize the time and talents of the elderly for mutual benefit. Their talents are also incorporated into oral history projects which aim to preserve the cultural heritage of ethnic groups and geographical locales.

Special programs from public and State libraries reach out to the aging in isolated rural areas and poverty pockets in the city with bookmobiles, Cable TV, and Books-By-Mail delivery. These services are often specially adapted in order to better serve the aged population. In Ohio, for example, an LSCA grant provided for a custom-designed bookmobile which facilitated service to elderly readers in Cleveland's senior day-care centers, nutrition centers and other locations. A hydraulic lift that raises patrons into the bookmobile makes the "Senior Bookshelf" accessible even to readers confined to wheelchairs.

Books-By-Mail, a growing delivery system, has notable impact on elderly persons whose mailbox can connect them with free, prepaid mailings of selected readings. Some libraries have made this popular service even more suitable for the elderly's needs by not only providing large print books, but also large print book selection catalogs.

Regular library programs in which the elderly participate as active members of the community include discussions, films, arts and craft demonstrations, exhibits of senior citizens' hobbies, concerts and forums on consumer issues and health concerns. Many library programs are brought directly to retirement and senior citizen centers and in some cases the elderly are provided transportation to the library for special programs. Librarians and volunteers, often older adults themselves, make person-to-person visits to the homebound, residents of nursing homes and the aged in State-supported institutions.

The blind and physically handicapped persons, a large percentage of whom are aged, are served through personal and mail delivery of talking books and special equipment to facilitate their reading opportunities. LSCA and Library of Congress programs complement each other in serving the elderly handicapped with talking books, braille, and other special reading materials available on loan through a network of 154 regional and subregional libraries for the blind and physically handicapped throughout the country. Those elderly persons disadvantaged both by physical handicaps and by a limited ability to speak English can also receive library services in the form of talking books, large print materials, recordings and reading aids, all in their mother tongue.

Senior citizens from all ethnic backgrounds are served with programs that recognize their diverse needs. Many LSCA projects for the aging in Texas, to cite one example, supply special bilingual library services and programs for the Spanish-speaking senior citizens. In one instance, such service included a bilingual large print card with the phone number of important community service organizations (police, fire, ambulance, etc.) distributed for free by the library that produced it. Outreach programs bring information, education, survival skills, cultural pride and communication capabilities within the reach of all bilingual citizens.

Library-centered independent learning programs geared to a broad range of interests and study goals are attracting an increasing number of elderly citizens pursuing a lifelong learning pattern. For instance, retired and senior citizens are taking advantage of cultural enrichment and continuing education offered by "Learn Your Way" centers in New York, Brooklyn and Queens Borough Public Libraries. By making appointments to confer with "Learning Advisors," specially trained librarians who help patrons find information or special materials, the elderly can be put in touch with a wide range of resources and given continuing assistance on whatever their interests may be.

Lending and reference services, along with immediate information and referral (I&R) services also connect the elderly with front-line community agencies and governmental programs (for example, Social Security, MEDICARE, MEDICAID, Veterans' programs, etc.) that provide for their well-being and indeed their survival. I&R services in general, and those services specifically designed for the aging population, are rapidly increasing in number. Cognizant of the elderly's special information needs, libraries are developing innovative I&R services. In a rural area outside of Los Angeles, California, public libraries used LSCA funds to implement an I&R service delivered from a roving van. This van was staffed with personnel knowledgable about community agencies, especially those concerning the elderly's welfare, and equipped with communications devices which provided contact with the main library for additional resources.

Future plans for library and information services for the aging include the refinement and implementation of model programs developed during the year and the continuation of established services and programs. The extension of library services for the elderly through broader geographical coverage is being undertaken, assisted by a catalog for the dissemination of exemplary LSCA library programs, which includes projects for the aging. Plans are also being considered for the development of public information programs that would connect the elderly population with the available library services that respond to their special needs.

2. ADULT EDUCATION

The Adult Education Program, authorized under the Adult Education Act of 1966, as amended, provides undereducated adults (persons 16 years of age and older) an opportunity to continue their education to at least the level of completion of secondary school and makes available the means to secure training that will enable them to become more employable, productive, and responsible citizens.

The program is a State grant operation administered by State education agencies according to State plans submitted to the U.S. Office of Education and approved by the U.S. Commissioner of Education. States are allotted grants to pay the Federal share of the cost of establishing or expanding adult education programs in local educational agencies and private non-profit agencies. The matching requirement for the State grant program is 90 percent Federal funds and 10 percent State and/or local funds.

The latest compiled reports from the States was for fiscal year 1975. The chart below reveals the age distribution of participants in the Adult Education Program during that year and estimates for fiscal year 1976 through 1978.

Age Group	Actual 1975	Estimate* 1976	1977	1978
16-24	492,615	320,100	342,210	384,780
25-34	338,140	213,400	228,140	256,520
35-44	195,225	145,500	155,550	174,900
45-54	110,716	155,200	165,920	186,560
55-64	50,407	97,000	103,700	116,600
65 & Over	34,107	38,800	41,480	46,640
Total	1,221,210	970,000	1,037,000	1,166,000

*It is anticipated that the percentage of participation in the Adult Education Program by persons 45 and over will show a sharp increase in fiscal years 1976 through 1978. On December 23, 1976 the Commissioner of Education signed a comprehensive Joint Agreement of cooperation between the Office of Education and the Administration on Aging. Implementation at the State and local levels will result in additional efforts to provide opportunities for education for older persons. Also the Bureau of Occupational and Adult Education circulated to the Regions and States a priority statement concerning special projects that will encourage the involvement of Older Citizens in Adult Education including suggestions for implementation.

* * * * *

The Office of Education does not collect cost data per participant by age group. However, by applying the estimated percentage of participation by age group to the amount appropriated or estimated to be appropriated for the fiscal years 1976 through 1978, we estimate the following Federal adult education expenditures by age group.

Age Group	Percentage	1976	1977	1978
16-24	33	$22,275,000	$23,595,000	$26,565,000
25-34	22	14,850,000	15,730,000	17,710,000
35-44	15	10,125,000	10,725,000	12,075,000
45-54	16	10,800,000	11,440,000	12,880,000
55-64	10	6,750,000	7,150,000	8,050,000
65 & Over	4	2,700,000	2,800,000	3,220,000

3. UNIVERSITY COMMUNITY SERVICE AND CONTINUING EDUCATION

Title I of the Higher Education Act of 1965 authorizes grants to the 50 States, the District of Columbia, Guam, American Samoa, the Commonwealth of Puerto Rico, and the Virgin Islands. The purpose of the program is to facilitate community problem solving through cooperation with postsecondary institutions. Each State administers the program by an agency designated by the Governor, under a State Plan approved by the U.S. Commissioner of Education. The State agency establishes program priorities and approves and funds institutional proposals. Funds are provided by a State formula with a 66-2/3 Federal and 33-1/3 non-Federal basis. Of the sums appropriated the Commissioner may reserve 10 percent for special project discretionary grants, and allot $25,000 each to Guam, American Samoa, Puerto Rico, and the Virgin Islands and $100,000 to each of the States and the District of Columbia. The remainder is distributed on a population ratio basis. Total appropriation for fiscal year 1976 was $12,125,000. The same level of funding - $12,125,000- has been requested in the Carter Budget for this program in fiscal years 1977 and 1978. Currently in fiscal year 1977 Federal funds are being made available under a Continuing Resolution.

The State-Grant Program has supported a number of projects designed to assist the older American. During 1976 over 170,000 persons in 35 States participated in 77 such projects. Activities supported by these funds included special programs to meet the educational needs of the elderly; legal aid and housing assistance; professional and paraprofessional gerontological human relations training for those providing care and services for the aging. The cost of these activities was approximately $1,451,000 in Federal funds.

Under Section 110 of the Title I, the Commissioner is authorized to make grants to institutions of higher education, individually or in combination, to assist them in planning, developing, and carrying out programs specifically designed to apply the resources of higher education to the problems of the elderly, particularly with regard to transportation and housing problems of elderly persons living in rural and isolated areas.

Special Projects authorized by Section 106, permits the Commissioner to reserve 10 percent of funds appropriated in order to support special projects which are designed to seek solutions to regional and national problems brought about by technological change. Such special projects are limited to demonstration or experimental efforts. Projects must be based on a design for and the implementation of organized continuing education activity for adults. In 1976 two projects for the Aging received continued support at a total cost of $180,000.

1. A renewal of $100,000 was made to Maricopa County Community College District in Arizona for the project, Six Dimensions for People over Sixty. The project will target services to senior adults. Each college will develop and operate separate program focusing on a different part of the senior adult population and its continuing education needs. Individual projects will use the mass media and direct instructional approaches.

2. In addition, 80,000 in renewal funds were directed to the University of Tennessee (Nashville) for Development of an Institutional Model for Community Services and Continuing Education for the Elderly in which ways to increase higher education access for the elderly will be developed and tested. A consortium of four institutions in Tennessee (Dyersburg State Comunity College, East Tennessee State University, Tennessee Technical University, and University of Tennessee) will conduct the project.

B. OFFICE OF THE ASSISTANT SECRETARY FOR EDUCATION

1. FUND FOR THE IMPROVEMENT OF POSTSECONDARY EDUCATION

The following are descriptions of six Fund-sponsored projects which address the education needs of older persons.

University of New Hampshire
New England Gerontology Center (an affiliate of the New England Center for Continuing Education)
Durham, New Hampshire

For many of the 20 million American citizens over the age of 65, retirement and high age brings financial, physical, and social problems. Pervading and transcending these concrete issues is an intangible which afflicts the consciousness of everyone, young and old, in this industrial society. The concept of the used-up elderly is so much a part of modern America that even those dynamic elders, whose creative service-oriented lives belie the myth, feel themselves a burden. For the, high age is a time to be endured with dignified sadness and resignation; for less fortunate elders, serious psychological problems develop. This state represents approximately 1/4 of the average life, an inconscionable amount of human time and resource to be wasted.

Elderhostel, a low-cost program of educational hosteling, was organized at the University of New Hampshire in direct attack on this concept. Recognizing that a college community is a self-contained world of intense intellectual and social stimulus, the Elderhostel staff planned a program which would offer these resources, at true costs, to people of retirement age. The Elderhostel program, in week-long units, includes study in non-credit courses, hostel-style accommodations in dormitories, meals in college dining halls, and participation in on-going campus life. Tuition costs are paid for by State and Federal grants; hostelers pay the actual room and board costs. Hostelships are available for those who could not otherwise participate. Following the 5-campus, New Hampshire pilot project of 1975, 21 New England Colleges successfully hosted the program in the summer of 1976 for 1,180 older adults.

Of the immediate impact of Elderhostel, there can be no question. Hostelers are personally revitalized by the experience, reporting new energy levels and increased self-esteem. Faculty members are overwhelmingly enthusiastic about the program, often realizing new dimensions and possibilities in their teaching. While no monetary profits are realized, colleges gain public relations benefits that literally could not be purchased. Many administrators are beginning to sense a lessening of the mistrust and resentment traditionally felt by elders towards institutions of higher education, and intend to use the Elderhostel program as a springboard towards further total community involvement.

The future of Elderhostel is not quite so certain. The enthusiasm of the elderly population and colleges all over the country, while testifying to the strength of the Elderhostel philosophy, poses a threat to the quality and character of the program. With Fund support, independent evaluations are being conducted from three perspectives: (1) adequacy of administrative design and potential for expansion; (2) statistical analysis of individual and institutional interest and participation in Elderhostel; (3) behavioral change in Elderhostel participants. It is expected that the results will indicate the optimal direction and future of the Elderhostel program.

Macalester College
St. Paul, Minnesota

The problem this project attempts to alleviate deals with extending effective educational opportunity to older persons (defined as age 55 and over), particularly in intergenerational settings, while also enriching the traditional educational process for the young.

In response to the problem this project trains a staff composed of representatives from each of the Minnesota educational systems: the University of Minnesota; the State University Board; the Private College Council; the State Community College Board; and the Area-Vocational-Technical Institutes. The method of training is a seminar presented by experts in the field of gerontology as it relates to education, sociology, psychology and public affairs. This staff then takes their expertise to interested campuses throughout the State of Minnesota and shares it in ways compatible with each individual institution, i.e. seminar sessions, workshops, consulting time, etc.

This project has the endorsement and cooperation of all of the educational systems heads in the State. Such a cooperative climate is due in large part to the work of the Minnesota Intergenerational Education Consortium comprised of the University of Minnesota, Mankato State University, the Colleges of St. Benedict, St. Thomas ans St. Catherine, St. Paul Area Vocational-Technical Institute, North Hennepin Community College and the Minneapolis Public Schools, which has been operating for the past two years under a grant from the Administration on Aging.

The goals of this project are: (1) to effectively train a staff of resource persons who will then effectively translate their expertise into training sessions on approximately 36 campuses (6 from each system) throughout Minnesota; (2) to use these training sessions to raise the consciousness level of the institutes and the systems they represent in the direction of integrating retired persons as a new clientele: (3) to develop the State of Minnesota as a National center designed to stimulate other States to do likewise; (4) to implement further phase I (intergenerational living, learning and teaching) as a way of moving toward a national learning society by so using a State systematically to influence national social policy.

Bucknell University
The Cross-Generational Program
Lewisburg, Pennsylvania

The Cross-Generational Program (CGP) evolving at Bucknell is a student-run program conceived by undergraduates who were concerned with improving their educational experiences and the life-style of the rural elderly. The CGP addresses the problem of age isolation; as groups, both elderly and students often find themselves in settings where peers are the only social contacts. As a result of this separation, the learning that could occur across generations is seldom realized. The CGP works at improving the learning process through effective interaction among faculty, students and older adults. In the past year, over 200 elderly, students and faculty have been actively engaged in program activities.

Activities aim at establishing a sound foundation of personal relationships and are directed at a particular intergenerational problem (such as improving communication) or a difficulty presented by the rural area (such as contacting and transporting a rural target population). Activities include attending social/cultural events and groups that meet weekly to discuss topics of interest. The CGP also has an "Outreach" component through which students contact isolated individuals; through a "Live-in" component, elderly live as guests in the program's university residence.

Fostering communication and trust plus testing the feasibility of housing elderly in university residences summarize the past year. Our data show that elderly in this particular rural setting are not primarily interested in living at the university for periods longer than two weeks. However, they do demonstrate an interest in attending plays, concerts, and occasional classes. A hesitancy to attend more classes stems from a lack of self-confidence or an unfamiliarity with the classroom. Elderly are more comfortable in the role of a resource person working with individual students in an area of their expertise.

In order to better utilize elderly as resource persons, an "Older Teachers" component is developing over the next two years. A list of 30 elderly (along with former occupation, hobbies, and areas of specific interest or knowledge) is being prepared as a sourcebook for distribution to faculty, thus offering faculty the opportunity to invite older adults to class when topics match elderly interests. After this cautious introduction to the classroom in the student role, interested elderly will attend seminars designed to build confidence and teach skills necessary for giving short talks or presentations to a class. No time scale has been set for this process since it must proceed cautiously with constant feedback from older adults, faculty and students.

The proposed strategy should provide meaningful interactions across the generations while developing new roles for older adults. It is expected that this approach will encourage more faculty to take an active role in the program and help to institutionalize it. We expect students to benefit from an alternative education system that introduces personal perspective and experience to their study. Over the next two years, a twofold evaluation (quantitative and phenomenological) will be completed

and the results published in a form that will describe the development of the program to serve as a manual for other universities interested in intergenerational work.

University of Man (UFM)
Manhattan, Kansas

A complaint frequently heard in small towns across the United States is that "there is nothing to do." The disenchantment of many youth with their local opportunities is resulting in both a general outmigration of young people and the failure of other youth to return home after college graduation. The proportion of elderly citizens in Kansas, particularly in smaller communities, is increasing, which means fewer people in the productive age groups. Many small Kansas communities are declining, as they become less and less able to provide either full employment or full services for their members. This trend, if it is not reversed, could mean the loss of an enormously rich cultural heritage which characterizes small town life.

University for Man (UFM), a community education organization in Manhattan, Kansas, has been involved in the revitalization of community life for over eight years. The agency creates and develops all types of educational opportunities which are free of grades, credits, costs and prerequisities. The experiences of the staff have convinced them that within every small community are individuals who possess information and skills worth sharing and also individuals who want and need access to these talents. The problem, as UFM sees it, is that few public mechanisms exist for linking people together so that learning and sharing can occur. Last year, therefore, UFM assisted six Kansas communities in creating educational programs based upon local talent. Three of these communities were in northwest Kansas and three were considerably closer to Manhattan, in the north central region of the State. The six ranged in population from roughly 1,500 to approximately 7,000. Class topics spanned broad areas of human interest and concern, for example, Wagner Appreciation, Banks and Banking, That Church Down the Street, Metrics, Death of a Farmer, several languages, and various arts and crafts.

The UFM coordinators were assisted in their work by twelve VISTA volunteers, two for each community, who were thoroughly trained in UFM methods of organization. In the second year UFM is replicating the process in six new communities with twelve new VISTA volunteers. It is anticipated that all twelve programs will eventually be both locally controlled and locally funded, and this goal has already been realized for several of the first-year communities. A long-range goal of the project is to form a network of communities within Kansas where people with special knowledge and talents can reach others who are interested in the same areas, thus revitalizing the resources that have always existed in small towns, but that have frequently not been utilized. A film depicting the UFM experience is being prepared, and a profile of each particular town's community education program is also being constructed. These models will be available as paradigms for similar programs elsewhere in the nation.

South Oklahoma City Junior College
Oklahome County Libraries System
Open Access, Satellite Education Services (OASES)
Oklahoma City, Oklahoma

Urban sprawl in large metropolitan areas has made it increasingly difficult to provide adult education opportunities that are accessible to all segments of the population. The absence of adequate transportation systems and the inhibitions of many unserved and underserved population groups to entering unfamiliar territories where services are available continue to compound the problems. Stabilizing and even declining revenues of educational agencies make it all the more difficult to utilize traditional service approaches in the expansion of adult education services. Oklahoma City is one of the largest cities in the nation without a systematic program of low-cost, accessible life-long learning. Both the Oklahoma County Libraries System)OCLS) and South Oklahoma City Junior College (SOCJC) have independently indicated a desire to expand programs and services for under-served people including functional literacy reading programs, cultural heritage programs, programs on health maintenance and adult basic education.

The OASES Project is the joint effort of both organizations to offer more comprehensive continuing education opportunities through a cost-effective partnership which takes advantage of some previously successful adult education programs, combined administration, and existing physical facilities.

The first year of the OASES project is seeing the operationalization of the prototype OASES Center is a branch library outfitted as a satellite adult education center. The academic and non-academic programs are being designed for the immediate target population consisting primarily of Mexican-Americans, Native-Americans and older Americans. Studies of cost-effectiveness that focus on cost to both consumers and providers are being conducted and a preliminary model of cooperation is being created which identifies those programs and services most successful in serving people and that can be economically replicated.

The OASES project anticipates an operational cost less than that of existing single institutions and expects to extend adult education opportunities more effectively using a model of interinstitutional cooperation rather than competition. This emphasis on cost-effectiveness should have very real implications for directing adult education efforts in Oklahoma City as well as other metropolitan areas.

The Learning Exchange
Evanston, Illinois

In every metropolitan area vast numbers of human resources are either unused or under-utilized. For example, in Greater Chicago less than 7 percent of the adult population are professional educators while the other 93 percent are people with skills, talents, and knowledge that make

the city work. Before schools were invented, adults who "knew things" played a vital role in a city's educational process. Now, because of the evolution of highly structured, formalized educational institutions, people who "know things" (but who may lack degrees or certified teaching credentials) have few ways to pass their knowledge on to others. As a result, much educational potential is being lost in a contemporary society.

The Learning Exchange (TLE), a people-to-people telephone referral service, was established in 1971 to tap the vast human resource potential that exists in metropolitan Chicago. Acting as an educational clearinghouse, TLE matches people who want to learn with people who want to teach and vice versa. Moreover, people who want to form peer learning groups are matched with each other. After referral, participants assume the responsibility for creating their own learning arrangements. They determine when and where to meet, for how long, what materials will be used, and fees, if any. By enabling learners and teachers to design their own programs in accordance with their needs and convenience, TLE is playing a vital role in promoting learner-centered educational change in metropolitan Chicago.

Since its inception, TLE has been instrumental in establishing more than 5,000 classes, discussion groups, tutorial sessions, and recreational activities. TLE currently has registered over 3,000 subjects which callers want to teach, learn, or discuss. In addition to academic tutoring, the most popular subject areas on file include foreign languages, musical instruments, arts and crafts, and manual repair skills.

Because of the rapid growth and development of TLE, the 3x5 index card data base is becoming outdated and overloaded. The Fund has awarded TLE a grant for fiscal year 1976-77 to develop a data processing system that can handle the information input, storage, and retrieval functions necessary for an efficient, effective, and low-cost referral service. The implications of the Fund grant are far-reaching. Not only will a newly designed data processing system increase the capability of TLE to serve tens of thousands of new learners and teachers in the Chicago area, it will also serve as a model for all the other independent organizations similar to TLE that are beginning to emerge around the country (ten have already been established and approximately ten more are currently on the drawing boards).

To help promote the establishment of more people-to-people educational referral services like TLE in other cities and to eliminate much of the front-end development cost, one of the products of the Fund grant award will be a booklet which outlines the ingredients of an effective data processing system, as well as methods and techniques for developing publicity networks, effective media and grass-roots communication programs, self-support mechanisms, and feedback systems.

VI. THE OFFICE OF CONSUMER AFFAIRS

Mrs. Virginia H. Knauer serves as the Special Assistant to the President for Consumer Affairs and as Director, Office of Consumer Affairs, Department of Health, Education, and Welfare.

The Office of Consumer Affairs (OCA) assures that the consumer's interest is reflected in Federal policies and programs, cooperates with State agencies and Voluntary organizations in advancing the interests of consumers, promotes improved consumer education, recommends legislation of benefit to consumers, encourages productive dialogue and interaction between industry, government and the consumer, and provides continuing policy guidance to the Consumer Product Information Coordinating Center.

Its major activities, however, fall primarily within these categories: (1) consumer advocacy, (2) consumer education and information, and (3) planning and analysis. While these activities in general are initiated on behalf of all consumers, it should be noted that the elderly consumer shares fully in the benefits of OCA programs.

Highlighted below are major activities in each of these categories with special emphasis on those having the greatest impact on older Americans.

1. CONSUMER ADVOCACY

Mrs. Knauer is a member of the Domestic Council Committee on Aging which has been charged with responsibility for developing, coordinating and presenting both short-term and long-range policy issues in this area. Through a task force of the Committee's Interdepartmental Working Group, OCA participated in the development and signing of an interdepartmental working agreement on information and referral services for the elderly and has continued to work toward its implementation.

Mrs. Knauer also serves as a member of the Council on Wage and Price Stability and the Domestic Council's Committee on the Right of Privacy. Consumer input at these levels is essential to broad policy development and has special significance for the elderly consumer.

The inflationary impact of the energy crisis on the elderly in particular has been consistently taken into consideration in OCA's ongoing active participation in such top level interagency task forces as the Energy Resources Council, (and its predecessor, the Committee on Energy), the National Power Survey, and the Federal Power Commission's Task Force on Natural Gas Curtailment.

OCA has acted on behalf of the elderly primarily through its comments in support of various regulatory proposals that would have a significant impact on elderly consumers. In the course of analyzing a wide variety of subjects for consumer impact, several topics were of special interest to the elderly. Those included: Over-the-Counter Drug Advertising; Ingredient Labeling in Over-the-Counter Drugs; Opthalmic Goods and Services; Hearing Aids; and Retail Prices of Prescription Drugs.

There are several other areas in which OCA continued to monitor and promote the interests of consumers whenever possible during this past year. The elderly oftentimes have been disproportionately involved in these activities and therefore OCA has indirectly articulated their concerns. For example, retired citizens frequently have the time and inclination to do extensive traveling. OCA has consistently urged the Civil Aeronautics Board (CAB) to liberalize the charter rules so as to make this less-expensive mode of travel available to a wider spectrum of people. OCA endorsed and the CAB subsequently adopted a rule allowing Advance Booking Charters. Likewise, OCA's comments have repeatedly asked for more readable and comprehensible disclosure documents when consumers are buying retirement homes through interstate land sale promotions and when they are financing mobile home lot loans.

OCA at the direction of the President, joined with the Office of Management and Budget to coordinate a major effort to increase consumer representation in the Federal Government. With OCA's guidance, each of the agencies under the Executive Branch developed a proposed consumer representation plan individually tailored to its own circumstances, but in each instance providing measures whereby consumers could be effectively represented and participate in consumer related policies and actions. In addition to giving guidance to other agencies, OCA conceived, drafted and coordinated development of HEW's Consumer Representation Plan. Special mailings of the Plans went to organizations representing the low income and elder consumers in order to get their input and written comments. Representatives of these groups were

also invited to participate in the regional public hearings held in ten cities. Noteworthy among individual agency plans is one from the Social Security Administration which is especially significant for senior citizens living on social security. The Social Security Administration has developed a pilot project to test the desirability of establishing a Social Security Ombudsman. The Ombudsman is available to persons experiencing problems in social security matters.

The Consumer Representation Plans were substantially revised to reflect the comments from the public and published in the Federal Register September 28, 1976. The President has designated OCA to have continuing responsibility for monitoring the extent and effectiveness with which Departments and Agencies carry forth the policies embodied in the Consumer Representation Plans.

OCA through day-to-day liaison continued to encourage and assist State and local governments in their responsiveness to consumer problems, including those of the elderly. Currently there are 135 State consumer offices, 158 County offices and 69 City consumer offices. A growing number of these offices now have or are considering, special information and education programs for the aging and for concentrated enforcement efforts against frauds and deceptive practices which are directed toward the elderly.

OCA's Directory of State, County and City Government Consumer Offices includes a listing of toll-free telephone lines in operation to help facilitate consumer contacts with these offices. The 1976 Directory also includes a listing of Federal Information Centers, Federal Consumer Information Centers and State Public Utilities Commissions. These will insure that the Directory is of special assistance to the homebound and/or handicapped consumers. The Directory is available to the general public through the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402.

OCA's Guide to Federal Consumer Services has a listing for older Americans which is free from the Consumer Information Center, Pueblo, Colorado 81009.

The Office of Consumer Affairs published a Directory of Consumer Organizations. More than 400 international, national, State and local non-government consumer organizations are identified. These

listed are groups which derive funding support from voluntary memberships and include many low income, elderly and minority organizations. The Directory was compiled in order to encourage more interaction among these groups. OCA sees the Directory as being of special assistance to the homebound and/or handicapped consumer.

As a result of OCA efforts to focus public attention on and seek resolution to the incompatibility problems associated with hearing aid devices and certain telephones, the following has taken place. OCA has obtained commitments from telephone companies in the Bell System to disclose in their advertisements non-compatibility between hearing aids and certain telephone models. The ads also describe the availability of special equipment for the hearing impaired.

2. CONSUMER EDUCATION AND INFORMATION

In addition to carrying articles in every issue of general interest to older Americans - as to all consumers - Consumer News focuses on specific news of Federal activities of special concern to the elderly. A few examples: nutrition programs for the elderly; transportation programs for the elderly; prescription drugs; hearing aids; condominiums; high blood pressure and funeral homes.

In addition, Consumer Register, which carries summaries of regulations of Federal agencies, includes material of special interest to older Americans, such as those dealing with Social Security; nursing homes; and prescription drugs.

"Dear Consumer" columns, which are provided as a public service to more than 7,000 weekly newspapers, occasionally deal with topics that primarily concern older Americans. Mrs. Knauer's four-minute Public Service Radio program, "HELP", which is sent to over 1200 radio stations, frequently has programs designed for the elderly. HELP and "Dear Consumer" have dealt with such specific topics as: retirement living, concerns for older women, pensions, Gray Panthers, nursing homes and elderly taxpayers.

At OCA's urging, the Division of the Blind and Physically Handicapped of the Library of Congress agreed to review Consumer News and "Dear Consumer" for possible inclusion in its bi-monthly magazines Talking Book Topics and Braille Book Review. Articles in the magazines are made available to the blind and physically handicapped in recorded form and in braille. A "Dear Consumer" column highlighted the services provided through the Division of the Blind and Physically Handicapped.

Besides providing information on an individual basis, OCA has participated in more than 20 national, regional and State conferences and workshops designed to address issues affecting low income, minority and elderly consumers. In addition to providing materials and information regarding possible funding sources and technical assistance, OCA has continued to alert these groups to proposed legislation, regulations and policies that may impact on them.

OCA has contributed to national senior citizen publications and has answered many requests by senior citizen organizations to plan and convene consumer education and protection seminars and workshops.

The Office invited representatives of senior citizen organizations, business and the academic sector to participate in the July 19 and 20 National Conference on Care Labeling. Proper care of clothing and other textile products has economic importance to most consumers, but it has particular importance to consumers on fixed incomes. Among other things, Conference participants discussed the need for clearer and more readily understandable instructions and alternative care labeling.

OCA also invited representatives of senior citizen organizations to participate in the November 11 and 12 Consumer Education Catch-Up Conference and the December 8 and 9 Citizens Participation Conference. Workshops highlighting successful community consumer education programs were featured.

Plans are underway for OCA to hold a conference on life and health insurance in February 1977. The conference will bring together consumers, government, insurance, industry and academic representatives to discuss and develop approaches to meeting consumer needs in the area of life

and health insurance, subjects of vital importance to the elderly.

OCA has received funding from the Office of the Secretary, HEW, to update and publish the publication Food Is More Than Just Something To Eat. The booklet is particularly useful to the elderly, and the Administration on Aging is using it in various food programs for the elderly. OCA also plans to develop and distribute a new advertising campaign aimed at increasing consumer awareness of the importance of nutrition to good health.

OCA commented in some detail on the proposed Federal Trade Commission regulation which takes a complex approach to nutrition information in food advertising. OCA proposed that government, industry and consumers work together to develop a meaningful and more understandable method of communicating nutrition information to consumers.

OCA has obtained greater public awareness of the OCA/Consumers Union funded prototype for a local services comparability and rating system for consumers. The dissemination vehicle for this project is a quarterly magazine called Washington Consumers' Checkbook. The first issue of Checkbook was devoted to health services. Coverage of cost and quality of Washington area services should be especially helpful to older residents of the area. The second issue dealt with auto repair, another area of great concern to older Americans.

3. PLANNING AND ANALYSIS

The national survey of consumer attitudes was designed by a distinguished professor of marketing research under contract to OCA. It will be the largest survey ever conducted by the Federal Government to discern consumers' attitudes toward their experiences in the marketplace (pre-sale, point-of-sale, and post-sale) with a comprehensive list of over 200 products and services. The survey will also have a larger-than-average sample base of over 3,000 people (Gallup uses 1500) in order to get detailed information on the problems and complaints of special subgroups such as the elderly and the poor and to get as much information as possible on the nature of complaints people have with specific products and services. Pilot studies have indicated that less than 5% of all the people in the country who have consumer

complaints will voice their complaints to governmental agencies and those who do may not be representative of consumers as a whole. OCA hopes the survey will provide the kind of comparison data the public sector needs to evaluate its own complaint data and to provide a statistically complete picture of the nature of all consumer problems with products and services.

The proposed uniform consumer complaint code (UCC) was designed during the Spring and Summer of 1976 to enable OCA and any other consumer complaint office who wishes to adopt it, to compile more detailed and informative data on the types of consumer complaints received. The UCC is divided into two parts. Part I uses a multi-digit numbering system to represent the product or service which is the subject of the complaint. Part II lists the issue involved or nature of the complaint. Thus, each complaint letter would be described by two or more symbols which give the type of product or services involved and the nature of the complaint about that product or service.

Many of the approximately 30,000 complaints received by OCA during 1976 were from elderly persons. About one-fifth of these complaints were referrals from the White House, members of Congress and other Federal agencies. Each complaint is given careful consideration and brought to the attention of the appropriate Federal, State, County or City government agency, trade association or business firm that can best offer assistance to the consumer. A special effort is made to be of direct help to senior citizens when it is possible.

OCA has worked with the Community Services Administration in the planning and development of the National Center for Appropriate Technology which is funded with grants totalling $3,086,546. The Center will carry out a program of research and development, with a specific mission in its first year of developing, modifying, adapting, and implementing technologies which can be helpful to poor people. This is especially necessary in dealing with the problems of rapidly increasing energy cost and will tie in with CSA's Weatherization Program. The Center will tap the research and development of other appropriate technologies to help low income communities. Working with community action agencies throughout the country, the Center hopes to apply that technology toward improving the general quality of life in their communities. OCA expects the new technology to be especially beneficial for the elderly consumer.

ALCOHOLISM

Obligations

	1974	1975	1976	1977 Estimate	1978 Estimate
Public Health Services:					
Alcohol, Drug Abuse, and Mental Health Administration:					
National Institute on Alcohol Abuse and Alcoholism					
Budget Authority..	$138,222,000	$146,048,000	$148,433,000	$153,454,000	$154,066,000
Obligations.....	(199,025,000) 1/	(167,633,000) 2/	(189,945,000) 3/	---	---
National Institutes of Health:					
National Institute of Arthritis, Metabolism, and Digestive Diseases.....					
Subtotal, PHS					
Budget Authority..	138,222,000	146,048,000	148,433,000	153,454,000	154,066,000
Obligations.....	(199,025,000)	(167,633,000)	(189,945,000)	---	---
Office of Human Development:					
Basic State.....	29,900,000	32,640,000	33,134,000	34,054,000	34,980,000
Expansion Grants..	286,000	---	---	---	---
Facility Improvement.....	34,000	35,033	27,600	30,000	32,000
Subtotal	30,220,000	32,675,033	33,161,600	34,084,000	35,012,000
Public Services Administration:					
Services to Alcoholics.....	---	35,326,000	51,000,000	43,200,000	43,200,000
TOTAL.....	168,442,000	214,049,033	232,594,600	230,738,000	232,278,000

1/ Includes $60,803,000 in FY 1973 court released funds.
2/ Includes $21,585,000 in FY 1973 court released funds.
3/ Contains $41,512,000 obligated in transition quarter.
4/ Obligations cannot be identified.
5/ The new reporting requirements under Title XX do not presently require States to report on such categories of individuals such as services to alcoholics. Until those reporting requirements are changed the 1978 estimate will remain at the same level as 1977. The States estimates under the new requirements include services to alcoholics in such categories as Day Care, Health Related, Counseling, etc.

ALCOHOL, DRUG ABUSE, AND MENTAL HEALTH ADMINISTRATION

NATIONAL INSTITUTE ON ALCOHOL ABUSE AND ALCOHOLISM

THE SCOPE OF THE PROBLEM

BACKGROUND FACTS

Alcoholism and alcohol abuse are recognized as one of the Nation's most serious health problems. There is no method of accounting that fully measures the tragic loss of human resources stemming from the misuse of alcohol. The economic cost to our society alone is estimated at $25 billion annually, with $9.4 billion attributable to lost productivity, $8.3 billion to alcohol-related health and medical problems, and $6.4 billion to motor vehicle accidents. Approximately 35,000 accidental deaths each year are related to the abuse of alcohol, while a third of all suicides and half of all homicides involve alcohol. Ten million persons with drinking problems reside in the U.S., including 10 percent of the nation's work force, and 36 million Americans are affected by alcohol abuse among family members. Alcohol has long been and continues to be this country's primary drug problem.

A fact not yet commonly understood or accepted by the public is that over 95 percent of alcohol abusers are employed, or employable, family-centered individuals who reside at home and maintain apparently normal lives. The stereotype of the skid row alcoholic is not representative; public inebriates account for only 4 to 5 percent of our national drinking problem. Studies and reports have confirmed that the wide range of devastating and complex social, psychological, physical and cultural problems associated with the use of alcohol are related to excess, not moderation, and that heavier drinkers know less about the affects of alcohol than do lighter drinkers and abstainers.

FEDERAL LEGISLATION RELATING TO ALCOHOL ABUSE

In an effort to reduce the misuse of alcohol within our society and promote responsible drinking behaviors, Federal legislation was passed in 1970 creating the National Institute on Alcohol Abuse and Alcoholism within the National Institute of Mental Health (NIMH) and authorizing project grants to support prevention and rehabilitation services for local communities and institutions. This "Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment, and Rehabilitation Act" (P.L. 91-616) has consistently been lauded as landmark legislation, promoting the widespread recognition of alcoholism as a treatable illness, rather than the sociopathic disorder it was generally considered in the past.

In 1971, the National Conference of Commissioners for Uniform State Laws developed the "Uniform Alcoholism and Intoxication Treatment Act," which stipulated that alcoholic individuals should not be subjected to criminal prosecution because of their consumption of alcoholic beverages but rather that they should be provided with appropriate treatment within their communities. This model legislation has since been widely adopted by State governments.

In 1974, the "Amendments" (P.L. 93-282) to the 1970 Act established the NIAAA as a separate agency within the Alcohol, Drug Abuse, and Mental Health Administration (ADAMHA), furthered the emphasis and direction of the original legislation (P.L. 91-616), and required the adoption by States of the basic provisions of the model "Uniform Alcoholism and Intoxication Treatment Act" as a prerequisite for obtaining Federal grants for community assistance programs. In the execution of its legislative mandate, the annual budget of the NIAAA grew from $34 million in FY 1971 to $137.8 million in FY 1976.

The latest "Amendments" (P.L. 94-371) to the 1970 Act have just been passed by Congress. They provide for $600 million in authorizations for NIAAA over the next three years. The bill continues funding for formula grants and community assistance programs, provides for renewed efforts to provide treatment for underserved populations, women and adolescents, and mandates a new emphasis on alcohol research.

PUBLIC HEALTH SERVICE
Alcohol, Drug Abuse, and Mental Health Administration
National Institute on Alcohol Abuse and Alcoholism

Among the many interesting developments in the field of alcoholism during the past 6 years, perhaps the most significant event has been the wide-ranging commitment of the Federal government to the problems of alcohol abuse and alcoholism.

The National Institute on Alcohol Abuse and Alcoholism, created by an Act of the United States Congress (Public Law 91-616), was formally established in May 1971. The Institute develops and supports programs to (1) improve treatment services for alcoholic persons in States and communities, (2) treat and rehabilitate employees with drinking problems in Government and private industry, (3) modify public attitudes toward alcoholism and alcohol-related problems by developing a program of education and public information, (4) train professional and non-professional personnel, and (5) determine through research the causes and prevention of alcoholism and alcohol abuse. The Institute is rapidly developing a coordinated national alcoholism program. As a step toward the accomplishment of this goal, the National Institute on Alcohol Abuse and Alcoholism is providing funds for the development of adequate treatment services for alcoholic persons, based, whenever possible, on existing services.

Fiscal year 1972 was the Institute's first full year of operations, a year of dynamic growth and challenge. Throughout the country, along with the expansion of programs initiated in FY 1971, new programs for alcoholic people were developed such as those for public inebriates and the alcoholism poverty program.

During FY 1973 the Institute moved substantially closer to its primary goal of making effective treatment available at the local

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level to every alcoholic person in the United States. The development of alternative fiscal resources was also stimulated in order to expand services and make projects more financially independent. Further, recognizing that no illness has ever been eradicated by just treating the casualties, the Institute made a sound beginning towards the long-range goal of prevention. Sophisticated educational and informational techniques were initiated to foster the concept of responsible alcohol use among those who choose to drink.

During FY 1974, the Institute continued to foster the development of community-based resources for alcoholism treatment. The alcoholism field in general continued its significant growth at State and local levels in response to the awareness and momentum generated by the Federal leadership. The NIAAA leadership role was enhanced by its placement as a separate Institute within the new Alcohol, Drug Abuse, and Mental Health Administration. In FY 74, the Institute also began more intensive enlistment of the Nation's private enterprise system to the national alcoholism effort. NIAAA initiated programs to foster the development of guidelines for counselor certification and alcoholism program accreditation as an important step towards generating greater third-party payments for treatment services. An increasing number of private companies initiated occupational alcoholism programs for their employees. In the prevention area, the NIAAA's National Center for Alcohol Education began operations, and the need to respond to increasing public awareness sparked a significant expansion in the activities of the National Clearinghouse for Alcohol Information. Near the end of the Fiscal Year, the program authorities of the NIAAA were renewed and expanded by the passage of the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act Amendments of 1974 (P.L. 93-282).

During FY 1975, the Institute began to make inroads with accreditation of alcoholism programs under newly adopted national standards to provide more effective treatment through patient fees, health insurance, and other third-party sources. Federal alcoholism efforts began to include the basic provisions, where necessary, for financial support, clothing, shelter, health care, legal assistance, and vocational training.

Occupational alcoholism programs were greatly expanded in 1975. More than 275 new occupational programs were established independent of NIAAA funding throughout the nation to currently serve a work force of nearly 2,750,000 people. These programs were established in the private and public sector for the benefit of the employees suffering from alcohol abuse and alcoholism. Significant partnerships also have been developed with the Civil Service Commission and the Department of Defense to foster Congressionally mandated occupational programs for Federal employees and servicemen with alcohol-related problems.

One of the major activities conducted by the Institute in 1975 was a National Alcohol-Health Promotion Conference which brought together scores of medical professionals, corporation executives, college educators, labor and management leaders and key individuals from the country's voluntary organizations.

The number of research grant applications reviewed during FY 1975 was 263, and this represents a 289% increase in applications received over FY 1971. This growth in research grant applications reflects an increasing awareness on the part of researchers of the importance of alcoholism as a public health problem.

During FY 1976, as a result of new leadership in the Institute, the commitment of the Institute was and will be for the next few years directed to "Operation Mainstream." NIAAA has attempted to bring the treatment of alcoholism into the mainstream of our nation's health care delivery system, into our total social and health care organization and the payment system that supports it. NIAAA is utilizing the concept of the total systems approach to health care delivery. It involves all phases of the Institute's mission including research, prevention, training, and treatment. NIAAA wants alcohol problems to be in the mainstream of American consciousness.

One of the first accomplishments during FY 76 was the strengthening of the integration of the Institute's programs. Elements of prevention, research, training, and treatment activities interact in significant ways and it was essential to maintain a continuous cross fertilization between research findings and therapeutic practice. Realizing that primary health care personnel do not know enough about alcoholism, and do not diagnose it early enough, the Institute supported career teacher training programs, funding teachers in 17 medical schools, and many practicing physicians are being instructed by these teachers. As the "Mainstream" concept has strong implications for the research field and as top biomedical and behavioral researchers have not been involved to the degree needed in alcohol research, the Institute has expanded the intramural and extramural research programs to keep pace with investigations now going on across the country. The Institute, through its studies and through grant and contract support, has made some important discoveries in research. During FY 76 our studies provided us with a better idea of how alcohol affects the liver and the functioning of the brain, the effects of alcohol on the heart, gastrointestinal system, and nutrition. We have found how prolonged heavy use of alcohol by men affects the production of testosterone and can cause sex changes. More research is being conducted on the effects on the fetus of the mother's abuse of alcohol. We learned that a very high proportion of pregnant women who abuse alcohol give birth to children who have some defect. NIAAA is interested in demonstrations of the aggression factor and how this is seemingly triggered by alcohol. About half of the cases of child abuse and wife beating, and of car accidents and fatalities, involve persons with alcohol in their bloodstreams.

During FY 76 the Division of Prevention engaged in extensive campaigns directed toward our target audiences--youth, women, and minorities. The proportion of American youth who drink has been on a continuous increase, particularly in the age group of 18-20.

The Federal resources administered by the NIAAA reaches States, communities, and individuals through the activities of five operating Divisions: Special Treatment and Rehabilitation, Resource Development, Prevention, Intramural and Extramural Research.

During FY 76 NIAAA funded 856 projects amounting to $148,433,000, of which 111 projects for $10,680,000 were associated with Indians. In the transitional quarter 288 projects were funded for $41,562,000, of which 32 awards for $3,792,000 were associated with Indians.

DIVISION OF SPECIAL TREATMENT AND REHABILITATION

This Division reflects the Institute's original goal to assure that high quality treatment services are available to all who require them. These services are administered by its three branches: Special Projects Branch, Occupational Alcoholism Branch, and the Services Analysis Branch.

Special Projects Branch

The Special Projects Branch provides leadership and assistance to communities in the development of high quality services to meet their needs. In contrast to a referral network, programs of this Branch involve the direct delivery of services for the alcoholic person in the community. They are geared to help the community take advantage of State and local funding bases to ensure the continued delivery of quality services and assistance in obtaining third-party payments for the person in treatment.

In addition to comprehensive centers established to treat all residents of the area, direct project grants support program activities that cover a wide range of treatment and rehabilitation strategies. A large number of alcoholic persons are served by these grants, including American Indians and Alaskan natives, blacks, Spanish-Americans, migrant workers, women, youth, drinking drivers, public inebriates, the poor, persons referred by the criminal justice system, the aged, and persons living in rural areas. The primary goal of all programs is to ensure that adequate and appropriate services are available to all.

Occupational Alcoholism Branch

Sensitizing decisionmakers to the importance of implementing programs for persons on the job is the primary mission of the Occupational

Alcoholism Branch. Reaching the alcohol abuser in the work place means earlier identification and, quite often, more successful treatment than is possible through other means. Additionally, the threat of job loss usually means a more cooperative client. For these reasons, programs of the Branch are aimed at providing assistance to employers in the public and private sectors to develop and implement occupational programs for employees whose job performance has become impaired because of alcohol abuse and alcoholism.

The main thrust of the Branch has been the development of occupational programs at the State and local levels.

The Branch has focused on a variety of programs dealing with special populations, among them university personnel, city and State employees, hospital based employees, industrial workers, and individuals in management and the professions. This Branch also has the responsibility for assisting all parts of the Public Health Service to implement the Federal Employee Assistance Program.

Services Analysis Branch

The newest Branch of the Division designs and conducts studies which analyze a broad range of issues involving the identification, treatment, and rehabilitation of alcohol abusers and alcoholic people for the purpose of improving service delivery at the community level. In coordination with other Institute offices, the Services Analysis Branch analyzes the results of service efforts in both the Occupational and Special Project branches as well as the results of services in general. The aim is to increase knowledge about what kind of service works best for which individual and what are the health risks and benefits of providing these services. The Branch's efforts should aid not only the Division but also the entire field in upgrading knowledge and improving and insuring quality client care at reasonable cost with minimal dependence on Federal financial support.

DIVISION OF RESOURCE DEVELOPMENT

The activities of the Division of Resource Development encompass a wide range of programs from the training of alcoholism counselors to assisting the states in implementing the provisions of the Uniform Alcoholism and Intoxication Treatment Act. With its two branches--Training and State Assistance--Resource Development is responsible for planning, developing, and administering programs in two key areas: manpower development and State alcohol programs. These areas are vital to the goal of integrating alcoholism services into the health care delivery system since they help assure that qualified personnel and adequate funding are available for the care of alcoholic persons. In addition, activities relating to Institute resources which overlap treatment, prevention, and research are Division responsibilities, such as collaborative work with voluntary agencies, State and county groups, and national organizations.

Training Branch

As a necessary step towards the NIAAA goal of providing quality treatment and rehabilitation for the alcoholic, the Training Branch seeks to ensure that enough qualified personnel will be trained to provide such services. The need for trained personnel becomes more crucial as the NIAAA comes closer to achieving the integration of alcoholism services into the mainstream of the health care delivery system.

Among the Branch's priorities, the definition of manpower resources is of prime importance. In this connection, policies are being studied and developed in the areas of manpower development, planning and evaluation, and utilization and distribution.

In order to achieve a higher level of qualifications for alcoholism personnel and in part to assist the effort to obtain more third-party payment coverage for alcoholism treatment--the Training Branch is developing program strategies for the credentialing of alcoholism personnel. The Branch is also working toward the continued development of leadership capabilities among professionals to administer, evaluate, and promote research in alcoholism treatment programs.

Branch strategies embrace the training of both degreed and non-degreed personnel in order to meet the varied needs of the alcoholism field. The Branch is also promoting the use of continuing education programs to reach professionals in all health-related fields whose experience and prior education and training should enable them to provide services to alcoholic people. With the National Institute on Drug Abuse, joint funding has been provided in an effort to increase the amount of alcohol/drug education taught in the medical and public health schools in the Nation.

State Assistance Branch

The role of the State Assistance Branch is to promote and facilitate State programs in both the prevention and treatment of alcoholism. The Branch administers two major programs: formula grants and special grants for implementation of the Uniform Alcoholism and Intoxication Treatment Act.

Formula grants are available to the designated State alcoholism agencies to assist them in planning, establishing, maintaining, coordinating, and evaluating projects for the development of more effective prevention, treatment, and rehabilitation programs to deal with alcohol abuse and alcoholism. Formula grant funds are allotted to the States on the basis of the relative population, financial need, and the need for more effective prevention, treatment, and rehabilitation programs. To qualify for funds, the State agency must have an approved State plan, which is reviewed and updated annually. The plan is a public

document and it is expected that the people of the State will have input into the planning. Among other things, the plan must include a survey of need for programs and facilities for the prevention and treatment of alcohol abuse and alcoholism; and the identification of the need for prevention and treatment of alcohol abuse and alcoholism by women and by individuals under 18 years of age. The State is also required to have an advisory council--made up of citizens representing a broad range of interests and including care providers, consumers, and consumer advocates--to consult with the State agency in carrying out the plan.

Special grants for implementation of the Uniform Alcoholism and Intoxication Treatment Act are made available to States as an incentive to enact legislation which, among other things, decriminalizes public intoxication and mandates services rather than jails for alcoholic persons. To qualify for a grant, the State must demonstrate that its law is in accordance with the basic provisions of the Uniform Act, and the law must be in effect on the date of the award. A state may receive up to $150,000 plus 20 percent of the State formula grant if it meets the criteria. These grants may be awarded once a year, up to a total of 6 years.

National Center for Alcohol Education (NCAE)

Under its legislative mandate for manpower development, the Institute established the National Center for Alcohol Education (NCAE) in May 1973. The Center's primary goal is to improve the effectiveness of alcohol related services through the development of model training programs which can be widely used by practitioners in the field and the development of educational materials for the general public. These programs and products aim through education to reinforce resources and strategies for primary prevention, and through training to develop and increase skills and resources for the delivery of a wide range of services to alcoholic people.

The Decisions and Drinking Series designed for public education is targeted at three significant groups--women, blacks, and parents of young children. Two distinctive features of the series are its focus on people without drinking problems and a plan which enables the courses to be taught by a lay person. The instructor is a community leader, preferably a member of a group electing to take the course.

The Center's training models address a variety of needs and audiences; for example, Management Skills for Halfway House and Other Alcohol Program Administrators, Programming Community Resources, the Training Practitioners' Clinic, an Orientation Program for Marine Officers, Basics for State Prevention Coordinators, Counselor Skills, and Continuing Education Units for Community Health Nurses.

All of these courses are developed by NCAE staff in consultation with experts and consumers, and are field tested with community partici-

pants. In all program areas, the Center is engaged in a concurrent planning effort with the National Clearinghouse for Alcohol Information, which has the principal responsibility for distribution of Center products.

An increasingly significant aspect of the program is the collaboration with the Area Alcohol Education and Training Programs and the summer schools of alcohol studies in the development and the dissemination of Center products.

Area Alcohol Education and Training Programs (AAETP)

While the Institute and NCAE provide a national sense of direction on alcohol training, the main thrust of the Area Alcohol Education and Training Programs is to enrich and expand area-wide, State and local manpower planning and educational efforts in response to local needs.

The AAETP training is tailored as closely as possible to local and area needs and includes upgrading qualifications of personnel, promoting alcoholism training among other service providers, meeting the specialized education needs of target populations, and educating the public in order to facilitate early identification of alcoholism problems. Currently there are four AAETP's headquartered in Atlanta (Southern Region), Chicago (Midwestern), Hartford (Eastern) and Reno (Western).

The AAETP's represent a new concept in the coordination of education and training resources: the organization of representative, private groups to coordinate the development and sharing of public and private resources within broad geographic areas. So that AAETP's would identify with area concerns, each was incorporated as a private, nonprofit organization governed by a volunteer board of directors made up of representatives of local alcohol treatment and education programs from all the States in its area.

DIVISION OF PREVENTION

A basic, but long-range goal of the Institute is to work toward the prevention of alcoholism and problem drinking. To achieve this goal, NIAAA created the Division of Prevention. The primary function of the Division has been the development, testing and evaluating of practical methods of preventing the abuse and misuse of alcoholic beverages.

Through its Youth Education and Community Prevention Branches and the National Clearinghouse for Alcohol Information, the Division seeks to develop strategies and programs designed to give people the facts they need to make informed decisions about whether to drink and, if they choose to drink, to do so in a setting that enhances their well-being and quality of life.

Within the framework of Operation Mainstream, prevention efforts are aimed at integrating new prevention strategies and health education programs into the mainstream of everyday life in order to reduce, and ultimately eliminate, the incidence of new cases of alcohol abuse and alcoholism.

Community Prevention Branch

The Community Prevention Branch seeks to develop strategies to create a social environment more conducive to a responsible attitude toward drinking, and to strengthen community and individual resources working toward such a goal. As a key part of this effort, the Branch aims to achieve an effective level of health education in the community regarding the use, misuse, and nonuse of alcohol. The overall emphasis is on primary prevention.

Strategies developed should be applicable to the drinking as well as the nondrinking population, and to those who drink at unsafe levels as well as those without drinking problems. Examples of such strategies are: laws stating that drunkenness is unacceptable behavior; educational measures which bring about a positive understanding of the uses of beverage alcohol; and social policies that diminish the availability of alcohol, influence the act of drinking, and change the cultural meaning of alcohol. All of these approaches will influence drinking patterns and modify the social environment of both the drinker and nondrinker.

One of the major efforts of the Branch has been the development of the State Prevention Coordinator (SPC) program which established a staff position for prevention in each of the 48 participating State and territorial alcoholism authorities. This promoted the development of State-sponsored, community oriented, primary prevention programming aimed at the reduction of drinking problems by the use of positive measures directed at how people drink, their attitudes toward drinking, and their welfare while drinking.

The SPC's are encouraged to provide the opportunity for citizens to examine their attitudes and behavior regarding drinking and nondrinking in order to determine what measures they might use to prevent alcohol problems. SPC's work in a variety of public education campaigns, initiate public discussions with local communities, assist youth and adult groups in surveys of drinking patterns, and develop prevention advocacy groups.

The demonstration grant program, which is the other major activity within the Branch, affords the opportunity for communities to organize, study and implement creative prevention approaches to modifying harmful drinking practices within the community. Many of the previously mentioned prevention concepts are embodied within the currently operating grants.

Youth Education Branch

The goal of the Youth Education Branch is to reduce the destructive use of alcohol among the Nation's youth through the development, implementation, and evaluation of comprehensive alcohol abuse and alcoholism prevention strategies. The program attempts to create healthy attitudes, increase knowledge, and promote positive behavior related to alcohol consumption.

In pursuing this goal, the Youth Education Branch of the Division of Prevention has initiated three major efforts during the past 3 years: 1) the development of audiovisual and print materials for use both within and outside the formal education system; 2) the support of a limited number of demonstration projects to test a number of different prevention strategies; and 3) an outreach effort to involve new elements of the Nation's citizenry such as colleges and universities and voluntary organizations in the development and testing of prevention strategies utilizing their own resources.

These demonstration projects, which have been operating for several years, have utilized techniques that fall into two categories: specific strategies and nonspecific strategies. The nonspecific prevention strategies do not deal directly with alcohol and drinking, but focus on other aspects of life, such as inter-personal relations, which may in turn have an influence on whether or not people drink and how much and how often they drink. Alcohol-specific strategies deal directly with alcohol in some way, such as legal sanctions which prohibit intoxication, regulate the alcohol content of beverages, or influence the environment in which drinking takes place; media or other educational vehicles which persuade people to modify their drinking behavior; changing the social environment in an attempt to alter drinking patterns; and facilitating the transfer of facts about alcohol into people's drinking behaviors.

National Clearinghouse for Alcohol Information (NCALI)

The National Clearinghouse for Alcohol Information is an information service of NIAAA established to search out worldwide information on alcoholism prevention, treatment, and research, and to share this knowledge with the professional community and the general public.

The Clearinghouse shares its alcohol information through a variety of services and products designed to assist the many different users of NCALI. Through a system of acquiring, evaluating, analyzing, processing, formatting and reformatting of all kinds of information about alcohol, thousands of persons can get the kind of information they need in a form that is most helpful to them. Responses to requests range from NIAAA-prepared pamphlets and posters to a demand bibliography or computer search.

Current awareness services and materials are designed to search out new users of Clearinghouse services and to keep registered users up to date on new developments in the field. The Clearinghouse prepares two publications: NIAAA Information and Feature Service, a medium for news and features; and Alcohol Health and Research World, a quarterly paid-subscription magazine, also designed to keep the readers abreast of the latest information.

For users who want to receive more technical information on a regular basis, Current Awareness offers two other services. After indicating his/her user profile by selecting topics from a list of interest categories, a user can register to receive Individualized Interest Cards, issued monthly, and Grouped Interest Guides issued semiannually.

A unique feature of this Clearinghouse is the Information Dissemination Program (IDP) which is designed to assist the Institute's prevention program through the enlistment of previously uncommitted resources in the campaign against alcoholism. Currently focusing on four target audiences--women, youth, minorities and the elderly--IDP activities are aimed at working through existing channels to reach these audiences to help them establish appropriate prevention programs. The outreach activities of IDP are further aided by Clearinghouse field representatives around the country who disseminate and implement NIAAA/NCALI projects that have broader application and can be replicated in other States.

Other Clearinghouse activities include providing special support to NIAAA's Occupational Alcoholism Branch, serving as a clearinghouse for drinking and driving materials produced by the Department of Transportation, and supporting NIAAA's interagency agreement with the U.S. Navy's Alcoholism Prevention Program.

DIVISION OF EXTRAMURAL RESEARCH

The newly-formed Division of Extramural Research reflects NIAAA's increased commitment in the research area. It will continue to support basic and applied research into the causes and treatment of alcoholism, particularly in the areas of clinical research, prevention and education, behavioral and psychological studies, and the physiological effects of alcohol. The Division is made up of two units: the Extramural Research Branch, which supports research outside of the Institute, and the Epidemiological and Special Studies Branch, which collects and analyzes data on a national and international basis on the prevalence and incidence of alcohol abuse and alcoholism. Through these two branches, the Division supports and conducts research programs for improving treatment strategies and developing new prevention programs to reduce the incidence of new cases.

Extramural Research Branch

Studying all aspects of the potential causes and consequences of alcoholism is the objective of the Extramural Research Branch. Through an extensive grant program based largely in university and research laboratories, research programs are conducted in a wide variety of biomedical and psychosocial areas in alcoholism.

Biomedical support is provided for basic and applied studies such as the metabolism of alcohol, alcohol-related liver diseases, effects of alcohol on the heart, gastrointestinal system, and nutrition. In the behavioral area, support is provided for studies on the drinking practices, and the attitudes and beliefs of subcultures, ethnic groups, socioeconomic groups and families toward alcohol use and alcoholism. Other studies in this area are aimed at illuminating the social and psychological characteristics of alcohol abusers.

Some current areas of needed research include studies about alcohol and the central nervous system, the relationship between alcohol and hormones, the carcinogenic effects of alcohol, and the fetal alcohol syndrome. An increased research effort on all aspects of alcohol use and abuse in women and youth is also required.

Epidemiological and Special Studies Branch

This Branch develops and analyzes data on alcohol abuse and alcoholism for a better understanding of its natural history, trends and patterns of occurrence in order to help the Institute establish priorities in research, prevention, and treatment.

The Branch has three data gathering and analysis functions: surveillance, medical epidemiology, and social psychology. Surveillance is concerned with the collection of data over time to document use and abuse of alcohol. Data will be analyzed in terms of national and international trends and patterns, with attention to improving methodology toward developing indicator systems. In medical epidemiology, by delineating the role of alcohol in clinical problems, the goal is to increase physician awareness and competence by developing a heightened index of suspicion for specific syndromes in which immediate intervention could have clinical importance. Studies in the social psychology area are conducted in order to identify the sociological and psychological determinants and consequences of alcohol consumption in order to provide a sound basis for prevention and treatment policies and thereby enhance the likelihood of successful intervention.

DIVISION OF INTRAMURAL RESEARCH

The Institute's goal is to build a program of excellence in basic and clinical alcohol research. An important step in reaching this goal

was the recent establishment of a new Division of Intramural Research. The Division is in the process of relocating its research activities from St. Elizabeth's Hospital and has reorganized itself into three new branches--Clinical and Biobehavioral Research, the Laboratory of Metabolism, and the Laboratory of Biopsychosocial Research. These operate an inhouse program of research on the multiple determinants of alcoholism and on the critical factors in the prevention, diagnosis, treatment and rehabilitation of alcoholism. The Division collaborates with agencies, universities, and scientific organizations in the conduct of basic and clinical research on alcohol and its effects. It also trains research investigators in advanced methods of alcohol research.

Clinical and Biobehavioral Research Branch

The Clinical and Biobehavioral Research Branch will plan and conduct studies involving human subjects to investigate factors underlying alcoholism and assess issues related to treatment. In the clinical area, the research will be aimed at (1) studying the long-term consequences of alcohol abuse on disorders of the liver, heart, brain, and other organs; and (2) delineating critical factors in the treatment and rehabilitation of alcoholic persons. Studies in the biobehavioral area will investigate the effects of alcohol on brain functions, emotions, personality, and interpersonal dynamics.

Laboratory of Metabolism

The Laboratory of Metabolism will conduct basic biochemical and biophysical studies related to the metabolism of alcohol. Areas of study include theoretical and experimental aspects of cellular, membrane, lipid, protein, enzyme, and energy metabolism pertinent to alcohol consumption, dependence, and withdrawal. Studies will focus on (1) determination of changes in brain energy and neurotransmitter metabolism during ethanol intoxication, addiction and withdrawal; (2) effects of ethanol on hepatic fat metabolism and the relationship to changes in blood lipids; and (3) abnormalities in liver energy metabolism induced by alcohol consumption and the relationship of these metabolic changes to hepatic and cerebral dysfunction.

Laboratory of Biopsychosocial Research

Studies conducted by this laboratory will focus on the interplay of biological, psychological, and sociological factors of alcohol consumption, preference, dependence, intoxication, and withdrawal. One of the major areas of study is cognition. Studies will investigate levels of cognitive performance in alcoholics and cognitive functioning in light, moderate and heavy drinkers. The laboratory will also conduct research on ethanol-induced central nervous system depression and its reversal. Other studies will examine electrophysiological markers of alcohol-induced dysfunction in humans.

OFFICE OF PROGRAM DEVELOPMENT AND ANALYSIS

The Office of Program Development and Analysis (OPDA) serves as the focal point for Institute international activities, and for Institute program planning and evaluation. Within the Office are three branches: Program Development and Planning, Program Analysis and Evaluation, and Policy Studies and Special Reports.

Just as alcohol is worldwide in its usage, NIAAA must take advantage of resources around the globe in its efforts to obtain information and offer counsel on the best available programs for the alcoholic and his family. NIAAA is working with agencies such as the World Health Organization (WHO) and other international public health groups in an effort to develop policies and guidelines for the planning and development of alcoholism services on an international basis, as well as applying new and improved techniques to services in this country.

OPDA also has responsibility for planning and preparing special reports including major scientific reports with significant policy implications such as the Alcohol and Health Reports to Congress. Selection of the areas of research, evaluation and integration of the data and findings, and coordination of the writing, editing, and production of these reports are monitored from this Office.

Program Development and Planning Branch

The Program Development and Planning Branch serves as the focal point at NIAAA for identifying program needs and coordinating the development and modification of program objectives as progress is achieved. It carries out special projects which have important implications for overall Institute policy or national program development. One such area of vital importance to the alcoholism field involves health insurance. The Branch is monitoring several projects whose ultimate goal is the eventual inclusion of alcoholism benefits in all health insurance policies throughout the nation. Significant demonstration projects of this sort are being conducted in Health Maintenance Organizations (HMO's), and in an Incentive Contract Program that gives support for profit making organizations willing to establish occupational programs for the prevention and treatment of alcoholism among employed persons.

Another responsibility of this Branch is the development and coordination of program planning activities and maintenance of an operational planning system in program evaluation, management analysis, and financial management. Program Development and Planning also reviews related Federal activities and maintains liaison with other agencies in areas where interagency cooperation is required.

Program Analysis and Evaluation Branch

Responsibility for evaluating the efficient and effective use of public funds for alcoholism services rests primarily with the Program Analysis and Evaluation Branch. The Branch conducts evaluations in each functional program area of NIAAA, including research, treatment, prevention, training, and management.

The Program Analysis and Evaluation Branch gives the Divisions the evaluative information they need to assess their current programs and to plan strategies for future projects based on sound findings.

The Branch monitors a large number of evaluation projects which are designed to provide data in four key areas: 1) accountability; 2) management information, including cost benefit analyses; 3) research; and 4) information about patterns of use and abuse of alcohol in this country.

One of the key evaluation projects is the Alcoholism Treatment Program Monitoring System, which gathers and analyzes data to determine the effectiveness of treatment in NIAAA-funded grants among special populations including the drinking driver, public inebriate, poverty programs, occupational programs, and some of the American Indian programs. Status reports are prepared on a State-by-State basis and are provided to the program people in the Institute and the field for their use in evaluating the quality of treatment they are, or should be, providing.

A State Alcoholism Profile Information System (SAPIS) provides annual reports from each State regarding all State or Federal alcoholism programs. This system primarily measures the impact of formula grant funds on State programs.

Other current projects include evaluations of the Area Alcohol Education and Training Programs (AAETP's), the National Clearinghouse for Alcohol Information (NCALI), the National Center for Alcohol Education (NCAE), the Career Teacher program, and prevention project grants.

Policy Studies and Special Reports Branch

The Policy Studies and Special Reports Branch serves as a focal point for conducting policy studies and developing NIAAA policy. The Branch plans, initiates, and conducts policy studies concerning alcohol-related problems and in support of programs aimed at alleviating these problems. It makes recommendations to the Director concerning alcohol-related policy matters.

The Branch also has responsibility for planning and preparing special reports including major scientific reports with significant policy implications, such as the Alcohol and Health Report to Congress.

For the development and preparation of these special reports, data from research programs, program analysis, program evaluation, treatment services, surveys, and other sources are obtained and integrated. In addition, state-of-the-art reviews and critical analyses and evaluations of special alcohol-related topic areas and issues are initiated and implemented by the Branch.

PROGRAM COORDINATION

The Office of Program Coordination serves as the focal point for coordination and evaluation of all NIAAA programs as a total, integrated system, and for liaison between elements of the system. To facilitate this effort, a management information system has been developed that will provide a total programmatic and functional picture of Institute program activities for use in decisionmaking and control by the Director and his staff. The effort to develop and implement an efficient centralized Institute-wide Management Information and Control System will help to integrate and advance the innovative approach of "Operation Mainstream" which will assist the Institute in accessing timely information for policy decisions in pursuit of its programmatic objectives.

Program Coordination is also responsible for coordinating interagency activities involving the Institute and all other Federal agencies, especially those growing out of interagency agreements dealing with alcohol abuse and alcoholism. Among such collaborative efforts are: a public service program operated in cooperation with the National Highway Traffic Safety Administration (NHTSA) of the Department of Transportation to increase public awareness of the effects and consequences of alcohol use and abuse. Also with NHTSA, extensive joint efforts have been agreed upon in the area of research, treatment, and prevention with NIAAA covering its goal in above areas; namely, the assessment of the effects of alcohol use and abuse on biological and social systems, and NHTSA integrating its mission to determine the hazard of alcoholism in highway safety and the prevention of alcohol-related traffic accidents and casualties. In the training area, the collaborated efforts include for NHTSA to sponsor training programs for judges and law enforcement personnel in handling drinking drivers, and NIAAA in educating misdemeanor court judges, law enforcement personnel and others on handling alcohol-related court cases by diversion into the Alcohol Treatment System. In the prevention area, both agencies (NHTSA and NIAAA) are coordinating the planning and implementation of public information and education programs which relate to drinking drivers and especially for some high risk population groups, i.e. youth. In the treatment and rehabilitation area, where NHTSA is supporting short term drinking driver programs, NIAAA is providing technical support in developing and evaluating programs for the identification, referral, education, and treatment of persons convicted of Driving-While-Intoxicated. In the area of information exchange, in all instances the results of the programs, whether performed jointly or individually, will be provided to each of the agencies.

Other collaborative efforts are: the provision of consultation and technical assistance to the Department of the Navy in the development of a brochure for chaplains explaining the chaplain's role in the Navy alcoholism program; the provision of technical support to the Social Security Administration as part of the implementation of Title XVI (Supplemental Security Income Program) of the Social Security Act which requires that an alcoholic person be undergoing active treatment to be eligible for such assistance; and the utilization of the National Treatment Alternative to Street Crime Program (TASC), a program in operation by the Law Enforcement Assistance Administration (LEAA) of the Department of Justice for drug abusing offenders. This program will also provide for screening of alcohol abusing offenders in the criminal justice system for referral for treatment to NIAAA grantees, determining that the client is acceptable, monitoring the progress of each client through the TASC tracking units to determine success or failure and, in case of violation of the criteria of the treatment program, return the client to the criminal justice system.

Other Program Coordination areas of responsibility in which this office takes action includes implementation of the National Environmental Policy Act, the Privacy Act, the Rural Health Initiative Program, and the Health Underserved Rural Area Program. Lastly, the NIAAA Annual Report to Congress is prepared by this office.

PUBLIC AFFAIRS

The Public Affairs programs encompass a wide range of efforts designed to increase public awareness of the facts about alcohol use and abuse as well as to develop and disseminate public information materials. The Office of Public Affairs has coordinated a nationwide public service education campaign on radio and television and developed a broadcasters' handbook containing editorial materials on the myths and facts about alcohol use and abuse and offering ideas for local programming. This office also coordinates the public and media appearances of the Institute Director and senior staff; monitors the Institute's activities regarding the Freedom of Information Act; coordinates the clearance of publications through appropriate government channels; and provides technical assistance to volunteer groups in support of public education programs.

OFFICE OF PROGRAM SUPPORT

The administrative functions of the NIAAA are performed in four branches that comprise the Office of Program Support.

Contracts Management Branch develops and implements standards and procedures for the management of the Institute's contracts program, and negotiates, executes, and administers the Institute's contracts and reimbursable agreements.

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Grants Management Branch develops, implements and coordinates the application of Institute standards, methods and procedures for the management of grants, performs all necessary tasks to insure compliance with grant management policies and procedures, and provides guidance to NIAAA staff, applicants, and grantees on the management grants programs.

Financial Management Branch coordinates the formulation, presentation, and execution of the NIAAA budget, including review and approval by various levels of the Executive Branch and Congress, as well as managing the current year appropriations in each program area.

Management Services Branch coordinates activities concerned with the provision of general services to the Institute, including the use of manpower resources and the development of policies and procedures to increase the effectiveness and efficiency of management.

ALCOHOLISM

Recent statistics indicate that 21 of every 100,000 Americans die each year from alcoholic cirrhosis of the liver. This death rate has increased strikingly since 1962, when it was 12 per 100,000. As a cause of death in the age group of 45 to 64 years, cirrhosis is exceeded only by heart disease, cancer, and cerebrovascular disease. It is this knowledge which makes intensive research on alcoholic cirrhosis a vital part of the research program at the National Institute of Arthritis, Metabolism, and Digestive Diseases of the National Institutes of Health.

NATIONAL INSTITUTES OF HEALTH

National Institute of Arthritis, Metabolism, and Digestive Diseases

Enlargement of the liver (hepatomegaly) is a common manifestation of alcoholic liver disease that generally has been attributed to fat accumulation. Because there is no evidence that fat alone accounts for the increase in liver mass, Dr. Charles S. Lieber of the Mount Sinai School of Medicine in New York designed a study to determine if cell constituents other than fat might contribute to alcohol-induced hepatomegaly.

His findings indicate that long-term feeding of alcohol to rats leads to hepatomegaly characterized by an accumulation of protein that is quantitatively as important as the increase in fat. The bulk of the protein accumulates in the soluble fraction of the cell, and consists primarily of so-called "export proteins" such as albumin and transferrin, which normally are exported from the liver cell into the plasma.

Livers from rats fed ethyl alcohol (ethanol) increased 30 percent more than controls both in volume and wet weight. The increase in liver fat accounted for half of the increase in hepatic dry weight, while a concomitant increase in liver protein accounted for practically all of the other half. Moreover, the hepatocyte cells increased 36 percent in size, with no increase in cell number, and the major protein increase was traced to the soluble "cytosol" fraction of the cell.

It was shown, furthermore, that hepatic concentrations of typical export proteins, such as albumin and transferrin, increased significantly in ethanol-fed rats, while concentrations of a nonexport protein, ferritin, decreased. Hepatic accumulation of export proteins was attributed to a defect in the functional state of the microtubular system.

These findings support the hypothesis that ethanol may decrease the liver's ability to export proteins, and reveal a potentially important new site of the hepatotoxic action of ethanol.

OFFICE OF HUMAN DEVELOPMENT

Rehabilitation Services Administration

ALCOHOLISM

Over the past several years, people with the primary disability of alcohol abuse have constituted between 4% and 5% of the total number of individuals rehabilitated by State rehabilitation agencies. The Rehabilitation Act of 1973 requires that priority in services be afforded severely handicapped individuals, and neither the Act nor the Federal regulations includes alcoholism within the definition of severe handicap. Therefore, it appears probable that there will be a gradual decline in the number of alcoholic individuals served by State rehabilitation agencies in the future.

The Rehabilitation Services Administration works closely with the National Institute on Alcohol Abuse and Alcoholism. A national conference of the Directors of State alcoholism and State vocational rehabilitation agencies was conducted for the purpose of stimulating cooperative planning and programming in State level programs for alcoholics.

Numerous special projects in alcoholism have been conducted by State rehabilitation agencies. In New Jersey, for example, the State agency has worked in close cooperation with private industry and organized labor in identifying and providing necessary services for employees whose jobs are endangered by alcohol abuse. Other projects designed to serve alcoholic people have been active in Alabama, Alaska, Connecticut, Florida, Washington, Wisconsin, and Texas.

Rehabilitation Research

Research and Demonstration projects concerned with alcoholism have (1) developed methods of counseling, placement and follow-up of members of skid row populations; (2) conducted long-term follow-up studies of rehabilitated alcoholics; (3) studied career patterns of alcoholics to identify factors in successful vocational adjustments; (4) established a half-way house for homeless alcoholic men; (5) studied problems of alcoholic offenders; and (6) developed two series of films on rehabilitation of alcoholics based on research results, one intended for public showing over television and the other series for professional training.

Also administered by the Office of Research and Evaluation is the Special Foreign Currency Program. Evaluation and reports on progressive action program in Poland and Yugoslavia are of value to the United States and other countries where there is concern about the increasing number of alcoholics and problem drinkers.

There is a greater recognition by programmers in this field that these men and women need social and psycholigical rehabilitation services. New projects emphasize an interdisciplinary approach to ascertain the most efficient methods of bringing about vocational rehabilitation in a community setting for alcoholic and problem drinkers. This program will be closely integrated with the domestic rehabilitation research program.

Number of Alcoholism Rehabilitation

	Persons Rehabilitated	
Fiscal Year	Total	Alcoholics
1974	361,138	15,271
1975	324,039	14,873
1976	303,328*	13,300*
1977	295,000*	12,900*
1978	286,000*	12,500*

*Estimated

Public Services Administration

Alcoholics

The Public Services Administration has responsibility for administering the Social Services program authorized under Titles I, IV-A, X, XIV, XVI and XX of the Social Security Act, as amended. Except for Guam, Puerto Rico and the Virgin Islands, Title XX superseded all of the authorizing titles cited above as of October 1, 1975.

Under Title XX, grants are made to States for services to eligible individuals based on income or public assistance status. States may choose the services they will provide, as long as each service conforms to at least one of the five goals stated in the Act.

Within the broad spectrum of services provided to eligible individuals are those directed to preventing, solving or alleviating the problems brought on by alcoholism.

ARTHRITIS, RHEUMATIC DISEASES, AND RELATED DISORDERS

Arthritis, the nation's number one crippler, along with other rheumatic and connective tissue diseases, affect more than 22 million people in the United States at a cost of about $13 billion annually. The classification "arthritis and rheumatism" refers to almost 100 different disorders. More than a dozen of these are regarded as serious public health problems, most notably rheumatoid arthritis, juvenile rheumatoid arthritis, degenerative joint disease, systemic lupus erythematosus, and gout. Rheumatoid arthritis is one of the severely crippling forms of rheumatic disease, and several million Americans are afflicted with it. The most prevalent form of arthritis is osteoarthritis, or degenerative joint disease, and more than half of all people over the age of 55 have this disorder. In the face of these figures, researchers are continuing to pursue both basic and clinical biomedical investigations against these diseases. Much of this effort is conducted and supported by the National Institute of Arthritis, Metabolism, and Digestive Diseases.

Obligations

	1974	1975	1976	1977 estimate	1978 estimate
National Institutes of Health: National Institute of Arthritis, Metabolism and Digestive Diseases	$14,076,000	$16,860,000	$17,709,000	$22,389,000	$25,761,000

NATIONAL INSTITUTES OF HEALTH

National Institute of Arthritis, Metabolism, and Digestive Diseases

The major emphasis in research against these diseases is being directed toward gaining the fundamental knowledge that may lead to definitive cures or effective prevention. Not only has there been an intensive interest in gaining a better understanding of the nature of arthritic disorders, but also a strenuous effort is being sustained to determine what are the initiating events which trigger processes that cause the various forms of arthritis and related musculoskeletal diseases. The program conducted and supported by NIAMDD continues to pursue studies of connective tissue activation in rheumatic diseases; the biological effects of lysosomal enzyme release and immune complexes in rheumatoid arthritis; and immunologic derangements in systemic lupus erythematosus.

Studies are also in progress to examine collagen in osteoarthritic cartilage, the effect of motion on the cartilage of the joints, enzyme processes in arthritis, the mechanics of normal, arthritic and prosthetic joints, and many other vital topics.

Many projects are directed toward expanding our general understanding of connective tissue and associated musculoskeletal disorders through studies in immunology, including autoimmunity and hypersensitivity and disturbances of immune systems both hormonal and cellular; skeletal muscle structure and function; the structure, function, production and biochemical studies of collagen, elastin, and other modalities of connective tissue; and the "ground substances," such as the mucopolysaccharides and mucoproteins.

Much of the research on these diseases is also directed toward improving treatment and developing new procedures and bio-compatible materials, such as those which have made the total replacement of hips, knees and other joints so effective.

Intensive planning is underway to provide for the various important missions called for by the National Arthritis Act and the subsequent National Arthritis Plan which was presented to the U.S. Congress in 1976 following a twelve-month study and survey by the National Commission on Arthritis and Related Musculoskeletal Diseases. The NIAMDD is performing a central role in the implementation of the mandates of the Act, and is working to fulfill the requirements of the National Arthritis Plan within the framework of existing fiscal and manpower resources.

Within the past year, the Institute has begun to establish a number of Multi-Purpose Arthritis Centers, mandated by the Act. These centers are intended to conduct educational programs for health professionals providing care for patients with arthritis, clinical and laboratory research, training programs for physicians, information programs for professional and lay audiences, and community demonstration projects.

Rheumatoid Arthritis

Rheumatoid arthritis leads to serious disability, and although research has brought forth more effective ways of limiting pain and deformity from the disease, the cause of the disorder is still not known. Many scientists believe, however, that the mechanism which causes the widespread chronic inflammation that attacks the joints and other body systems may be an abnormal reaction of the body's immune system. Such a reaction could be stimulated by infection and may result in a misdirected attack by the body's defense systems on its own tissue (an autoimmune reaction). Much evidence exists to recommend this theory, and researchers are striving to uncover information which may establish

a causative link. A number of infectious agents have already been identified from tissues of patients with rheumatoid arthritis, but so far none has been shown to be a definite cause of the disease.

An important area of investigation involves the association of prostaglandins, hormone-like substances that act locally in many tissues of the body when inflamed. Most prostaglandins which have been studied have been implicated in triggering tissue inflammations. About two years ago, Dr. Gerald Weissman, an Institute grantee, and associates at the New York University School of Medicine demonstrated that large doses of prostaglandin E_1 can suppress the inflammation and tissue damage in rats in whom experimental arthritis is induced. This team also developed evidence that the prostaglandins probably switch off inflammation by inhibiting the release of potent tissue-dissolving enzymes (lysozymes) from white blood cells. In more recent studies, NIAMDD grantee Dr. Armen H. Tashjian, Jr. and his associates at Harvard University have obtained evidence that bone resorption activity, an important component of the joint destruction and deformity observed in patients with rheumatoid arthritis, may result in part from activity of prostaglandin E_2 in the synovial tissue of the patients' joints. The investigators say that although the mechanisms involved in bone resorption during the course of the disease are still not well understood, their findings suggest that indomethacin and related nonsteroid anti-inflammatory compounds may act to prevent or retard bone destruction by inhibiting prostaglandin biosynthesis.

Treatment in the early stages of rheumatoid arthritis is designed to relieve pain, to control inflammation, and to prevent deformity. Many cases can be controlled satisfactorily on a program of rest and physical therapy, using salicylate drugs such as aspirin, and not progress to significant joint destruction or interfere with the normal routine of the patient's life. Some cases are controlled with corti-costeroid drugs, administered alone or in combination with aspirin or gold. Numerous investigators in recent years have had reported beneficial results in treating severe cases of the disorder which cannot be controlled by conventional approaches with such immunosuppressive drugs as azathioprine and cyclophosphamide. Research has shown that because of the toxic nature of these drugs, however, it is necessary for clinicians to be highly selective and follow strict guidelines for their use. Other agents with toxic effects, such as nitrogen mustard, methotrexate and chlorambucil, have also been shown to be effective in some cases, and research on the efficacy and hazards of these drugs is continuing.

Another therapeutic agent which has been shown to be quite effective in the treatment of rheumatoid arthritis is gold, more strictly gold salts. An NIAMDD researcher at Baylor College of Medicine in Houston, Dr. John T. Sharp, along with his associates, has shown for the first time by radiologic evaluation that gold therapy helps alter the course of rheumatoid

arthritis by giving injections of a soluble gold compound for 20 to 30 weeks. Periodic radiologic x-ray examinations have shown the arrest of bone and cartilage destruction in several patients, as well as a significant slowing of the rate of joint damage. Dr. Sharp is now exploring the relationship of blood levels of gold to changes in the patient's condition.

An important link between immune mechanisms and rheumatoid diseases was established not long ago when Dr. Paul Terasaki and his associates at UCLA discovered that most patients (95 percent) with ankylosing spondylitis possess a common genetic cellular factor (histocompatability antigen) present in only a small proportion (5 percent) of the general population. This link suggests that some aberrant, genetically controlled, cellular immune response may be the cause. If this link is proven to exist between human leukocyte antigens (HLA) and a number of other diseases, it could mean earlier and more accurate diagnosis for many patients.

Numerous researchers continue to document this remarkable association between the histocompatibility antigen HLA-B27 and ankylosing spondylitis. Institute grantee Dr. John S. Davis IV and his associates at the University of Virginia School of Medicine have now shown that this rheumatic disorder in women has the same strong association with the antigen as that reported in previous studies in which the subjects were predominately male. NIAMDD grantee Dr. Frank R. Schmid and his associates at the Northwestern University Medical Center has, furthermore, detected signs of spondylitis in 25 percent of apparently healthy men who carry the antigen HLA-B27, suggesting that the prevalence of spondylitis in this group and in the population at large may far exceed previous estimates.

U.S. - U.S.S.R. Cooperative Trial of D-penicillamine

The Institute is also supporting studies on the efficacy and toxicity of D-penicillamine in two careful studies, one of which is sponsored by the U.S. - U.S.S.R. Cooperative Program in the Rheumatic Diseases. In preliminary studies, both here and in England, D-penicillamine has shown great promise in the treatment of rheumatoid arthritis, but more work is needed to determine the minimally effective dose and the long-term toxic effects.

Lyme Arthritis

Dr. Stephen E. Malawista and his associates at Yale University are investigating what may be a new, infectious form of mild arthritis in the Connecticut River valley. Dubbed "Lyme arthritis" after the location where it first emerged, the disease is marked by recurrent attacks of joint pain, is sometimes preceded by an unusual skin rash, and may be transmitted or triggered by insect bites.

Thus far, 51 patients (39 children and 12 adults) from three contiguous communities, Lyme, Old Lyme, and East Haddam, Conn., have been identified. In most patients only one joint, usually the knee, was involved initially. Two-thirds of the patients have experienced recurrent attacks, with some patients suffering as many as ten recurrences, and, in some, several joints became affected.

The unique syndrome is distinguished from juvenile rheumatoid arthritis by its short duration of symptoms, high prevalence of affected males, absence of inflammation of the iris and ciliary body, and its geographical and seasonal occurence. Thus far, all bacteriologic cultures and serological tests have failed to point to a specific infectious agent. The investigators believe that further studies of this phenomenon may provide better knowledge of the poorly understood causes and early stages of many other forms of arthritis.

Systemic Lupus Erythematosus

Researchers Dr. Daniel R. Budman and Dr. Alfred D. Steinberg at the NIH Clinical Center in Bethesda, Maryland, recently conducted a retrospective analysis of 235 NIH patients with systemic lupus erythematosus (SLE), and found that 45 percent were hypertensive. This study, which was undertaken to clarify the relationship between hypertension and renal function, indicates that the presence of hypertension does not imply the presence of significant kidney disease and that the outlook for patients with SLE and hypertension may be better than was previously thought. The investigators say their study indicates that hypertension is not necessarily a result of SLE, and that, in fact, SLE patients can suffer considerable kidney impairment without having abnormal blood pressure. The scientists say that their observations do suggest that further study should be made of the aggressive management of hypertension in SLE, because high blood pressure may increase kidney damage already begun by the "autoimmune" process.

Dr. Ronald P. Messner and his associates at the University of New Mexico are investigating the question of whether susceptibility to SLE is genetically determined and if it can be traced within a family as an abnormal immune response. The researchers are studying lymphocytes from SLE patients and their families to examine what role these antibodies play in altering the function of T and B lymphocytes. Antilymphocyte antibodies have been found in patients with SLE and over half of their family members. Attempts also are being made to determine what antigens are involved in these reactions. The studies could provide insights into some of the underlying pathophysiology of the immune system in SLE and development of a method for detecting any genetic predisposition that might make it possible to unravel the epidemiology of SLE.

A number of investigators recently have reported an association between other HLA's and systemic lupus erythematosus (SLE). The actual HLA specificities reported by investigators have varied widely, perhaps because of differences in the size of the samples tested, or because of population variables such as age, race, and geographic differences. Former NIAMDD grantee Dr. Lawrence E. Shulman, who has recently been appointed Associate Director for Arthritis, Bone and Skin Diseases of the Institute's Extramural Programs, and his associates at the Johns Hopkins University School of Medicine have completed a study of 120 SLE patients and 120 matched controls, which links the histocompatibility antigens HL-A1, HL-A8 and the HL-A1,8 phenotype with certain attributes of SLE and suggests that these antigens may play a vital role in the predisposition to this disease.

Artificial Joints

Important progress continues to be made in the research and development of total joint replacement. Numerous orthopedic surgeons are now regularly implanting artificial hips and knees. A new prosthetic knuckle has been developed which enables people with deformed and crippled hands to grasp and pinch again. Advancements are also taking place in the development of prosthetic ankles, shoulders and elbows. Studies continue to focus on problems of finding the best materials for fabrication of joints that will display minimal antigenicity and toxicity, maxium acceptance by the body and show little wear or corrosion over longer periods of time. Materials currently in use include metal alloys, graphite, ceramics, plastics and combinations of these.

Recently, NIAMDD grantee Dr. Jorge O. Galante and his associates at Rush Medical School in Chicago evaluated a cobalt based alloy which has high tensile strength, and good malleability, toughness and resistance to corrosion. The investigators have found the material well-suited for skeletal implantation in terms of biocompatibility with tissues, and they report that it also wears well and can stand a great deal of stress during use. The characteristics of this new cobalt-based alloy make it a promising material for permanent implants such as total hip prostheses, which are subject to long-term mechanical stresses.

The most advanced artificial joint under study is undoubtedly the artificial hip, and hip joint replacement continues to be one of the most successful orthopedic procedures in restoring mobility to patients, even in cases where reconstructive surgery has failed. The outlook for replacement of joints of all kinds in the treatment of arthritic conditions is good, and the Institute will continue to support such work at centers throughout the United States.

Bone Research

Dr. Donald G. Walker, an Institute grantee at Johns Hopkins University, and his associates have discovered that by giving mice

with inherited osteopetrosis ("marble bone") disease intravenous cell suspensions prepared from spleen and bone marrow taken from normal littermates, they are able to permanently restore the capacity of the mice to resorb bone and calcify cartilage, reversing the effects of the disorder. This discovery provides a new rationale for treating the disease in man.

Another NIAMDD grantee, Dr. Stanley A. Brown, and his associates at Dartmouth Medical School have now perfected an ultrasonic device which provides information about the early healing and callus formation of bone fractures. This device should aid in evaluating the healing process and increase the effectiveness of treatment of fractures, facilitating early management decisions and shortening the period of disability.

Outlook

The findings presented above are but a few of more than 150 ongoing, Institute grant-aided or NIH Clinical Center studies covering the range of rheumatic diseases. These efforts are continually increasing a valuable fund of basic knowledge, and improving treatment and control of these disorders. We will continue to pursue various areas of investigation which offer the promise of expanding our scientific knowledge which could lead to an eventual cure or prevention of these disorders.

BURN CENTERS

Mission and Goals

The mission of the Health Services Aministration, within the context of burn care, is to serve as the lead agency in coordinating the health services research and training activities of the Public Health Service. Specific goals include development of plans for a system of regional burn care and for training burn care delivery personnel.

The mission of the Health Resources Administration is to provide expertise in data collection, health manpower training and health services delivery research. Specific goals include the gathering of burn incidence and manpower availability data which can be used to determine burn treatment center and manpower training needs and to develop programs to meet those needs.

The mission of the National Institutes of Health is to advance scientific knowledge of the effects of burns on the body and the development of techniques to reduce fatalities and permanent damage resulting from burns. Specific goals include the continuation of current research and research training programs.

Obligations

	1974	1975	1976	1977 Estimate	1978 Estimate
Public Health Service:					
National Institute of Health:					
National Institute of General Medical Sciences	$2,100,000	$2,500,000	$3,769,000	$4,896,000	$6,091,000
Health Resources Administration:					
Bureau of Health Manpower	188,023[1/]	118,492	100,000	---	---
TOTAL, PHS	$2,288,023	$2,618,492	$3,869,000	$4,896,000	$6,091,000

1/ Cumulative through 1974.

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BURN RESEARCH PROGRAMS

Thermal injury may vary from a minor wound to the most destructive form of injury known to man. Burn damage ranges from skin redness (first-degree), blistering (second-degree), to destruction of the full skin thickness (third-degree). Serious burns evoke a myriad of systemic responses (respiratory and cardiovascular collapse, metabolic dysfunction, kidney failure, stomach ulceration, etc.) and require the most intensive care that hospitals can provide. Among surviving patients, hypertrophic scarring, skin contracture, and the loss of motion of joints can result in extreme disfigurement and physical disabilities, accompanied by severe psychological stress and many years of rehabilitative effort.

Of the nearly two million Americans who suffer medically significant burns each year, 130,000 are hospitalized and 70,000 require intensive care for which the dollar cost alone is well in excess of $300 million. Of the 10,000 who die, one-third are children under 15, with the great majority being preschoolers. Another large fraction involves the elderly, 65 years and older. Although the number of burn deaths is small compared to the great killers--heart disease, cancer, and stroke--extensive burn injury as an entity is unquestionably catastrophic in terms of the overwhelming insult to patient, the psychological after-effects, and the prolonged reconstructive period, all of which cause severe suffering and expense to the involved families.

Burn research and burn patient care, including rehabilitation, are important concerns of the Public Health Service. The National Institutes of Health, primarily through the National Institute of General Medical Sciences (NIGMS), supports research on the biomedical aspects of burn injury. The NIGMS, in addition, has collaborated with the Health Services Administration and other health agencies in order to develop an effective program in burn research and care.

HEW Burn Task Force

An HEW Burn Task Force was established in fiscal year 1976 to assess the status of national capabilities and needs for burn treatment and to recommend a plan for action to achieve the goal of optimum patient care. Findings and recommendations of the Burn Task Force were documented in the Burn Care Report and submitted by the Secretary, HEW, on September 23, 1976, to the Senate Subcommittee on Labor/ Health, Education, and Welfare. In addition to representation on the Burn Task Force by all appropriate agencies of HEW, other members represented the U. S. Consumer Products Safety Commission, the Department of Defense, the Council of Governments, and numerous academic institutions noted for expertise in the areas of burn care and research.

National Institute of General Medical Sciences

The importance of burn research cannot be overly emphasized. The death rate for severe injuries involving 30 percent or more of the total body surface has in several centers been reduced rather significantly during the past 10 years, from 100 percent to nearly 50 percent. However, many deaths continue to occur for unknown reasons and the overall mortality remains high. Also, the time of death following burn injury has shifted, from one to two days post-injury to two or more weeks. This is due largely to the introduction of more effective means of resuscitation and other early supportive measures. As a result, the full, long-range impact of burn injury upon vital organs and systems of the body has only recently been realized, posing a difficult but crucial challenge for the very best efforts in biomedical science.

NIGMS Research Program

The NIGMS supports burn research centers and projects within the Trauma-Burn Program. The research centers are multidisciplinary efforts where basic laboratory findings are rapidly applied to improve patient care. Nine trauma-burn research centers are presently supported, two of which are devoted entirely to problems of burn injuries while four others have significant burn-related research components. The broad goals are to understand the basic cellular and tissue changes induced by injuries and to prevent death, mitigate pain, and lessen both the recovery time and degree of disability suffered by severely burned patients.

Recent Accomplishments

Support was awarded in fiscal year 1976 to establish a new trauma-burn research center at the University of Utah Medical center, Salt Lake City. This institution has embarked on an aggressive program to improve the care of injured persons in the Intermountain West region, covering 3,500 square miles. The research includes studies on liver dysfunction and stomach ulceration induced by trauma, the effects of corticosteroids in trauma and burn treatment, and the development of instruments to continuously measure oxygen consumption and the metabolic activity of injured patients.

The need to replace burned skin has long been a critical problem in the treatment of severe burns. Studies have been carried out to find a synthetic material that would serve effectively as a skin substitute. While a number of such materials have been tried clinically, none has proved adequate in the restoration of skin function. Recently, by applying principles of biomaterials development gained from space technology, investigators at the Burn Research Center at the Massachusetts General Hospital, working with mechanical engineers at the Massachusetts Institute of Technology, devised a composite biomaterial that exhibits many of the biological and physical properties of true skin. The material is a composite of carbohydrates and protein fibers derived from the tissues of cattle. The fibers are reinforced with a second biologic material that protects them from being eroded by naturally occurring enzymes in the tissue. The fiber reinforcement makes the material strong and enables it to prevent fluid loss and infection when in place, covering a burned area. The latter qualities are very important since fluid loss and infection are two of the most serious complications of severe burns. Tests have shown that the material does not cause inflammation and does not stimulate an immunological reaction. The ultimate goal of the research is to fabricate a biomaterial that will be incorporated into the body and be slowly replaced by normal tissues.

Nutritional imbalance following injury is a major focus in the Burn Research Center at the University of Washington's Harborview Hospital, which serves the four-state area of Washington, Alaska, Montana, and Idaho. The research is significant because acute weight loss commonly occurs in burn patients. Loss of 30 percent of body weight is often associated with death. Also, because the immediate cause of death usually is seen as progressive collapse of the lungs with pneumonia, mortality associated with starvation in acutely burned patients is often overlooked. Already in this center, life-threatening metabolic imbalance has been averted in more than 500 burned patients by the development of a precise formula which predicts the caloric requirements of patients based on body weight and the percent of body burns. Corollary measures are the intravenous administration of highly concentrated carbohydrate and protein solutions and the constant delivery of nutrients into the stomach via a nasogastric tube. These techniques have made it possible to prevent weight loss in many patients throughout their hospitalization and have allowed an increase in the survival rate of these patients. This has been demonstrated particularly by a 50 percent survival among young, adult patients having 85 percent total body surface burns.

Prior to the introduction of these extraordinary feeding measures, the mortality rate experienced in such cases, both at this center and others throughout the United States, was 100 percent.

Silver sulfadiazine, developed and introduced three years ago by an NIGMS grantee at the Columbia University College of Physicians and Surgeons, has been considered the most successful topical antimicrobial agent for the treatment of burns. Data have now been obtained on its use with more than 10,000 patients throughout the world. Less than 10 of these patients

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exhibited adverse reactions to the drug. The activity of the drug is not blocked by wound contaminants or metabolites and its broad action inhibits the growth of many bacteria and fungi. On wounds, it is non-painful, does not stain and is slow acting. It forms a reservoir in burned tissues, releasing low levels of silver which kill the bacteria over long intervals. Less than 10 percent of the sulfadiazine is released and absorbed by the body and no renal or hematologic toxicity has been reported. In conjunction with adequate parenteral treatment, it has been found very effective. For example, in one study only seven deaths were attributed to infection in more than 300 patients with burns up to 60 percent of the total body surface. More recently, studies have been undertaken to test the results of the addition of zinc to the silver sulfadiazine. The investigator's theory is that the zinc might alter the structure of the compound and possibly avoid bacterial resistance.

Anoxia, a condition of subnormal oxygenation of the arterial blood, following pulmonary complications, is the second most frequent cause of death from severe thermal injury. Although such anoxia has been linked to the inhalation of incomplete products of combustion in a number of instances, a newer study at the New York University suggests the early post-burn phase may be associated with release of showers of micro-aggregates of platelets and thrombin from the burn site. This observation has been shown to be a possible etiological factor in early post-burn deaths. Periodic monitoring of arterial and venous blood with regard to oxygen levels may therefore be of value--particularly in view of the investigators' observation that heparin may prevent the formation of intra-vascular clotting in the pulmonary vascular bed. The findings also provide further support for the contention that blood transfusions or the intravenous administration of high molecular weight solutions may be contraindicated during the early post-burn phase--especially if the injured patient has not received anti-coagulant therapy.

Research Manpower

The NIGMS has long recognized the necessity of a rigorous training activity to assure continuing momentum and success in research on the pressing problems of burn injury. Under the old surgery training program, support for training in burn research was provided to several institutions. In June 1975, the Institute activated an institutional fellowship program in burn and trauma research under the new National Research Act. Seven awards were made to train physicians and scientists interested in research in these areas. The program offers a multidisciplinary approach, which hopefully will advance our knowledge of the body's total response to injury and burns. There are 14 trainees who receive instruction from a supervisory staff including trauma surgeons and/or burn specialists as well as basic scientists who provide research training in related fields such as physiology, biochemistry, and microbiology. In addition, support was provided for several individual fellowships, four career development awardees, and one career awardee in the area of trauma and burns.

Outlook

The field of trauma and burn research offers many fruitful areas for investigation. In terms of their contributions to mortality and morbidity and the likelihood of yielding to concerted scientific investigations, specific areas of particular merit can be specified. These include the clarification of post-operative and post-wound infections, which occur in approximately 14 million cases per year. Thus, these infections constitute this country's greatest single communicable disease problem. While some infections are successfully prevented or brought under control, much more must be learned, for example, of the factors that increase the risk of infections in the post-trauma patient, and of the pathophysiological effects of their virulence.

Wound healing ranks equally high on the list of priorities. The body's total metabolic response to wounds must be determined, including disclosure of those factors that may inhibit or induce biological repair. Studies beginning with the induction of collagen synthesis in cells in the injured area should continue through the body's organ and system responses to burns. Much is still to be learned about the relation of infection to resistance, and why antibiotic therapy has been ineffective. Also, little is known as to how immunological responses affect skin grafting, the most important method for repair of burned skin. There needs to be considerable work on improving the horrible scarring of the skin which always occurs following severe burns.

It is equally important to further studies into progressive organ failure following severe multiple injury, including cardiopulmonary, hepatic, and kidney failures, and related gastric or peptic ulceration. These studies should provide a better understanding of the total body metabolism. Inadequate protein production or utilization is known to occur in liver failure. In addition, there is unequivocal alteration in the intermediate metabolism of carbohydrates and fats following severe multiple injuries. New approaches and methodologies to elucidate far more completely the pulmonary response to injury are also foreseen. It is apparent that different individuals respond to similar degrees of trauma in markedly different fashion, much as individuals show marked variations in their resistance to infectious agents. Finally, rehabilitation of burn victims is a relatively untouched area and certainly needs major emphasis. It is vitally important to bring the severely burned person back into society, so that he does not feel he is an outcast, but feels he can lead a useful and productive life.

HEALTH RESOURCES ADMINISTRATION

Bureau of Health Manpower

Burn Centers

The Bureau of Health Manpower does not have an on-going program that relates to the categorical target of Burn Centers. However, the Division of Nursing has awarded a contract to the University of Texas, Southwestern Medical School which emphasizes educational training, instruction, and research of the burn phenomena to prepare nurses at the master's level of education to become experts in the care of patients suffering thermal injury.

HEALTH RESOURCES ADMINISTRATION

Bureau of Health Planning and Resources Development
Burn Center Planning and Construction
Division of Facilities Development

The Hill-Burton program has always encouraged the development of new services which would render better health care and at the same time concentrate scarce health resources and skills. This is especially true of Burn Centers which have been given both planning assistance by Hill-Burton State agency and DHEW regional office staff and assistance by Hill-Burton funds on several occasions.

Public Law 93-641, signed on January 4, 1975, extended and extensively revised the Hill-Burton program. Burn Centers will be eligible under two types of formula grant assistance: (1) modernization of health facilities, and (2) construction of new inpatient medical facilities in areas which have experienced recent rapid population growth. The same facilities are also eligible for loans and loan guarantees with interest subsidy. A third type of grant assistance (Sec. 1625) is project grants for construction and modernization projects designed to prevent or eliminate safety hazards in publicly owned medical facilities or to avoid noncompliance by such facilities and licensure or accreditation standards. Grant or loan assistance from FY 1976 and 1977 appropriations (except Sec. 1625 grants) are awaiting the publication of regulations for Title XVI. At that time, $40.1 million in formula grants and $250 million in loan or loan guarantee authority will be available for the priority projects in each State. Section 1625 public facility project grants have already been opened for initial applications for the $11.4 million.

HEALTH SERVICES ADMINISTRATION

BURN CARE

I. Introduction

Advances in the medical management of patients with burn injuries and in the delivery of health care services to burn patients during the past several years have stimulated support for their widespread implementation. An important milestone was the passage of the Fire Prevention and Control Act of 1974, committing the Federal Government to assist in the care of burn patients, including support for facilities, research on burn related subjects, and training for personnel to provide medical care.

This requirement to improve burn care services also highlights the obstacles that remain before the goal of optimum patient care can be realized. The inveterate lack of information about burn victims and treatment facilities and the nascent nature of the field are the major obstacles to the resolution of three key issues:

(1) The number of patients with burn injuries who require specialized care.

(2) The manpower and capital resources that are currently available.

(3) The types of specialized care and staffing that are appropriate for patients with different degrees of burn injury.

Concerned individuals in both the private and the public sectors have become increasingly involved in attempts to resolve these issues and to articulate a national burn care policy that addresses the problem holistically. To date, this dialogue has produced considerable agreement within the burn care community as to the appropriate structure of burn treatment programs.

The planning and development of burn care services should be performed on a regional basis. A large population is required to support the full range of services that are part of a coordinated program of burn care. Regionalization assures appropriate patient referral and the development of specialized treatment facilities in a manner that prevents the dilution of available resources. Likewise, personnel resources capable of providing the range of services required by the burn victims at the site of injury, in the emergency room, in intensive care, and during rehabilitation, should be developed for each region.

This report presents a brief review of these issues, and it recommends certain activities that Agencies of the Public Health Service should perform related to each. A budget for performing these activities during the next three fiscal years is presented.

II. Burn Care in the United States

Burn injury is one of the most serious forms of trauma that can be inflicted on the human body. Burn injuries cause about nine million disability days per year, and approximately nine thousand patients die of burn injuries annually, making burns the third leading cause of accidental death in the United States.

It is estimated that approximately two million burn cases require some level of medical care annually. More than 95 percent of these cases involve minor burns that are treated satisfactorily on an ambulatory basis, and of the 75,000 persons who are hospitalized, only a fraction require specialized burn care.

The hospitals that serve patients with burn injuries vary in their ability to provide specialized burn care. Table 1 presents data published by the National Center for Health Statistics (NCHS) and by the American Hospital Association (AHA) on the care of burn patients by hospitals of varying size. The NCHS data provide estimates on the utilization of non-Federal short-term hospitals of the United States in 1971, and the AHA data summarize the number of short-term and specialty hospitals that reported operating burn care units in 1973.

If, for the sake of comparison, these data on burn patient discharges are assumed to apply to the same period, they suggest that a substantial number of burn victims are treated routinely in short-term general hospitals; approximately one half of the patients with burn diagnoses were discharged from hospitals with less than 200 beds, whereas 82 percent of the hospitals that report operating burn treatment units have at least 200 beds.

The in-patient care provided in general care or intensive care facilities to patients with burn injuries is not different than that provided to other patients except that it is directed toward a different set of symptoms and needs; specialized equipment, personnel with special training in the treatment of burn injuries, and plans specifically designed for treating burn injuries are not usually found in these settings.

The contribution that specialized burn care facilities can make to reducing mortality and morbidity in any but the most critical patients is not well documented, and data necessary to compare the results of treatment provided in general and special burn care facilities are not currently available. Valid data that indicate the severity of burns that hospitals of varying service capabilities attempt to treat are likewise nonexistent.

The existing data sources described in the appendix [1] do not provide any information on the burn patients who should be hospitalized but who do not receive an appropriate level of care. On the other hand, a recent study on the care received by patients hospitalized with burn injuries in Florida suggests that burn patients are frequently admitted inappropriately and that they stay too long.[2]

Without the types of data on patients and treatment facilities described, the adequacy of the number of beds used to serve patients with varying degrees of burn injury cannot be estimated with any reasonable degree of precision; a technical report on estimating the availability of hospital beds for the treatment of burn injuries appears in the appendix. [3]

III. Burn Care Organization

Experts in burn care agree that an echelon system of burn services should be developed. Burn care should begin at the site of injury and continue through intensive and rehabilitative care. Although most patients with relatively minor injuries do not require care in specialized burn treatment facilities, the availability of burn care facilities for severely burned patients is an important element of a national burn care system.

The broad range of medical and allied personnel required to treat patients with serious burn injuries suggests application of the service region concept in organizing victims. These kinds of personnel range from the prehospital emergency medical technicians who transport victims and maintain their vital processes to the hospital-based personnel who treat and rehabilitate burn patients.

Implicit in the regional concept is the assumption that patients are served more effectively and efficiently when the activities of the providers of health care services are coordinated. The purpose of coordinating the services provided within a region is to assure the

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1/ Recent Surveys and Existing Information Systems for Estimating the Incidence of Burn Injuries and Determining the Number and Location of Burn Treatment Facilities. Office of Planning, Evaluation, and Legislation, Health Services Administration. Presented to the HEW Task Force on Burn Care, January 12, 1976.

2/ "Progress Report: Effect of Burn Education of Quality of Emergency Care"; grant number HS 1801-02: Principal Investigator: Dr. Bernard Linn, University of Miami School of Medicine.

3/ Estimating the Availability of Hospital Beds for the Treatment of Burn Injuries. Office of Planning, Evaluation, and Legislation. Health Services Administration. Presented to the HEW Task Force on Burn Care, February 17, 1976.

TABLE 1

ESTIMATED BURN PATIENT DISCHARGES

AND BURN CARE UNITS BY HOSPITAL SIZE

Hospital Size (Beds)	Burn Patient Discharges[1]		Burn Care Units[2]	
	No. (000s)	Pct.	No.	Pct.
6-99	29	26	11	8
100-199	23	20	14	10
200-299	18	16	18	12
300-499	20	18	45	31
500+	23	20	57	39
Total	113	100	145	100

1. Inpatient Utilization of Short-Stay Hospitals by Diagnosis, U.S. 1971. Data from the National Health Survey. Series 13, No. 16. National Center for Health Statistics, Rockville, Maryland, July 1974. Data summarized from Appendix Table 6, p. 56.

2. Hospital Statistics, 1974 edition: 1973 Data from the American Hospital Association Annual Survey. American Hospital Association. Chicago, 1974.

accessibility of services to patients, facilitate their referral, and to coordinate the delivery of specialized burn care resources. Without such coordination, the proliferation of facilities can dilute scarce personnel resources, undermine that aspect of the quality of care which depends on constant use of skills, and, through under-utilization, threaten the financial stability of all burn care facilities within the service area.

The treatment of serious burns is expensive to the patient, the family, and the hospital. The average length of stay for patients with severe burn injuries is greater than three weeks, about eighty percent higher than the average length of stay for all trauma admissions combined. The care for burns is about twice as costly as the care for other hospitalized patients; about a third of the cost of burn patient care is not recovered by the hospital, a non-recovery rate some two and a half times greater than the write-off for other patient categories. In addition to these direct costs, the development of specialized burn care facilities which are not available for treating patients with other kinds of injuries and illnesses represents a significant opportunity cost.

Unlike many other categories of emergency patients, persons with burn injuries can be stabilized quickly and then transported to an appropriate facility early in the course of their treatment without seriously jeopardizing their survival. Since travel time to specialized facilities is not of primary importance in the care of burn victims, then, it is medically feasible to regionalize the treatment of serious burn injuries in a centralized facility.

In short, the planning and development of burn care services on a regional basis has the potential for (1) effecting economies of scale through the concentration of capital and personnel resources, (2) improving the quality of care by maintaining the skills of burn care teams, and (3) establishing suitable mechanisms for the transportation and referral of patients through coordination with the emergency medical services system. In addition, since the organization of health care resources for the treatment of burn victims is ideally suited to regionalization, it provides an opportunity to evaluate the pervasive sentiment for regionalizing health care services generally.

Persons with serious burn injuries should receive emergency medical services at the time of the accident. The emergency care of burn victims is one aspect of the Emergency Medical Services (EMS) program conducted by the HSA's Bureau of Medical Services. The EMS program, which assists State and local agencies in the creation and improvement of emergency medical systems, provides an opportunity to establish networks of comprehensive emergency medical services throughout the country.

EMS has initiated regional planning with respect to overall trauma and with special attention to those categories of patients that require prompt emergency services in order to survive: trauma, burn, cardiac and poisoning victims, high risk infants, and psychiatric, drug overdoes, and alcohol abuse patients. Services for patients with burn injuries have been developed as part of the overall development of regional emergency medical care systems, and recent House and Senate committee reports on the 1976 EMS amendments have included recommendations that HSA be authorized to expand its planning and coordination of burn care on a regional basis.

The goal of HSA is to establish 300 contiguous EMS regions across the nation by fiscal year 1985. Because of the highly specialized nature of burn services, however, the service population will probably come from a large area that is unlikely to coincide with the area of jurisdiction for a single EMS region or health systems agency. An area large enough to support a specialized burn treatment facility is more on the order of magnitude of census divisions or HEW regions; and, as a consequence, several EMS regions will be circumscribed by the boundaries of a single burn care region.

The number and location of burn facilities must take into account the relationship between existing facilities and the needs of the target population. It might be advisable to plan a single burn care facility for several of the Rocky Mountain States, for example, whereas the best approach for the densely populated Northeast corridor might be a closely linked consortium of several larger burn treatment facilities.

Both the Federal and State legislation require State and areawide planning agencies to review and approve applications to construct or modify institutional health care services. Although these laws vary in detail and substance, it is clear that the legislative intent is to limit the further development of inpatient facilities, including burn care beds, to areas that have demonstrable need for the proposed services. Some twenty-five States have passed some type of Certificate of Need legislation, and the National Health Planning and Resources Development Act of 1974 requires that all new health services projects be reviewed according to detailed criteria. HRA is therefore sponsoring the development of technical materials for use in determining the need for and planning burn treatment services.

IV. Manpower Development

The professionals who provide burn care services typically have general training and professional experiences first and specialize in the care of burn patients subsequently. The majority of physicians specializing in burn care, for example, have generally trained in this field as part of another formal training program, e.g., general surgery or plastic surgery. Annually, only one or two physicians completes the two formal programs in the United States for training physicians in burn care.

Likewise, nursing schools typically provide general training and educational experiences. Most training for nurses in the care of burn patients is received in-service; some nurses are recruited into the field of burn care following experiences in general intensive care. Members of other disciplines represented on the burn care team -- such as dietitians, social workers, occupational and physical therapists -- are generalists who are instructed in the care of burn patients through in-service programs.

The American Burn Association (ABA) sponsors symposia for physicians to keep them abreast of technological advances, and additional continuing education activities are conducted by some large burn treatment facilities in all aspects of burn care.

Since the numbers and types of personnel necessary to provide optimal care have not yet been fully defined[4/], the sufficiency of current manpower and training programs for health care personnel in burn care is difficult to assess precisely. There appears to be consensus among experts in the burn care field, however, that there are a number of existing specialized treatment facilities without an adequate number of trained staff to provide the level of care required by burned patients; at least eleven of the nation's sixty largest burn care facilities, for example, are reportedly unable to recruit medical directors.

The proliferation of treatment facilities without first training the medical personnel necessary to staff them promises only to exacerbate this problem. Specialized burn treatment facilities require large staffs, and increasing the number of facilities before developing additional manpower resources will only accentuate the existing shortage of professional personnel.

It is clear that, in addition to those individuals who specialize in the treatment of burn injuries, education and training in burn care should be available to medical personnel who provide care for trauma cases generally; the effectiveness of a system for treating burn injuries is enhanced by adequate treatment throughout the system. Since most burn victims enter the medical care system through the emergency departments of general hospitals, the medical personnel in emergency rooms should be capable of providing initial treatment and triage. Emergency and general hospital personnel should be acquainted with the initial management of all burn injuries and the care of burn injuries that are not so severe as to warrant their treatment in a facility specializing in burn care.

4/ The ABA is currently developing criteria for training personnel and staffing.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

REPORT ON DAY CARE

A REPORT TO THE

HOUSE COMMITTEE ON APPROPRIATIONS

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Federal Funds Expended for Day Care
(Dollars in thousands)

	1976	1977	1978
SOCIAL AND REHABILITATION SERVICES:			
Assistance Payments Administration:			
Work Incentives Program	$ 51,147	$ 57,125	$ 57,125
Public Services Administration:			
Social Services	366,000	736,000	639,000
Child Welfare Services	1,967	1,967	1,967
Subtotal	567,967	737,967	640,967
Office of Planning, Research, and Evaluation:			
Research	2,800	480	750
Subtotal, SRS	560,767	738,447	641,717
OFFICE OF HUMAN DEVELOPMENT:			
Office of Child Development:			
Head Start	1/	1/	1/
Research and Demonstration	1,900	2,165	3,200
Subtotal, OHD	1,900	2,165	3,200
EDUCATION DIVISION:			
Assistant Secretary for Education	76	125	125
Office of Education:			
Vocational Home Economics	1/	1/	1/
Education for the Handicapped	705	555	555
National Institute of Education	157	50	---
Subtotal, Education	938	730	680
TOTAL	573,605	741,342	645,547

1/ Estimates are not available on the portion of this program's budget supporting day care.

2/ Does not include amounts expended for day care where such service is ancillary to primary purpose of program, i.e. Head Start and Vocational Home Economics.

Report on Day Care

(Fiscal Year 1978)

The Department of Health, Education, and Welfare funds several programs which provide day care services to children of working mothers. These include day care services under the Work Incentive Program (WIN), Social Services Programs, and the Child Welfare programs, all administered by Social and Rehabilitation Services. In addition Head Start, administered by the Office of Child Development in the Office of Human Development, provides care during the day for many children from low-income families. Day care benefits of the Head Start program are ancillary to the major purpose of Head Start, which is the provision of comprehensive developmental services (educational, nutrition, health, social and psychological) to children and their families. The Vocational Home Economics program in the Office of Education also provides day care to many pre-school children as an outgrowth of its main purpose.

The Department of Health, Education, and Welfare also supports research and demonstration efforts to develop knowledge and strategies to assure that DHEW and other day care resources will be most effectively utilized to provide quality day care services meeting the needs of children, families and communities.

SOCIAL AND REHABILITATION SERVICE

Federal Funds Expended for Day Care

	1976	1977	1978
		(in thousands)	
Assistance Payments Administration:			
Work Incentives Program	$ 51,147	$ 57,125	$ 57,125
Public Services Administration:			
Social Services	566,000	736,000	639,000
Child Welfare Services	1,967	1,967	1,967
Subtotal	567,967	737,967	640,967
Office of Planning, Research, and Evaluation:			
Research and Demonstration	2,800	480	750
Total, Social and Rehabilitation Service	570,767	738,447	641,717

SOCIAL AND REHABILITATION SERVICE

WIN Child Care

Assistance Payments Administration

The Work Incentive Program, authorized under Title IV of the Social Security Act, is a State-administered program designed to encourage and assist recipients of Aid to Families with Dependent Children (AFDC) to achieve self support through a program of training, work experience, employment, child care, and other supportive services. The 1971 Amendments to the Social Security Act authorized child care and other supportive services to be provided to all WIN registrants who need such care and services to enable them to accept work or training. State expenditures are matched by Federal payments at the rate of 90%.

Child care services include full-time and part-time care for children of WIN participants. Child care may be provided in their own home, in family day care homes, or in day care centers. Of the child care provided, about two-thirds is full-time and one-third part-time. Child care for children in their own homes accounts for about 48% of the total, while 33% receive care in family day care homes and 19% are cared for in day care centers.

	1976	1977	1978
Federal funds.....	51,147,000	57,125,000	57,125,000
Child years of care provided...	83,850	85,000	85,000
Average monthly number of children.....	112,400	115,000	115,000
Average WIN registrations (new)	1,294,000	1,300,000	1,300,000

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Public Services Administration

Day Care Services

The Public Services Administration has responsibility for administering the Social Services program authorized under Titles I, IV-A, X, XIV, XVI, and XX of the Social Security Act as amended, as well as the Child Welfare Services program authorized by Title IV-B of the Act. Except for Guam, Puerto Rico, and the Virgin Islands, Title XX superseded the services under all of the above cited authorizing Titles except IV-B effective October 1, 1975.

Under Title XX, grants are made to States for services to eligible individuals based on income or public assistance status. States may choose the services they will provide, as long as each service conforms to at least one of the five goals stated in the Act.

Under Title IV-B, services are available to all children who need them without regard to the economic circumstance of their families.

Within the broad spectrum of services provided under the above Titles are day care services to children and adults. Services may be provided in the individual's own home or outside the home, including care in family day care homes, group day care homes, and day care centers.

Child care services furnished must be suited to the age, special handicaps or other conditions of individuals children and selected with the participation of the mother (or other responsible relative) insofar as possible.

State licensing laws and standards must be enforced to assure that child care facilities used by the agency are licensed or approved as meeting the standards of the licensing authority. All out-of-home care must also comply with the Federal Interagency Day Care Requirements.* Prior to July 1, 1977, the Department must submit a report to Congress on the appropriateness of these requirements.

In F.Y. 1978, it is estimated that States will use $639,000,000 in Federal funds through the Social Services program and $1,967,000 through the Child Welfare Services program.

*PL 94-120 suspended staffing ratios required for children aged 6 months to 6 years in group day care homes and day care centers through January 31, 1976.PL 94-401 continued the same suspension from February 1, 1976 through September 30, 1977. Family day care homes need not count school age children of the provider.

Public Services Administration

Day Care Services
(in thousands of dollars)

	1975 Actual	1976 Estimate	7-1-76 to 9-30-76 (Transition Period) Estimate	1977 Estimate	1978 Estimate
Social Services day care	486,718	$566,000	$145,000	$736,000	$639,000[1/]
Child Welfare Services day care	1,967	1,967	1,967	1,967	1,967

1/ The FY 1978 estimate assumes that the $200 million available for day care under P.L. 94-401 during FY 1977 will not be available.

Day Care

The 1977 R&D program includes a grant to gather pertinent information concerning the barriers and cost of the Federal Interagency Day Care Requirements amended by Title XX. This project is also gathering information concerning policy changes within States changing funding from Title XX to State monies or income disregard. This information will be included in the FIDCR Appropriateness Report that the Secretary is mandated to submit to Congress by July 1, 1977. Other R&D efforts will focus on the improvement of management in the delivery of child day care at the State and local level. This will include special efforts in the purchase of service, information and referral and client eligibility field.

(Dollars in Thousands)

1975 Actual	1976 Actual	7/1/76-9/30/76 Transition Quarter	1977 Estimate	1978 Estimate
2,500	2,800	248	480	750

OFFICE OF HUMAN DEVELOPMENT

Office of Child Development

Day Care

The Office of Child Development (OCD), located within the Office of Human Development serves as an advisor to the Secretary, the Assistant Secretary for Human Development, and other Federal agencies on matters pertaining to the care and development of children.

Child development program efforts aim at improving child care delivery systems and designing programs to improve the quality of life for children and their families throughout the Nation. Major activities are focused on meeting the developmental needs of preschool-age children from low-income families and on improving services to particular populations of vulnerable children such as the abused and neglected, children in foster care, children in need of adoptive homes, and children in institutions. A variety of research and demonstration activities are also conducted. They are designed to improve the quality of children's programs, such as day care and emergency services, and to measure their impact on the children and families served. The three major child development programs are Head Start, Child Welfare, Research and Demonstration, and the Child Abuse and Neglect Prevention and Treatment Program.

Head Start
(Dollars in thousands)

	FY 1976	FY 1977	FY 1978
Head Start Total	$454,500	$475,000	$475,000

Head Start is a comprehensive preschool program which serves children and their families, primarily those who are poor. It encompasses a wide range of development activities including education, medical, dental, nutritional, social and other services with particular emphasis on parent involvement. Head Start funds full-year and summer programs. The full-year programs provide service either on a full-day or part-day basis. A variety of training and technical assistance activities are provided to local program staff to enhance the quality and effectiveness of the services offered. Head Start also conducts experimental programs such as the Child and Family Resource Program which provides family-oriented child development services according to the assessed needs of individual children, and Developmental Continuity, a program to facilitate continuity of educational and social gains made in preschool programs into elementary school.

For FY 1977 Head Start will assure that 10 percent of the enrollment opportunity in each State are available to handicapped children. This is in accordance with the legislative mandate contained in P.L. 93-644. Prior to FY 1976 Head Start had implemented a policy of making 10 percent of the enrollment opportunities nationwide available to handicapped children. Head Start now services handicapped preschool children in an integrated setting with the non-handicapped and has established service delivery linkages with State and local agencies concerned with handicapped children.

The Head Start Policy Manual states that the appropriate duration of an educational or enrichment program for pre-school children is no more than six hours per day. Beyond this period, it is desirable for a child to "return to his own family unless there is no suitable caregiver in the home due to employment, illness or other reasons." Only in such cases may the basic Head Start program be supplemented to provide full day care for the child.

Low-income children and families, like other segments of the community, differ greatly in their need for child care and developmental services. Ideally, Head Start programs should be tailored to the special and diverse needs of each individual community and child, with particular emphasis placed on serving those with the greatest need. Thus, size permitting, each Head Start program should provide a balanced program of remedial and developmental services that reflects the full array of needs in the community.

Research and Demonstration
(Dollars in thousands)

	FY 76	1977 Estimate	1978 Estimate
Research and Demonstration (Day Care)	$1,900	$2,165	$3,200

The aims of OCD's day care activities are to develop knowledge and strategies to assist in the effective utilization of Federal, state, local and private resources and in contributing input for major legislation designed to improve the quality and availability of national day care.

The overall goal for OCD in Day Care is to improve the quality and availability of day care services nationwide. The OCD approach to achievement of day care-related goals and objectives emphasizes a multi-faceted, multi-year effort, involving (1) basic and applied research in areas of relevance for day care policy; (2) development and validation of program models and service delivery systems which incorporate research findings; (3) evaluation of demonstration model operations and impacts; (4) translation of research and development findings into training and technical assistance programs for intermediate target groups at State and local levels; and (5) dissemination of knowledge throughout the day care community.

All of the current efforts contribute toward the overall goal of achieving a better understanding of the needs fo the children who are in Day Care as a basis for providing quality Day Care, taking into account a variety of factors including costs. The results of several of the projects initiated during FY 1975 and 1976, including the day care center and home cost-effective studies, will provide data essential for activities having a direct impact on this goal.

The National Day Care Center Study is being conducted in 64 day care centers in Atlanta, Seattle and Detroit. Approximately 2,400 pre-school children and their parents are being examined. This project is a three-year, three-phased effort designed to examine in depth, three major cost-related policy issues in day care--caregiver/child ratio, group size and the level of caregiver professionalism-- and to systematically examine variations of different levels of these variables to determine what relationship exists when measured against classroom process, child outcome variables and costs. Sound research and corresponding cost information generated on these major provisions contained in the Federal Interagency Day Care Requirements (FIDCR) should have significant impact on the fiscal level of Federal involvement in day care and should be helpful in setting levels of program input quality for Federal Interagency Day Care Standards. Thus enhancing HEW's responsiveness to Congressional report requirements under Title XX. The Study also should provide a firm basis for resolving the important national, state and local issues relating to "professionalizing" the pre-school caregiver occupation.

This research effort is also examining the significance of other center-based program variables and therefore should assist policy planners and practitioners at the local, state and national levels in the design and formulation of operational guidelines for day care. The Study has already been cited in several Congressional hearings on the appropriateness of FIDCR as being a major contributor to the overall FIDCR assessment.

The National Day Care Home Study is a two-year, two-phase effort to characterize family and group day care homes in urban settings. Phase I, to be completed in 1977, will provide profiles of family day care in major family day care markets throughout the United States and will result in a comprehensive Phase II design. Phase II constitutes an intensive investigation of family and group day care program processes, costs and outcomes with particular regard for variables of demonstrated Federal policy significance. This phase will be funded in FY 1977 upon completion of Phase I.

Although much general information is available in the field of day care, a need exists for more specific usable information designed to aid the providers of day care at the Federal, State and local level in their efforts to deliver quality day care at reasonable cost levels.

In this regard, there is a need for more specific information about the benefits that children and parents derive from various day care programs and services as related to the cost of providing such programs and services. Information of this type is particularly important because policy makers at all levels of government as well as practitioners need this type of information to develop the best possible day care programs for the children at the lower possible cost to the consumer. Little careful research has been performed on the relationship between major cost variables in day care, such as the ratio of center staff to children and the level of professionalism of a center staff, to benefits derived by children in a day care center.

Another need exists in the area of parent perceptions of what they consider to be important to their children in day care. Little reliable information exists to describe current usage patterns and different consumer preference patterns among various groups using day care, the actual and perceived barriers to the use of different kinds of day care, and the trade-offs parents would make between various levels of service and costs and between different types of arrangements and localities.

In addition, OCD has funded the first phase of a Day Care Supply study which will develop a supply model based on nationwide center level programs, staff and cost characteristics which can be used to simulate on a state-by-state basis, the impact of changes in FIDCR-type regulations on the availability and fee structure of public subsidies. It will also assess the impact of changes in local economic conditions on the supply of day care. Data wi-l also be used to generalize the findings of the National Day Care Center Cost-Effects Study from the three target sites to the major day care market in the United States.

EDUCATION DIVISION

Office of the Assistant Secretary for Education

Fund for the Improvement of Postsecondary Education

Report on Day Care
(Dollars in thousands)

	FY 1976 Actual	FY 1977 Estimate	FY 1978 Estimate
Office of the Assistant Secretary for Education - Fund for the Improvement of Postsecondary Education	$76	$125	$125

The Fund, which was established by the Education Amendments of 1972 and reauthorized in 1976, was created to improve the effectiveness of postsecondary education by encouraging the reform and improvement of policies and practices in the field. Under the Fund's Comprehensive Program, grants have been awarded for the improvement of educational practice across a broad range of concerns.

During the past year, one of those concerns has been day-care/community education as reflected in the Fund's grant awarded to the East Harlem Block Schools in New York City. The Block Schools (two nurseries and one elementary) employ a number of parents as volunteers. The Fund's grant to the East Harlem Block Schools supports a joint Bank Street College of Education/Goddard College B.A. program for the education and certification of those parents serving as volunteers in the schools their children attend.

The thrust of the Fund's project is to offer a model of parent participation in community education -- from day care through postsecondary.

Office of Education

Report on Day Care

(Fiscal Year 1978)

The Office of Education's role in providing day care services consists of aspects of vocational home economics education and education for the handicapped programs. The day care role within these activities is focused on training workers for day care/child care occupations and providing services to handicapped children through the support of special demonstration projects. Moreover, these day care services are segments of broader program activities.

Vocational Education

The Vocational Education Act of 1963, Part F, Consumer and Homemaking Education, provides grants to States for educational programs which prepare youths and adults for homemaking and wage earner roles. An ancillary function of the Act and a general objective of vocational home economics education is the training of personnel to operate child care/day care development centers. This training represents one component of comprehensive child care development programs. The day care courses are furnished in home economics in-school laboratories and centers which perform the dual role of training potential child care/day care workers and providing a conducive atmosphere for the growth and development of preschool children. Programs are developed on the local and State level with national technical support. Coursework may include training in child care and development occupations, infant, toddler and school age care, child nutrition, program planning, working with parents, foster family care, administration and supervision.

Since day care personnel training is part of comprehensive child care training programs which vary in scope according to locality, a breakdown of obligations specifically for day care courses is not feasible. Funding for child care development is made available under Consumer and Homemaking Educational grants which was supported at $40,994,000 in fiscal year 1976 and again in fiscal year 1977.

Enrollment in child care programs has increased from 8,453 students in fiscal year 1967 to over 200,000 in fiscal year 1975. These figures represent enrollment in all child care development programs of which day care training is one component. Each fiscal year since 1972, approximately 375,000 preschoolers have received either direct or incidental day care services through vocational home economics child care programs. In addition, many children between 6 and 14 years of age have also received some type of service offered by these programs.

Education for the Handicapped

The Handicapped Children's Early Education Program, Part C, supports demonstration preschool projects which are designed to stimulate the development of comprehensive educational services for handicapped children from birth through age 8 and their families. Several projected supported under this authority are located or cooperatate with day care centers and programs. The day care services provided are often incidental to the specialized education provided. The following projects furnished either direct or indirect day care services to handicapped children.

The National Capital Day Care Association, Inc. of Washington, D. C., has been funded to develop a three year demonstration project concerning specialized programming for preschool handicapped children. From fiscal year 1973 through fiscal year 1974, 55 children participated, 300 children were screened and 65 staff members trained. In fiscal year 1974, the project was funded at $88,596, in fiscal year 1975, $120,000. The fiscal year 1976 funding was $60,000, and the funding estimate for fiscal year 1977 is also $60,000.

The Saginaw, Michigan Child Development Center has been funded to develop a demonstration day care program to serve emotionally and mentally handicapped children so they may be assimilated into the public school system. In fiscal year 1975, 20 children have been served and $82,193 obligated for the project. For fiscal year 1976, $115,000 was utilized to expand the pilot program. In fiscal year 1977, the funding estimate is $115,000.

Potential School for Exceptional Children, Chicago, Illinois, a therapeutic day treatment center for traumatized infant-toddlers, preschoolers, and their parents in an urban area is designed to change young emotionally disturbed handicapped children's self image by alternating their daily life environment. From fiscal year 1974 through fiscal year 1975, 25 children participated, 85 children were screened and 60 teachers were trained.

Alpha Plus Corporation DBA Circle Preschool, Piedmont, California has been funded to demonstrate the preparation of speech impaired emotionally distrubed children (aged 3-5) for successful enrollment in regular and primary-grade classrooms by teaching them necessary survival skills in language and socialization from fiscal year 1973 through fiscal year 1975 51 children participated, 278 were screened and 140 teachers were trained.

Mile High Child Care Association - Denver, Colorado has been funded to develop a demonstration model for training day care personnel to identify developmentally delayed and emotionally distrubed preschool children and to program for them within the regular day care setting. Since fiscal year 1974 120 children participated 400 children were screened and 51 teachers have been trained.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Federal Funds Expended for Day Care
(Dollars in thousands)

	1975	1976	1977	1978
OFFICE OF EDUCATION:				
Vocational Home Economics.....	1/	1/	1/	1/
Education for the Handicapped...	669	705	555	555
Subtotal, OE.....	669	705	555	555

1/ Estimates are not available on the portion of this program's budget supporting day care.

NATIONAL INSTITUTE OF EDUCATION

DAY CARE REPORT

	FY 1976	FY 1977	FY 1978
	($ in thousands)		
Child Study Center, Washington, D.C.	$157	$50	---

The Center has been supported as a facility for NIE staff to conduct research on the learning and development of pre-school children of federal employees. Alternatives designed to increase the impact of the research expenditures will also be explored, such as establishing a pre-school demonstration site in collaboration with the Smithsonian institute.

DIABETES

Obligations

	1974	1975	1976	1977 estimate	1978 estimate
National Institutes of Health: National Institute of Arthritis, Metabolism, & Digestive Diseases*..	$11,132,000	$14,422,000	$14,538,000	$35,727,000	$34,012,000
National Cancer Institute	not available	not available	$235,000	$250,000	$250,000
National Eye Institute	$4,378,000	$4,763,000	$5,246,000	$9,065,000	$9,065,000
National Heart, Lung and Blood Institute	$3,793,000	$5,600,000	$7,000,000	$11,900,000	$12,400,000
National Institute of Neurological and Communicative Disorders and Stroke	not available	$1,365,000	$1,606,000	$1,860,000	$1,931,000
National Institute of Dental Research	not available	not available	$400,000	$600,000	$600,000
National Institute of General Medical Sciences	not available	not available	$775,000	$1,000,000	$1,000,000
National Institute of Child Health and Human Development	not available	not available	$2,230,000	$4,619,000	$4,750,000
National Institute on Aging	not available	not available	$450,000	$563,000	$575,000
Division of Research Resources	not available	not available	$6,075,000	$6,355,000	$7,378,000
TOTAL	$19,303,000	$26,150,000	$38,555,000	$71,939,000	$71,961,000

*Does not include obligations for diabetes-related research projects in other program categories at NIAMDD such as endocrinology, metabolism, nutrition and kidney disease.

DIABETES

It is estimated that there are about 4.5 million diabetics in the United States, and perhaps another 5 million persons will sometime in their lives be affected by the disease. Diabetes is the fifth leading cause of death by disease in the nation; about 35,000 Americans die each year with diabetes and in several times that number diabetes is a contributing factor to heart attacks, stroke, kidney failure, vascular (blood vessel) disease, and blindness. In patients with juvenile diabetes, it is now the leading cause of blindness and seriously reduces life expectancy.

Despite the substantial progress that has been made in medical care for the diabetic, we are still far from the primary goal of eradication or even effective management of the disease. It is therefore essential that scientific research continue to be conducted to find a cure for the disease or a means of preventing its devastating complications.

Intensive studies on the various facets of the disease are presently being conducted and supported by the National Institute of Arthritis, Metabolism, and Digestive Diseases (NIAMDD), the component of the National Institutes of Health (NIH) in which diabetes research is centered. Research closely related to diabetes is also supported by other Institutes at NIH including the National Institute of General Medical Sciences, National Institute of Dental Research, National Institute of Child Health and Human Development, National Eye Institute, National Institute of Neurological and Communicative Disorders and Stroke, and the National Heart, Lung and Blood Institute.

Particular attention is being focused upon five different areas of reseach in diabetes. They are: (1) intensive investigations of the production and action of the focal hormone in diabetes, insulin; (2) studies of another pancreatic hormone, glucagon, which is produced in excessive amounts in diabetics, and of the hypothalamic hormone, somatostatin, which inhibits glucagon production; (3) the possibility that in some cases diabetes may be triggered by an infection, particularly a virus; (4) a number of new approaches to therapy, and (5) the potentially severe complications of the disease.

In July, 1974, diabetes research received a major impetus with enactment of the National Diabetes Mellitus Research and Education Act (Public Law 93-354). The legislation called for establishment of a National Diabetes Commission, the principal charge of which was to prepare a long-range plan to expand and coordinate the national research effort against diabetes, to recommend ways of advancing patient and professional activities in early recognition and

treatment of the disease, and to alert the general public to the significance of early detection, proper control, and complications which may evolve from the disease. The Commission's report, entitled "Long-Range Plan to Combat Diabetes," was submitted to the Congress December 10, 1975, and in September 1976 the Congress appropriated a substantial increase in funding for NIH-directed diabetes research in order to implement the Commission's plan.

NATIONAL INSTITUTES OF HEALTH

National Institute of Arthritis, Metabolism, and Digestive Diseases

Diabetes Research and Training Centers

The NIAMDD is the lead NIH institute for diabetes research. In addition to its continued support of ongoing research and training programs in diabetes, several new programs have been initiated by the Institute in its effort to implement the long-range plan to combat diabetes as recommended by the Commission.

As noted in last year's special report on diabetes, the Diabetes Mellitus Research and Education Act provides for the development, or substantial expansion, of centers for research and training in diabetes mellitus and related endocrine and metabolic disorders. In its report to the Congress in 1975 the National Commission on Diabetes recommended the creation of a series of new Diabetes Research and Training Centers within NIAMDD and that funding of such centers begin in FY '77.

In October 1976 the NIAMDD announced that it will establish a number of these centers in order "to increase the scope and tempo of Federally-supported research and training activities" in diabetes mellitus. Such centers are to be funded by the grant mechanism, but under conditions that will require close coordination with the NIAMDD. The NIAMDD held an orientation session for the representatives of potential applicant institutions on October 25, 1976. Potential applicants were asked to submit letters of intent prior to November 30, 1976, in order to determine if their proposed program meets the criteria of a Diabetes Research and Training Center. Full applications for center grants by eligible institutions are to be submitted, in accord with the required format prior to January 15, 1977. Following careful peer review, including review and approval by NAAMD Council, successful applicants will be notified in September 1977.

Research Grants in Diabetes

In December 1976 the NIAMDD announced a request for applications for new research grants in diabetes and related endocrine and metabolic disorders. A deadline date of March 1, 1977 was set for receipt of applications in response to this request. Successful applicants will utilize these research grants to initiate new studies into the cause, prevention, treatment and cure of diabetes and to draw upon several new and exciting leads being generated from current NIAMDD supported research.

Seeking the Cause of Diabetes

Current evidence indicates that there may be more than one cause of diabetes; genetic, infectious, and nutritional factors have been implicated. Recent evidence linking diabetes mellitus to the human

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lymphocyte antigen system (HLA) provides a promising new avenue of approach to understanding the genetic background of diabetes.

The possible role of infectious agents and in particular viruses, in the etiology of diabetes has been studied by increasing numbers of investigators in recent years. For example, an Institute-supported scientist at Pennsylvania State University, Dr. Bryce Munger, reported four years ago that healthy guinea pigs become diabetic a few weeks after being caged with guinea pigs made diabetic by chemical means. Efforts to identify an infectious agent or its route of transmission, however, were unsucessful.

Continuing research efforts in this area have been hampered by the lack of a suitable animal model. During this past year, however, Dr. Munger has documented spontaneous diabetes in a colony of Abyssinian guinea pigs and has verified the contagious nature of the disease. Although clinical manifestations are mild or variable, the presence of pathologic changes in the insulin-producing "islets of Langerhans" in the pancreas are reminiscent of human juvenile diabetes.

Healthy guinea pigs exposed to the colony became diabetic and most of them had signficant amounts of glucose in their urine. The severity of the islet cell changes generally paralleled that of the clinical symptoms and could be correlated with the duration of the overt diabetic state.

Attempts thus far to determine the nature of the infectious agent have been unsuccessful. Since, however, the diabetic animals do not require therapeutic insulin for survival and beta cell destruction in the pancreas is not total, long-term studies of the metabolic defect are possible without therapeutic interference.

These findings support the concept that infectious and/or immune mechanisms might be operative in the causation and the natural course of human diabetes.

Insulin and Insulin Resistance

Diabetes is a disorder in which there is a deficiency of insulin or insulin action. Many skilled scientists are attempting to determine the factors responsible for the abnormal production and action of insulin in diabetes.

A University of Chicago grantee, Dr. Donald F. Steiner, reported in 1967 that insulin production is preceded by the production of "proinsulin," and that insulin is produced in two stages. More recently, in 1976, he has found that "proinsulin" production is preceded by the production of "pre-proinsulin," and that insulin is produced in three

stages. The discovery of "preproinsulin" suggests that many hormones may have two precursors rather than one, and brings us closer to decoding the genetic mechanism by which the normal body orders the islets of Langerhans in the pancreas to create insulin.

In many diabetics there is no apparent deficiency of insulin production, but insulin does not seem to act appropriately to lower the blood glucose. This situation is often referred to as "insulin resistance" a term which refers to the need for ever increasing amounts of this hormone to control elevated blood sugar levels. Many scientists are attempting to determine the precise mode of action of insulin and what has gone awry in this process in some diabetics.

The Institute's Dr. Jesse Roth and Dr. C. Ronald Kahn have described six female patients with a unique diabetic syndrome associated with severe insulin resistance and the skin condition, acanthosis nigricans. Three of these patients produced autoantibodies (antibodies directed against one's own tissues) which alter cell surface insulin receptor activity, cause impaired insulin binding, and result in the described syndrome.

Normal insulin receptors were altered by a blood factor isolated from these patients, resulting in impaired insulin binding. It is believed that the blood factor is an antibody and that it inhibits insulin binding by altering insulin-receptor interaction on the cell surface. The investigators suggest that similar autoantibodies may be responsible for a number of other unexplained disorders marked by hormone resistance.

The NIAMDD's Dr. Yale Topper has produced a modified form of insulin, subsequently termed "super-insulin," which elicits insulin-like responses from mammary gland cells that are unresponsive to the native hormone. Muscle cells from insulin-resistant mice also responded readily to super-insulin, and their fatty tissue cells were 50 times more sensitive to super-insulin than to native insulin.

Evocation of insulin-like responses by "super-insulin" from cells incapable of responding to the native hormone indicates that in these cells only part of the cellular apparatus required for response to insulin is deficient. Apparently, "super-insulin" can either short-circuit or rectify this deficiency.

Such studies increase our understanding of the ways in which hormones interact with their target cells, and, in the case of insulin, might provide invaluable insight into the basic cause of diabetes.

Glucagon and Somatostatin

It is now well-established that diabetes is a disorder characterized not only by a deficiency of insulin or of insulin action, but also by

excessive secretion of the hormone, glucagon. Whereas insulin is secreted by pancreatic beta cells and acts to lower blood glucose, glucagon is a hormone secreted by pancreatic islet alpha cells which stimulates release of glucose from the liver and tends to elevate blood glucose levels.

More recently another hormone, somatostatin, secreted from the hypothalamus of the brain and found in the D cells of the pancreas, has been discovered. Administration of somatostatin has been found to lower elevated glucose levels in diabetic subjects by lowering elevated glucagon levels. It has been suggested that somatostatin might prove to be a useful adjunct to insulin in the treatment of diabetes, but much more research must be conducted to determine the validity of this hypothesis.

The Institute has recently negotiated a research contract with the University of Texas, Dallas, which provides for clinical and laboratory studies with glucagon and somatostatin in diabetic Pima Indians (a unique population with a 30 percent diabetes rate), primarily in the Institute's Clinical Research Unit at the Indian Hospital in Phoenix.

New Therapeutic Approaches

In recent years, many investigators have been seeking alternative means of controlling blood sugar levels in diabetic individuals, inasmuch as diet, insulin, and oral drugs have not been entirely satisfactory. One approach has been the transplantation of a healthy, insulin-producing pancreas into a diabetic patient. When this proved unsatisfactory because of rejection of the transplanted organ, transplantation advocates turned to implanting only the insulin-producing beta cells isolated from the pancreas. The results with this technique in a variety of experimental laboratory animals have been encouraging.

Two years ago several NIAMDD-supported studies demonstrated considerable success in ameliorating diabetes in both rats and monkeys via beta cell transplantation. At that time the Institute, together with the American Diabetes Association, felt compelled, however, to warn the public about optimistic speculation regarding similar human experimentation.

During 1976 an Institute-supported surgeon at the University of Minnesota, Dr. John S. Najarian, performed the first human beta cell transplantations "safely and without complications" in seven long-term diabetic patients. The need for insulin injections in these patients was reduced temporarily by nearly 50 per cent, and this reduction was

sustained in at least one patient for 18 months. Although this procedure remains highly experimental, this initial experience suggests that it may be a relatively safe one. It is to be stressed that much more research is required in this area: the investigators estimate that it will require four or five years to perfect the technique and to determine adequately its effeciveness.

The NIAMDD intends to increase its support of such beta-cell transplantation-related research. Also, support will be made available for research and development related to artificial devices which may be capable of effecting automatic blood glucose control.

Complications of Diabetes

The complications of diabetes are many and varied, and may often be devastating. Gradual deterioration of the blood vessels, kidneys, nervous system, and eyes are believed to occur relentlessly and in spite of apparently good blood sugar control; however, several NIAMDD grantees have recently obtained evidence to the contrary.

For example, Dr. John S. Najarian of the University of Minnesota has reported that healthy kidneys transplanted into diabetic patients develop typical diabetic kidney diseases in the "chemically disordered environment," while transplanted kidneys in non-diabetic control patients of the same age and tissue type remain unaffected. Simultaneously, it was shown that diseased kidneys in diabetic rats return to near normal following transplantation of rat neonatal pancreatic islet cells.

These findings suggest that good blood sugar control might prevent, if not reverse, the vascular complications of diabetes, and add support to the view that diabetic complications are linked to hyperglycemia and not to an independent, concurrent genetic disorder.

Recent work by several NIAMDD-supported research groups suggests a possible way to assess long-term blood glucose regulation in the diabetic patient using measurements of hemoglobin A_{1c}, a minor hemoglobin component in the blood of normal individuals which appears to be present in increased amounts in diabetic patients and correlates well with the level of blood glucose.

Still another complication of diabetes, hitherto unrecognized, is loss of bone mass. Dr. Louis V. Avioli of the Jewish Hospital of St. Louis has documented a significant loss of bone mass in patients with juvenile and adult-onset diabetes, and has proposed that this decreased bone mass is inherited with the underlying disorder and not

acquired. Verification of this finding may explain why diabetic patients are more susceptible to fractures from a lesser degree of trauma.

Institute physicians and epidemiologists working with the diabetic Pima Indian population have recently completed a 10-year follow-up study to elucidate the pattern of emerging complications of this disease in a diabetic population. This study provides a wealth of data which will soon be evaluated and correlated.

Disorders of the peripheral nervous system associated with diabetes are called diabetic neuropathies. These include a variety of syndromes that differ in their clinical manifestations and prognoses. Conservative estimates indicate that at least twenty-five percent of diabetics develop disabling (and sometimes painful) neurological complications.

The National Institute of Neurological and Communicative Disorders and Stroke has been actively supporting research in this area. A NINCDS Advisory Council work group has made recommendations for the training of young researchers and for additional research directions.

Training

The NIAMDD recently announced establishment of Clinical Investigator Awards in Diabetes to supplement its already existing Research Career Development Awards and National Research Service Awards.

Outlook

Although diabetes is the most intensively studied of the metabolic diseases, it is not the best understood. Continued advances depend upon further knowledge of the disease and its complications, of genetic factors, and of insulin action. It is in these areas that research has made the greatest progress in recent years. If diabetes research continues at its present highly productive rate, deferment of its onset in predisposed individuals and suppression of its severe complications are well within the realm of possibility.

DIGESTIVE DISEASES

Disorders of the digestive system are among the most common illnesses in the country. Digestive diseases affect 18 million Americans, and are of enormous economic cost in direct medical expenses and in time lost from work. In spite of this, many of these ailments are only poorly understood.

Most digestive diseases are chronic in nature and thus they often cause prolonged and expensive hospitalization and outpatient treatment. Many patients are afflicted for years, and have to undergo extensive and repeated treatments and surgery.

Obligations for Programs in Digestive Diseases

	1974	1975	1976	1977 estimate	1978 estimate
National Institutes of Health: National Institute of Arthritis, Metabolism, & Digestive Diseases	$19,888,000	$24,053,000	$24,725,000	$26,988,000	$28,061,000

NATIONAL INSTITUTES OF HEALTH

National Institute of Arthritis, Metabolism, and Digestive Diseases

More Americans are hospitalized because of diseases of the digestive tract than because of any other group of disorders. They rank second only to cardiovascular disease in the number of physician office visits or house calls. The enormous economic cost in direct medical expenditures and indirectly in hours lost from work has been estimated at $16.5 billion a year or some $80 for every man, woman, and child.

The National Institute of Arthritis, Metabolism, and Digestive Diseases (NIAMDD) is responsible for the Government's program of research in the field of digestive diseases. The Institute's program of extramural grants to scientists at research centers across the country, as well as research conducted at the NIH facility in Bethesda, supports research into the causes and therapy of the most important ailments of the digestive tract.

Dissolving Gallstones

One of the most important recent breakthroughs in digestive disease research is the development of a substance - chenodeoxycholic acid - that can dissolve gallstones. If proven safe and effective, such treatment would not only alleviate the severe pain suffered by some

16 to 20 million Americans, but in most cases it would also eliminate the need for removal of the gallbladder, the sixth most common operation performed in this country. In 1975, some 472,000 gallbladder operations were done at an average cost of more than $2000 each. Gallstone patients are sometimes poor surgical risks and 6,700 patients died that year. Chenodeoxycholic acid may become available to the general public after a two to three year period of final testing.

Last September the National Cooperative Gallstone study, supported by NIAMDD, entered Phase II. Ten treatment centers across the U.S. are enrolling a total of 1000 patients with radiolucent gallstones for the purpose of evaluating the safety and efficacy of using chenodeoxycholic acid in long-term management. Preliminary evidence based on animal and human experiments strongly suggests it will be effective and safe enough to be appropriate treatment for many patients with gallstones.

"The Pill" and Gallbladder Problems

New evidence to link oral contraceptives with increased dangers of gallbladder disease, including gallstones, was reported by Dr. Lynn J. Bennion and associates of the NIAMDD's Clinical Research Section, Phoenix, Arizona. Their study shows that women who took normally prescribed doses of oral contraceptives experienced a significant rise in the level of cholesterol in their gallbladder bile. Such increased levels have been implicated in the formation of gallstones. The scientists selected white and American Indian women between the ages of 19 and 39 in Phoenix for the survey. The mechanism responsible for the higher levels could be an increase in the secretion of cholesterol by the liver into the bile under the influence of the hormonal constituents of these contraceptive agents, or the hormones could also decrease the secretion of those bile acids which normally work to keep cholesterol in solution in bile.

Duodenal Ulcer

Duodenal ulcer disease is often associated with excessive nocturnal gastric acid secretion and awakening due to pain. Antacid drugs, which require frequent administration, and anticholinergic agents, which often have side effects, are in many cases unsatisfactory in reducing episodes of night-time pain and acid output.

NIAMDD supported researchers Dr. G.F. Longstreth and associates at the Mayo Foundation, Rochester, Minnesota, have found that cimetidine, a recently synthesized antihistaminic agent, has a profound diminishing effect on nocturnal acid, pepsin, and secretory volume output in patients with active duodenal ulcer. Half the patients they studied remained acid - free for as long as eight hours after a single oral

dose of 400 mg. of cimetidine given at bedtime and there were no adverse side effects. On this basis, this new treatment appears to merit long-term clinical trials of its therapeutic potential.

Another potent inhibitor of gastric acid secretion in patients with duodenal ulcers belongs to the family of prostaglandin compounds (naturally occuring body substances). It has been examined by NIAMDD grantee Dr. Andrew F. Ippoliti and associates at the University of California in Los Angeles.

Although prostaglandins (PG) E_1 and E_2 are potent inhibitors of gastric acid secretion in man, neither is effective when administered orally. The researchers found, however, that a synthetic analogue of PGE_2 can inhibit gastric acid secretion in man when administered by mouth. This substance was also shown to be significantly more effective than a popular drug used in patients with duodenal ulcer disease, and was without apparent adverse effects. Controlled clinical trials of PGE_2 appear indicated, since the substance seems to improve the healing rate of gastric ulcers in man.

Women and Peptic Ulcers

More women are getting peptic ulcers than ever before. Over the past 30 years, the male-female ulcer ratio in this country has dropped from 20 to 1 to 2 to 1, according to hospital and clinic records. One in 10 Americans will have peptic ulcers at some time in their lives. Experts cannot fully explain the feminine ulcer trend--which they say is worldwide--but trace part of the problem to increased smoking and drinking among women. Both substances upset the gastric system by stimulating gastric acid secretion and by irritating the delicate mucous membranes. Since no one has ever connected either occupational or emotional stress to ulcers in men, the researchers stopped short of attributing the current rise in female gastric disease to increased job responsibility.

The female ulcer trend--accompanied by a 30 to 50 percent drop in male ulcers in the past 20 years--also seems to disprove the long-held theory that women's hormones protect them against ulcer formation, reported Dr. Morton I. Grossman, director of UCLA's Center for Ulcer Research and Education which receives grant support from NIAMDD.

Gastrointestinal Hormones - Gastrin

These hormones have a wide spectrum of physiologic activity influencing the normal functioning of the organs of the digestive tract. Those gastrointestinal hormones that have been isolated so

far, unlike other hormones in the body, have been found to be polypeptides rather than amines or steroids. Recent studies, including those of Institute-supported scientists, have brought knowledge about the secretion and functioning of gastrointestinal hormones to bear on clinical problems of diagnosis. Differentiation of intractable peptic ulcer disease (Zollinger-Ellison syndrome, due to a tumor in the pancreas made up primarily of cells secreting gastrin into the circulation) from common peptic ulcer, vital to the selection of appropriate treatment, is now aided by radioimmunoassay tests of gastrin, the powerful hormonal stimulant of gastric acid secretion in the body. Gastrin levels are strikingly increased in patients with Zollinger-Ellison syndrome, and moderately elevated in patients with duodenal ulcer, but are normal or only slightly elevated in patients with gastric ulcers. Eventually, it may become possible to treat patients that now require surgical removal of the stomach to control their disease, with substances designed and synthesized to counteract gastrin.

Milk Intolerance in Different Age Groups

In previous studies, Institute grantees have traced the cause of milk intolerance in adults to a relative deficiency in the intestinal enzyme lactase; demonstrated that this condition is very common among Negro and Oriental adults; and described the precise mechanism by which undigested and unabsorbed lactose ("milk sugar"), causes the bloating, cramps, and diarrhea characteristic of milk intolerance.

Recent research by NIAMDD grantee Dr. Harry Shwachman of the Children's Hospital Medical Center, Boston, Mass., concerns the age at which milk intolerance appears in the normal human subject. The results indicate that low lactase activity (and consequent milk intolerance) may appear as early as during the fifth year of life in the Caucasian population. The fact that low lactase activity appeared only after age 5 suggests that a high milk consumption during weaning and after may be a stimulus to prolonging lactase activity. The researchers concluded that while the appearance of low lactase activity in this group of normal individuals may be genetically determined, the time of appearance is influenced by the length and level of milk consumption.

Milk and Ulcers

NIAMDD grantee, Dr. Jon I. Isenberg, and associates of the Wadsworth VA Hospital, Los Angeles, have called into question the advisability of frequent ingestion of milk by patients with peptic ulcer disease.

Cow's milk, on the basis of its caloric value and acid-neutralizing capacity, has long been considered ideal therapy for patients with peptic ulcer disease. Several scientists have noted, however, that milk does not neutralize gastric acidity continuously. A study was

undertaken on the effect of various milk preparations on gastric acid secretion of patients with duodenal ulcers and in normal subjects. These studies indicate that a significant increase in gastric acid secretion is produced in patients with duodenal ulcer by whole, low-fat, nonfat, or milk with a greatly reduced calcium content and this effect persists for at least 3 hours after milk ingestion. Because milk has only a transient neutralizing effect, followed by a sustained rise in acid secretion, there is reason to question its frequent, long-term, use in these cases.

Gastric Surgery

Gastric emptying is frequently impaired during the first few months after gastric surgery. Surgical remedies often fail and current medical approaches including drug therapy and various diets are of dubious effectiveness. Dr. William H. Metzger and associates of the VA Hospital Center and the University of California, Los Angeles, supported by a NIAMDD grant to the UCLA center for Ulcer Research, have shown that metoclopramide, an investigational drug which stimulates gastric motility, may be useful in treating such patients. Intramuscular metoclopramide produced a 2.6-fold increase in gastric emptying 90 minutes after eating a meal and was without untoward effects.

Laser Controls GI Bleeding

Bleeding lesions of the gastrointestinal tract have been sucessfully controlled in the first clinical trials of endoscopic laser photo-therapy. The procedure has proved safe, swift and well-tolerated in preliminary studies of 14 patients who were treated for lesions in nearly every part of the GI tract. Cumulatively, more than 130 bleeding sites in a wide range of disorders have been controlled by endoscopic laser electrocoagulation, with no instances of peritonitis or perforation, the investigators reported. The lesions included gastric and duodenal ulcers, hemangiomas and GI carcinoma. The findings were detailed by several teams including NIAMDD grantee Dr. Richard Stenger, Beth-Israel Hospital, New York. Large well-controlled trials are warranted to determine the exact role of endoscopic laser phototherapy, the researchers concluded.

Inflammatory Bowel Disease

Antibodies to dietary proteins have been reported previously in patients with chronic intestinal disorders such as ulcerative colitis and celiac disease, but not with Crohn's disease (regional ileitis). Orally administered proteins are known to be absorbed undigested in small quantities by the newborn and adult intestine, and such absorption is increased when there is intestinal damage.

NIAMDD grantee Dr. Kurt J. Isselbacher of Massachusetts General Hospital and associate Dr. Kenneth R. Falchuk have shown that antibodies to a dietary protein, bovine serum albumin (BSA), now have been found to be increased in patients with any of the above disorders, and that antibody levels correlate with the severity of the disease process. The findings suggest that increased absorption of antigenic material, and subsequent antibody production, may occur in association with intestinal damage in ulcerative colitis, celiac disease and Crohn's disease.

Crohn's Disease Activity Index

The National Cooperative Crohn's Disease Study, involving nine U.S. medical research centers, was established by NIAMDD contract in 1972 to conduct an in-depth study of Crohn's disease, or regional enteritis, a chronic, progressive inflammatory condition of the small intestine. Because the disease often worsens and improves spontaneously, it is difficult to evaluate patient response to the several different forms of therapy available.

Therefore, the study group has developed a Crohn's Disease Activity Index (CDAI) which is a numerical expression of the physician's over-all assessment of degree of illness in a large group of patients. The CDAI has been used in following over 500 patients since 1972 and its creators believe that it should be useful to all physicians who treat Crohn's disease as a method of assessing patient progress. It thus can be used as the principal measure of response to various forms of therapy and to tailor drug dosage to the individual patient's need.

LIVER DISEASE

The liver performs a multitude of complex biochemical tasks without which life cannot exist. The largest single organ in the human body, the liver functions as a "chemical factory", as a clearing station for purification and detoxification of blood, as a storage house for certain nutrients (particularly carbohydrates, certain minerals, and vitamins), as a site of production of blood proteins, as a secretory gland which aids both digestion and the removal of wastes. Not surprisingly, an organ of such complexity is subject to a wide variety of injuries and disease states.

Cirrhosis of the Liver

The two major liver diseases, cirrhosis (on the increase in our adult population) and hepatitis (increasing at an alarming rate among our young-adult population) are both of great social and economic importance. Seven years of research grant support by NIAMDD have yielded proof that severe liver injury can be produced directly by prolonged alcohol ingestion even in the absence of dietary

deficiencies. Consequently, the Council on Foods and Nutrition of the American Medical Association has commissioned the Institute investigator, Dr. Charles Lieber at the Mount Sinai School of Medicine, New York, to summarize his findings in a position paper. His research has culminated in the finding that alcohol exerts direct toxic effects on both the liver and gut, resulting in structural alterations in cells of the intestine, and in successive development of fatty liver, alcoholic hepatitis, and cirrhosis. He warns that alcoholics should not be led to believe that correction or prevention of nutritional deficiency will prevent liver damage in the face of continued alcohol abuse.

The researcher found that malnutrition was common among alcoholics because alcohol displaces protein, vitamin, and mineral-containing foods in the diet, and chronic alcohol consumption eventually may result in malabsorption of some essential nutrients. In his early studies, the investigator showed that rats develop a fatty liver when fed ethanol as part of a nutritionally adequate diet; subsequently, he duplicated these findings in monkeys and in normal and alcoholic volunteer human subjects.

Enlargement of the Liver

In a later, related study Dr. Lieber investigated enlargement of the liver (hepatomegaly), a common manifestation of alcoholic liver disease that generally has been attributed to fat accumulation. Because there is no evidence that fat alone accounts for the increase in liver mass, the present study was designed to determine if cell constituents other than fat might contribute to liver enlargement. Results showed that hepatomegaly leads to accumulation of protein in the liver, as well as fat, as a result of the liver's inability to export certain proteins such as albumin and transferrin into the plasma.

Primary Biliary Cirrhosis

Primary biliary cirrhosis is a serious liver disorder more frequently affecting women than men. The disease is often complicated by progressive loss of body minerals, particularly calcium. Massive vitamin D therapy does not regularly improve such demineralization, or associated intestinal calcium malabsorption. Normal liver conversion of vitamin D to a more active agent, 25-hydroxy-vitamin-D, was possibly impaired in such patients.

Three NIAMDD grantees at the University of Chicago studied a group of patients who failed to respond to therapy with conventional vitamin D. They have shown that oral 25-hydroxy-vitamin-D therapy increased serum levels of this metabolite in all patients, improved or stablized bone mineral content in all but one, and, thus, may be the preferred form of vitamin D therapy in primary biliary cirrhosis.

Liver Transplants

In 1968, NIAMDD supported scientist Dr. Thomas E. Starzl and associates at the University of Colorado Medical Center, Denver, reported the first successful liver transplantations in four children in whom the transplanted organs remained functional for periods up to one year.

As of December, 1976, the University of Colorado surgeons now have performed 116 liver transplants, more than any other medical group in the world. According to the Colorado surgeons, the procedure is still experimental because the results are not yet predictable. Of the 116 liver recipients, 30 lived at least 1 year post-operatively, 14 are still alive, and the longest post-operative survivor is approaching 7 years.

In a new procedure the Denver surgeons, using a special clinical research unit supported by NIH's Division of Research Resources, have successfully transplanted two livers removed from donors in Los Angeles and flown to Denver. The two procedures mark the first time in the U.S. that livers have been stored for long periods of time and transported great distances before transplantation (this is a routine procedure in kidney transplantation). The ability to store and ship livers before transplanting them may help to alleviate the problem of donor organ shortages should the currently experimental liver transplant operation become more commonplace in the future. It should be emphasized, however, that liver transplantation is still far from being a therapeutic procedure with predictable or assured outcome.

Outlook

This report encompasses but a small portion of the Institute-financed research on disorders of the gastrointestinal system, and indicates the diversity and productivity of the many investigations supported by the National Institute of Arthritis, Metabolism, and Digestive Diseases. The new ideas and research findings discussed here will result in better understanding and improved treatment for millions of Americans with digestive disorders.

DRUG ABUSE

Obligations

	1974	1975	1976	1977 Estimate	1978 Estimate
Public Health Service: Alcohol, Drug Abuse, and Mental Health Administration: National Institute on Drug Abuse	$272,900,000[1]	$219,813,000	$232,130,000	$260,312,000	$262,072,000
Office of Education: Drug Abuse Education	6,700,000	4,000,000	2,000,000	2,000,000	---
Elementary & Secondary Education, Title III	1,600,000	1,200,000	728,000	---	---
Elementary & Secondary Education, Title IV, Part C	---	---	316,000	1,253,000	1,343,000
Higher Education	100,000	55,000	50,000	50,000	---
Subtotal, Office of Education	8,400,000	5,255,000	3,094,000	3,303,000	1,343,000
Social and Rehabilitation Service: Public Services Administration	56,915,000	65,500,000	16,800,000	69,000,000	69,000,000[2]
Office of Human Development: Basic State Grants	9,100,000	9,520,000	10,805,000	11,105,000	11,400,000
Expansion Grants	377,000	---	---	---	---
Research and Demonstrations	137,000	---	---	---	---
Special Foreign Currency Program	18,000	50,000	50,000	100,000	---
Subtotal, RSA	9,632,000	9,570,000	10,855,000	11,205,000	11,400,000
TOTAL	$347,847,000	$300,138,000	$262,879,000	$343,820,000	$343,815,000

1/ Includes $31,874,000 of FY 1973/1974 year appropriations obligated in FY 1974.
2/ The new reporting requirements under Title XX do not presently require States to report on such categories of individuals such as services to drug abuse. Until those reporting requirements are changed the 1978 estimate will remain at the same level as services to drug abuse in such categories as Day Care, Health Related, Counseling, etc.

ALCOHOL, DRUG ABUSE, AND MENTAL HEALTH ADMINISTRATION

NATIONAL INSTITUTE ON DRUG ABUSE

Overview

Drug Abuse in the United States, defined as "the illegal use of a controlled substance or use of a drug in a manner...that leads to adverse personal or social consequences," represents an economic and social cost to the nation in excess of $10 billion for heroin alone. Lost productivity resulting from absenteeism, unemployment, and death represents $4.1 billion, with lost productivity resulting from incarceration adding an additional $1.2 billion. The direct costs of law enforcement, the judicial system, and corrections is estimated to be $1.9 billion. Drug Traffic Control and other Drug Abuse Prevention efforts account for another $1.1 billion of expenditures. Within this latter amount is $605 million spent directly to provide drug abuse treatment services. This estimate does not include the involuntary transfer of dollars between the drug user and his or her source of supply. Estimates of the size of this involuntary transfer of funds and in excess of $4.4 billion for heroin alone.

The National Institute on Drug Abuse has developed several longitudinal and survey sources for determining the extent of illegal and legal drug use, and the impact of prevention efforts and treatment efforts among specific segments of the population. A survey of 17,000 high school seniors in some 125 high schools around the country last Spring suggescs that for all illicit drugs, except marihuana, there has been practically no change in usage over the past year. Such a finding might seem unimportant, that is, no increase; however, this stability stands in marked contrast to the meteoric rise in drug abuse among American young people over the previous seven-year period. Nearly 60% of this year's high school seniors had used some illicit drug at least once. One in three have used an illicit drug other than marihuana, that is an amphetamine, a barbiturate, a psychedelic, or narcotic. One out of every five high school students had gone beyond experimenting with one of the more serious drugs. These results are substantiated in another study which adds that certain age groups have a greater incidence of abusing a given substance. The preteens and early teens have the highest rate of abusing glue and other inhalants. Marihuana is consumed at a greacer rate in the 18-25 age range than in either the over 26 or the 12-17 age groups. Narcotic use usually commences with experimentation in the early teens, with the regular use beginning in the late teens and early twenties.

It is clear that from these two surveys that youth continue to experiment with the various substances of potential and actual abuse. Only a small subgroup of the experimenters become regular users of any particular substance. It is apparent that most young people are going to experiment with cigarettes, alcohol, and marihuana, but it is not appropriate to see drug use as an inevitable movement from "experimentation" to "addiction". These surveys show separate and distinct

usage patterns: experimentation, occasional use, regular use, and excessive or heavy use. It is possible that an individual may be a heavy user of one substance and an experimenter with another. Though there is a relatively great number of youth who experiment with drugs, the actual numbers who develop extensive drug abuse histories and become nonfunctional in association with the drugs is proportionately small. The following examples demonstrate this point for young adults 18-25 years of age. Although 53% of these individuals admit to using marihuana at some point in their life, only 8.6% had used it during the past year. Four percent of these young adults report ever using heroin, yet less than one half percent report using any heroin in the past year.

Three specific drugs of abuse -- heroin, marihuana, and cocaine -- highlight several critical drug abuse issues:

Heroin Heroin remains the nation's number one drug abuse concern. The health indicators strongly suggest that the heroin problem in America is not getting better. Although it is one of the most seldom used drugs within our general population, it accounted for more than half of the patients entering the Federally funded treatment system during the past year.

Marihuana Marihuana has joined alcohol and tobacco as one of the three most commonly used drugs in America. Today 53 percent of the young adults and 22 percent of the youth, ages 12 to 17, have used marihuana; and 9 percent of the young adults and 8 percent of the youth are currently using it.

Cocaine A combination of factors has led to cocaine's resurgence as a more widespread drug of abuse. The emphasis on heroin, amphetamine, and barbiturate trafficking in the late 1960's may have encouraged some drug dealers to shift to cocaine because it was less troublesome to handle. The late 1960's witnessed a general upsurge of illicit drug use including cocaine. Cocaine has been touted by some as a "non-addictive, safe high." Many drug-related songs, movies, books, and articles reflected this social change, and cocaine was one of the drugs which was featured. Like all stimulants, including "speed" or methamphetamine, cocaine is nonaddictive but has a very high abuse potential and is a clear health hazard.

In response to this serious national drug abuse problem, NIDA continues to strengthen its activities in the planning and implementation of a wide range of drug abuse prevention activities. Due to concern over indications of a national increase in heroin addiction, the Institute has maintained its fully utilized treatment capacity of 102,000 treatment slots. A maintenance strategy has been adopted, enabling NIDA to support treatment projects at the prevailing declining match basis until the funding level for any given project is equal to 60 percent

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NIDA and 40 percent local share. NIDA will continue to support drug abuse treatment services in this manner, sharing the burden with state and local agencies at a constant level until national health insurance, medicaid, or another viable third party source, which includes drug abuse treatment, can assume some portion of this expense. This long-term funding strategy recognizes that the local sector is not in a position to accept further declination in the Federal contribution to the national treatment effort. The plan also assumes that the state role will be strengthened through greater reliance upon statewide contracts awarded through single state agencies as the primary treatment support mechanism. The states will be assisted in their efforts to develop procedures to capture third party payments for their programs, and the Federal Government will be better able to phase down its treatment activities when, and if, these alternative funding sources come into being.

Other assistance activities supported by NIDA are assuming increased importance. A national data retrieval and dissemination system has been established and will be maintained to provide management, at both state and Federal levels, with essential programmatic, scientific, and technical information on the nature and extent of drug abuse in the United States. Resources available for drug abuse prevention efforts can be most effectively utilized when such questions as treatment service utilization, Federal and non-Federal funding activities, and changes in drug abuse patterns can be answered. This capability will greatly aid the states in assuming primary responsibility for planning and coordinating their drug abuse activities.

Since drug abuse prevention is a relatively new field, NIDA must provide assurance that treatment projects are operating in accordance with acceptable standards of performance. At the same time, a coordinated program is needed for career development of treatment workers. Toward this end, ongoing NIDA funded treatment service projects are monitored and audited by Institute staff to maintain treatment effectiveness. Specialized training or education courses are developed by the Institute-supported National Training Center to maintain a sufficient number of trained treatment workers to staff the national treatment network. NIDA plans to work with the single state agencies in establishing credentialing standards for all drug abuser workers, recommending minimum education and training requirements for each level and type of credentialing.

In assessing the effectiveness of NIDA-supported drug abuse treatment programs, it has been found that relatively poor results have been achieved with such groups as the young, minorities, women, and abusers of multiple drugs, particularly from evaluation of such measures as vocational rehabilitation and employment. Special demonstration programs, outside the scope of the traditional treatment setting, have responded to these findings by dealing with the special social,

psychological, health, and other needs of these groups. A nationwide Treatment Outcome Prospective Study will provide baseline data on drug abusers entering treatment. These clients will be followed in treatment to assess direct treatment impact, and then after treatment to assess prolonged treatment impact and social adjustment within the community.

The final solution to many of our drug abuse problems continues to depend upon development of new knowledge on the causes, treatment, and control of such behavior. New treatment techniques, such as use of the therapeutic drug naltrexone, help block the effects of heroin. Investigations on behavior provide knowledge which has been directly translated into improved treatment procedures. Extensive data on the incidence and prevalence of drug abuse have begun to clarify usage patterns and trends in different age groups and in a variety of special populations. Additional marihuana studies are being undertaken in light of recent findings which raise questions concerning the possible effects of marihuana on the body's immune response system, cell metabolism, and male sex hormone levels. Progress is being made in determining those personality variables which may contribute to preventing or encouraging drug use in groups known to have above average risk of serious drug abuse involvement. NIDA's Addiction Research Center in Lexington, Kentucky, is concerned primarily with investigating the nature of the addictive process and assessing the abuse potentiality of narcotic depressants, stimulants, and hallucinogens in an attempt to identify addicting drugs early and, through appropriate control, limit their abuse.

Summary Objectives for FY 1978

The Institute's drug abuse prevention efforts in FY 1978 will focus increasingly on developing the Federal role of providing assistance to the states in the management of treatment programs, and in their planning and implementing of adequate licensing and credentialing programs for facilities and workers in the field. Additionally, the Institute will be involved in projects designed to evaluate treatment effectiveness and in the development of new methods of treatment for special populations. These activities, together with continuing research directed at, among other things, development of alternatives chemotherapeutical treatment approaches, evaluation for abuse potential of substances appearing on both the licit and illicit drug markets, and continuing evaluation of the effects of marihuana, reflect the major thrusts of the Institute's plan for FY 1978.

Community Assistance Programs

Community Assistance Program activities center on the ongoing provision of primary prevention and service programs for drug abusers. In FY 1978, priority attention will again be directed toward funding Single State Agencies for Drug Abuse to administer a comprehensive and coordinated treatment approach within each state. The four major long-range goals of the Institute will continue to be: (1) maintenance of a fully utilized Federally funded treatment capacity until the demand for treatment abates and/or the states can accept additional responsibility in this area; (2) provision of technical assistance to the states and local communities to help them assume increased treatment responsibilities; (3) support for national treatment standards for controlling the quality of treatment until states are able to establish their own standards which meet or exceed the Federal standards; and (4) promotion of the development of primary prevention/education methods.

NIDA, as the lead Federal agency concerned with drug abuse treatment, has requested sufficient funds in FY 1978 to be able to continue a "maintenance" treatment funding strategy in which a fully utilized 102,000 treatment slot ceiling will be supported. This maintenance strategy enables NIDA to support treatment projects at the prevailing declining match basis until the funding level for any given project is equal to 60 percent NIDA and 40 percent local share. Some shifting of funded treatment capacity among communities is planned so that resources which are not being adequately utilized in one area can be shifted to another area in which there is an unmet need. In order to ensure attainment of the above goals, the Institute will provide an increased level of monitoring and technical assistance support.

Community Assistance programs fall into three major categories. The first assists communities to establish treatment programs for narcotic addicts and drug abusers through the awarding of grants. Programs in the second category utilize the contract mechanism to establish statewide service contracts with single state agencies under which individual projects are subcontracted. Also included are special purpose contracts including a civil commitment program conducted under Titles I and III of the Narcotic Addict Rehabilitation Act (NARA). The third category represents the Institute's efforts in drug abuse prevention and education. These categories are described in detail below.

The Community Assistance Grant Program

Staffing Grants (Sec. 203e, CMHC Act)

Staffing grants were designed to pay a portion of the salaries of drug abuse treatment professional and technical personnel in comprehensive community centers. It is anticipated that all staffing grants will either have terminated or been incorporated into the statewide service contracts; therefore no funds have been requested for FY 1978 in this area.

Drug Abuse Service Projects Grants (Sec. 410, DAOT Act as amended by Sec. 10, P.L. 94-237)

Drug Abuse service project grants are awarded on a matching fund basis for the total operational costs of projects for the treatment of narcotic addicts and other drug abusers. To obtain an award a program must offer one or more of the following services: detoxification, institutional care, or community-based aftercare. Since the initial funding of 16 projects at the end of FY 1971, this program has expanded to its current total in FY 1977 of 103 projects and a Federal funding level of $41,084,000; providing a treatment capacity for 29,042 patients. Eighty-six of these programs, originally funded under Section 256 of the Community Mental Health Centers Act, were eligible for a maximum of eight years support. The remaining 17 projects were funded since April, 1973 under the Drug Abuse Office and Treatment Act for three years of Federal support, with possible renewal for three additional years. In FY 1978 this program will emphasize treatment service quality in the full utilization of 26,364 treatment slots. Emphasis will be placed on incorporating significant numbers of individual projects into the statewide services contracts.

Demonstration Treatment Grants (Sec. 410, DAOT Act)

Demonstration projects are awarded to develop and evaluate promising new theories or approaches relating to substance abuse treatment and rehabilitation services. There are two aspects to this activity: the gathering of data to define appropriate treatment and rehabilitation approaches for client groups with unique cultural, geographical, and/or psychological characteristics; and the construction of innovative models to improve the quality of services program effectiveness and to make possible the integration of new methods into community programs. Current and projected demonstration efforts include: the study of drug use among elderly, including prescription practices among physicians; the delivery of services to specific minority groups including women and youth; projects to link the community justice system with treatment resources in the community; the development, testing and implementation of treatment models for industrial settings; and the development of effective treatment approaches to the abuse of inhalants. New funds will support the development of vocational rehabilitation programs specifically designed for the drug abuser outreach techniques for the polydrug abuser, women, and criminal justice clientele. In 1978, 28 grants will be funded at a level of $7,623,000, including seven new and competing renewal projects for $1,520,000.

Formula Grants (Sec. 409, DAOT Act as amended by Sec. 7, P.L. 94-237)

Grants in this area were first made available in FY 1973. Financial assistance is provided to the states for planning, establishing, conducting, and coordinating projects for the development of more effective drug abuse prevention functions in the states and for evaluating the conduct of such functions. Funds are allocated to states

based on a formula which measures the relative population, and the financial and program need of each state. Federal funding through the formula grant mechanism will be maintained at $40,000,000 in FY 1978. Estimates have shown that the states are utilizing their formula grant funds in approximately the following manner: a) 13 percent for treatment and rehabilitation programs; b) 45 percent for prevention and education programs; c) 19 percent for training efforts; d) 9 percent for research initiatives, e) 4 percent for program evaluation, and f) 10 percent for administration. In FY 1978, formula grants will continue to serve as the mechanism through which states will assume coordinating responsibility for their drug abuse prevention programs.

The Community Assistance Contract Program

Statewide Service Contracts (Sec. 410, DAOT Act as amended by Sec. 10, P.L. 94-237)

This program is a cost-reimbursement, cost sharing, contractual mechanism through which the Institute can fund a number of drug treatment projects under the auspices of the single state drug authority. This program began in FY 1973 with contracts awarded to the states of New Jersey, New York, and Texas. Currently this mechanism is operational in forty-nine states and territories with increased effort anticipated in FY 1978. Subcontracts are awarded by the states to support local treatment projects which have the same basic objectives and requirements as the drug abuse service grants. This program is the primary mechanism by which states assume greater direct administrative responsibility for their drug abuse treatment activities. The continued growth of the program is evidenced by the Institute's effort to consolidate as many treatment programs as possible under this support mechanism. Funding in this program will increase from $96,037,000 in FY 1977 to $105,285,000 in FY 1978 and will strive to maintain a fully utilized treatment capacity of 68,152 slots.

Demonstration Contracts (Sec. 410, DAOT Act)

Contracts are awarded for directed research in important areas for which the grant mechanism is inappropriate. This activity also supports the Drug Abuse Early Warning Network (DAWN), which is a cooperative effort with the Drug Enforcement Administration to collect data on a national basis regarding the current trends and extent of drug abuse. DAWN will be funded at a level of $950,000 in FY 1978.

Program Review Contracts (Sec. 301, PHS Act)

This project enables NIDA to monitor the efficiency of the management, fiscal, and programmatic activities of Federally funded treatment programs, ensuring compliance with Federal funding criteria and maintenance of a fully utilized treatment capacity. The contract will be refunded in FY 1978 at a total cost of $1,650,000.

The Narcotic Addict Rehabilitation Act

Approximately 21,400 patients have entered into treatment under this civil commitment program since its inception in 1966. In the past, the inpatient phase of the program was conducted at the Clinical Research Center in Lexington, Kentucky and at Fort Worth, Texas. Now that the treatment portion of these facilities has been transferred to the Justice Department, all services are being performed contractually at community facilities. There are currently 10 community-based agencies providing evaluation and examination, inpatient care, and supervised aftercare under projects administered by the Institute. The present patient population in the civil commitment program is 181 persons. Efforts are currently being made to integrate NARA agencies with community-based projects, community mental health centers, independent drug abuse service projects, and with the statewide service contracts. New civil commitments are diminishing with program support reflecting this decrease in FY 1978. Funds for this program have dropped from over $7,000,000 in FY 1972 to $200,000 in FY 1978.

Prevention/Education Grants (Sec. 410, DAOT Act)

This program supports the funding of model approaches to drug abuse prevention which promise to be effective and adaptable to application on the local level. Its goal is to develop new knowledge and methodologies which provide constructive alternatives to and can compete successfully with, the sought-after pharmacological effects of drug use. During FY 1978, twelve continuation and thirteen new grants will be supported at a total funding level of $2,775,000.

Prevention Contracts (Sec. 410, DAOT Act)

These projects provide the means for evaluating new prevention techniques and disseminating information to various state and local prevention efforts. Examples are the Pyramid Project, which utilizes the services of qualified consultants to provide on-site evaluation and technical assistance to state and local prevention efforts; and, the National Search, which is conducted to identify and spotlight current examples of successful prevention programs in communities and develop them into national models. In 1978, NIDA will begin a new program aimed at integrating prevention techniques and methodologies into state treatment services plans. Contracts will be funded at a level of $2,800,000 in FY 1978.

Summary Objectives for FY 1978

In FY 1978, NIDA will continue its support for a fully utilized national treatment program which will be maintained at the FY 1977 increased capacity level of 102,000 treatment slots. A matching funding strategy to support community-based treatment projects at the prevailing declining match basis down to 60 percent NIDA and 40 percent local share

will also be continued. NIDA will thus share the burden of providing drug treatment services with state and local agencies until alternative sources of funding can be developed to assume a greater portion of the expense. This long-term funding strategy recognizes that the local sector is not in a position to accept a further contribution to the national treatment effort. The plan also places greater reliance upon statewide contracts awarded by NIDA to single state agencies as the primary treatment support mechanism. The states will also be assisted in their efforts to develop procedures to capture third party resources and will be held increasingly responsible for the effectiveness of their programs. Finally, the National Institute on Drug Abuse will strengthen its activities in the planning and implementation of a wide range of drug abuse prevention activities.

Training

The drug abuse training program seeks to ensure the continued availability of qualified manpower in treatment, prevention, and research programs. As a major share of this responsibility is transferred to the various states, the Institute will concentrate upon augmenting the national training effort through such activities as designing training models for states, and developing criteria for assessment of work experience in terms of academic credit required for credential recognition. A total of 9,489 persons will receive training in FY 1978. Principal mechanisms of support are as follows:

1. Grants: Training Grants are awarded under the authority of the Public Health Service Act (Section 303) to non-profit institutions for specialized training programs in the prevention and treatment of narcotic addiction and drug abuse. Through the Career Teacher Program, the training that medical students and students in health related areas receive on drug abuse is improved by increasing the knowledge of academic faculty and by developing regular courses of instruction. Other programs support training of persons who come into direct contact with drug abusers as well as specialized inservice or short term instruction on treatment, rehabilitation, prevention, and evaluation methods. Training topics include pharmacology, urine surveillance, medical problems and patient care, treatment modalities and their management, and individual and group techniques for working with the addict. In FY 1978, support will be provided for continuation funding of training grant projects and for approximately nine new awards.

2. Research Fellowships: Under the provisions of the National Research Service Award Act, individual and institutional awards are authorized to provide degree-oriented training support for aspiring bio-medical and behavioral research students. Support for this program will be increased from $488,000 in FY 1977 to $906,000 in FY 1978.

3. Contracts: Contract funds support the operation of the National Drug Abuse Training Center in Washington, D.C. The center continues to serve as a model for developing, validating, and testing training materials, techniques, and methodologies which have application for training workers in community drug abuse treatment, rehabilitation, and prevention programs. The Center provides limited training to Federal, state and local government officials, and other health professionals engaged in community programs to combat drug abuse. International training efforts are also handled by the Center. The primary effort for the National

Drug Abuse Training Center in FY 1977 will be to further support states in the development of their training capability by assisting with credentialing procedures, standard evaluation, training of trainers, and the implementation of their statewide training systems. Other Training Center efforts include training for specific manpower needs on a short term basis until the states can respond, the development and validation of training courses that can be readily adopted by state training programs, and the design of training models for sparsely populated states.

Primary Objectives for FY 1978

The National Drug Abuse Training Center will continue to develop and consolidate its role as the center of the national training system in the field of drug abuse prevention and treatment. The funding of training grants will continue, support for new fellowships will be limited to postdoctoral awards, and contracts will be funded at approximately the FY 1977 level.

Division of Scientific and Program Information

The Integrated Drug Abuse Management Information System (IDAMIS) is the organizational framework which encompasses the management information needs of the National Institute on Drug Abuse. IDAMIS was developed and is operated by the Division of Scientific and Program Information which in cooperation with 53 states and territories collects information vital to the management and administration of drug abuse efforts at the Federal and State levels. There are four major components of IDAMIS: 1) The Client Oriented Data Acquisition Process (CODAP), 2) The National Drug Abuse Treatment Utilization Survey (NDATUS), 3) the Financial Management Information System (FMIS), and 4) the Grants/Contracts Management System (GCMS). Each component serves a specific management information need. While each is different in scope and operation, all share a common construction which allows comparisons between the systems.

In addition to providing management data to NIDA, the IDAMIS components of CODAP and NDATUS also serve management needs of the Veteran's Administration and the Bureau of Prisons, thus making IDAMIS a national drug abuse information system. State agencies are also major contributors and users of IDAMIS.

In order to assist all states in more fully participating in drug abuse program management, the Division of Scientific and Program Information has provided the Single State Agencies the option of sharing responsibility for data by incorporating important features of the national level IDAMIS into the state data systems. This effort is known as the Integrated Drug Abuse Reporting Process (IDARP). The purpose of IDAMIS is to supply program managers at all governmental levels with accurate, timely, and useful information for planning, resource allocation, monitoring and evaluation. A variety of reports, both routine and special are generated and distributed to appropriate individuals at Federal, State, and local levels. System components are constantly undergoing evaluation and changes made as deemed appropriate to enhance the ability of the system to be responsive to the changing information needs of NIDA, the Veteran's Administration, Bureau of Prisons, and the States.

Client Oriented Data Acquisition Process

CODAP is concerned with the monthly collection of client data regarding drug abuse phenomena in federally supported drug abuse treatment agencies. Provisions for the collection of such uniform client-related data were established under Public Law 92-255 and CODAP is the only national recurring client data system operated by NIDA. CODAP has been operational since May 1973. In November 1974, a revision was tested and implemented. Currently, an average of 40,000 forms are processed monthly from 1,800 treatment units across the country.

CODAP employs four forms; an Admission Report, a Discharge Report, a Client Flow Summary, and a Client Progress Report. Data are collected at two crucial points in the treatment cycle; admission and discharge. This affords CODAP data users the capability to examine changes in drug abuse patterns affected by the treatment process. The Client Flow Summary provides data on the aggregate clinic population and some measure of activity during the month. All forms are submitted monthly except the Client Progress Report. The Client Progress Report is submitted quarterly only on clients in programs supported by the Bureau of Prisons (BOP).

CODAP is designed to supply both Federal and state managers with data on the demographic and educational characteristics of clients, their drug problems and drug abuse history, treatment modalities and environments, length of time in treatment, and other major indicators of drug abuse manifestation. A slightly revised CODAP will be implemented in January 1977. This will allow additional flexibility to meet Federal, state, and program needs.

Since its inception CODAP has been producing national management level, state management level and program management level reports on a quarterly basis. NIDA also produces the "Quarterly Statistical Series" consisting of special studies of topical items based on CODAP data. In addition, data tapes of cumulative Admissions, Discharges, and Client Flow Summaries are being provided to 26 states. The information contained on the tapes is, and can be, examined by many combinations at various levels of reporting thus providing a wide range of useful data displays for management use. Special studies and reports are regularly produced to meet unique needs of managers, researchers and epidemiologists.

The following CODAP Summary Objectives have been established for FY 1977 and 1978: 1) Implement the revised CODAP in 1977; 2) increase data analysis and utilization; 3) validate CODAP data on an ongoing basis; 4) continue technical assistance to states to assure independent data processing capability to analyze CODAP data; 5) improve the Historical Files and data analysis capability; and 6) continue to improve the data quality and perform all processing and control of data by in-house staff.

National Drug Abuse Treatment Utilization Survey

The Special Action Office for Drug Abuse Prevention in 1973, implemented a national survey effort to determine the scope of drug abuse treatment and the need for continuing fiscal support of such treatment throughout the United States. This effort was assumed by NIDA in 1974 and is now known as the National Drug Abuse Treatment Utilization Survey (NDATUS). NDATUS is the national inventory of all drug abuse treatment units across the country including data on the

utilization of drug abuse treatment facilities. The survey is conducted annually and provides essential management data necessary for the rational allocation of Federal funds to support drug abuse treatment. Information is collected on the number of actual treatment slots, census of clients in treatment, utilization rates for specified treatment modalities, funding sources, and waiting list information. NDATUS also serves as a mechanism for describing various trends relevant to changes in the structure and composition of drug abuse treatment service delivery system in the United States. Data from NDATUS is aggregated on a national, regional, state and program level.

The following NDATUS Summary Objectives will continue to be emphasized for FY 1977: 1) to assist both NIDA and state management to forecast treatment resources requirements for existing and future drug abuse treatment services; 2) to provide management with necessary and timely information to determine in what geographic locations treatment services are needed; 3) to analyze general treatment utilization trends; 4) to conduct comparative analyses for the nation, regions and states; 5) to provide each state with a computer produced inventory of all reported drug abuse treatment service units which can be developed into a state director; and 6) to provide the states with technical assistance to ensure that they have the capability to analyze and use NDATUS data to generate program level management reports.

Financial Management Information System

Unlike both CODAP and NDATUS, the Financial Management Information System (FMIS) is not a Federal reporting system. FMIS is a model financial information system for state use. It is designed to provide states with the information on state grant and/or contract funds, program income sources, expenditures and unit cost data.

The FMIS model is flexible and can be adapted to the individual needs of each state with the added capability of becoming a more comprehensive system at the state's option. This is accomplished by the use of a modular design whereby individual modules may be implemented according to state preference. FMIS is composed of four modules: 1) Grant/Contract Identification Module; 2) Expenditure Reports Module; 3) Program Income Module; and 4) Functional Cost Module.

The system has been designed and tested. It is currently available for state use. Over 30 states have requested either the manual or automated version of FMIS.

The FY 1977 objective is to continue to make the FMIS package available to states and provide technical assistance to states desiring to implement the package.

Grants/Contracts Management System

The Grants/Contracts Management System (GCMS), is not a reporting system, but the internal funds management system for all NIDA grants and contracts. Designed to provide NIDA management with regular reports on the status of all current grants and contracts, it also provides other agencies such as ADAMHA and PHS with fiscal data on grants and contracts. GCMS is similar in nature to the Grants/Contract Identification module of FMIS.

As the sole central control point for Institute grants and contracts the FY 1977 objective is to maintain the system and its reports for NIDA management and modify its output to conform with changing requirements imposed by PHS.

Integrated Drug Abuse Reporting Process

The Integrated Drug Abuse Reporting Process (IDARP) was developed to provide Single State Agencies with funds and technical assistance to facilitate the development of state and Federal capabilities to insure maximum use of CODAP and NDATUS data while minimizing overlapping, and duplicative reporting requirements.

Currently, activities are centered upon the provision of technical assistance and guidance to maximize data analysis, and use for state level decision making.

The IDARP effort complements the development of CODAP and NDATUS by helping obtain active cooperation from states by assuring compliance from local units and editing forms and verifying data input. IDARP differs significantly from earlier efforts in Federal/state cooperation in that its primary focus is upon creating information generating capabilities at the state in addition to Federal level. Thus insuring compatability of information, while minimizing developmental and operational costs. For FY 1977 the objectives are: 1) to provide technical assistance to improve data analysis; 2) to improve output reports to local units; 3) to provide states with the production capabilities of generating reports for state and local use; 4) to facilitate state plan updates and preparation; and 5) to provide states with the capability to process either CODAP and/or NDATUS data if they so desire.

Funds for the maintenance of IDARP, which was envisioned as a three-year experimental effort, will be expended by FY 1977. The program will then continue only at a subsistence level through the use of state funds. IDARP has evidenced itself as a highly successful Federal/state venture and alternative means to continue it will be explored.

In summary, the IDAMIS system collects, edits, processes and reports drug abuse information of a technical and scientific nature for the purpose of governmental and public dissemination in the form of reports, fact sheets, analysis and other publications to Congress, the Office of Management and Budget, Federal agencies, state and local units of government, the public, and special interest groups. Information is disseminated through the participating Single State Agencies and NIDA.

Research

Research programs of the National Institute on Drug Abuse are devoted to increasing our knowledge of narcotic addiction and drug abuse and to using this knowledge in formulating improved methods to deal with this problem in our society. Projects range from fundamental studies on the mechanisms of drug action, which hold promise for ultimate understanding and perhaps eventual solutions, to applied research and development activities, which can have a direct impact on treatment and prevention methods.

The NIDA research effort is organized around eight broad program categories which provide a framework for describing its activities: epidemiology, etiology, hazards, treatment, basic research, general research support, Research Career Development Awards, and direct operations. Each category is focused on certain general objectives, and the progress toward accomplishing these objectives in any one year determines the direction of research efforts in subsequent years. The following are brief descriptions of current and planned activities in each program category:

1. Epidemiology

The goal of epidemiological research is to estimate the extent of the drug abuse problem by providing continuously updated data on prevalence, incidence and trends of drug use. Studies, primarily employing survey technology, are designed to describe drug use for the population as a whole or for any one of a variety of special target populations. NIDA includes in its definition of "abuse" two broad categories of drug experience: 1) any use of illicit drugs; and 2) nonmedical use of prescription drugs.

The past four years have brought a culmination of well-designed longitudinal studies of the drug-using population which, in FY 1977, resulted in some well-grounded findings summarized in these six propositions:

a) Generally, people beyond their mid-twenties are no longer at risk of initiation to new kinds of drugs.
b) A high proportion of marihuana-using youths will eventually experiment with other illicit drugs.
c) Later age of starting a new drug is associated with less frequent use and a greater probability of stopping.
d) There are sequences in drug use behavior, so that use of one of the legal drugs (alcohol, nicotine) almost always precedes use of the illegal drugs.
e) Contrary to widespread belief, addiction to heroin is not necessarily a permanent state.
f) Occasional use of heroin does not necessarily lead to addiction.

We have high confidence in these general findings; they should lend themselves well to application in prevention and treatment programs as aids in selecting target populations, designing message content and proposing law enforcement strategies.

Specific projects planned for new funding in FY 1978 include measurement of consequences, and special studies of women, elderly persons and addicted infants.

2. Etiology

The goal of etiology is to determine the combinations of biological, behavioral, psychological, and societal factors most associated with increased risk to drug abuse. It includes studies of the personality correlates and behavioral factors which may predispose individuals to abuse drugs; longitudinal research studies which are concerned with medical and psychological factors that may be predictive of subsequent drug use; studies of familial factors and the influence of peers on the abuse of drugs; and experimental studies of group processes associated with behavior and attitudinal changes related to drug abuse.

The following set of propositions sums up the etiological "state-of-the-art" in FY 1977:

a) Personality factors indicative of maladjustment (e.g., low self-esteem, poor school performance, delinquent and deviant activities) are common antecedents of subsequent use of marihuana and other illicit drugs.
b) Drug behavior and drug-related attitudes of peers are among the most potent predictors of drug involvement.
c) Parental behavior, attitudes and closeness to children have varying importance at different stages of involvement with drugs.
d) Socio-demographic variables (e.g., race, sex, geographic region) have little predictive influence regarding the use of marihuana.
e) The more deviant the youngster is in other matters, the more likely he is to experience early involvement with drugs.

Among the FY 1978 new initiatives will be a review of drug control systems in other countries and at different historical times, as well as studies of the impact of policy change in the U.S. Other initiatives will include studies of the relation of psychopathology to drug use and of characteristics of barbiturate users.

3. Hazards

This component of the NIDA research program includes studies which determine adverse effects of drugs on the physical and

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mental health of the individual and the consequences of drug abuse on society. Four major programs deal with the effects of drug use on impaired performance, particularly driving; the relation of drug use and crime; toxicity studies of abusable substances and treatment compounds; and determinations of abuse potential of new drugs and drug combinations. Other current investigations concern drug interactions and genetic and reproductive effects.

The following are important achievements in the study of hazards during the past year:

a) Animal studies of the treatment compound Naltrexone (narcotic antagonist) showed no signs of toxicity, and FDA approval of large-scale clinical trials was obtained.
b) A long-term study of the effects of chronic marihuana use was begun. This effort is coordinating the results of previous marihuana studies and hopes to provide answers to remaining questions concerning health consequences and social effects.
c) A program in cocaine research directed at answering questions concerning physiological and behavioral effects was developed.

In 1978, new studies will be undertaken to clarify the relation of addiction to economic behavior, commission of crimes, and suicide, and to assess the extent and effects of inhalant abuse.

4. Treatment

Treatment research seeks to determine the most effective therapeutic procedures for reducing drug abuse. Included in this objective are the development and clinical evaluation of new pharmacological treatment methods, including antagonist and substitution approaches, the development of long-acting chemotherapeutic drugs, and investigation of innovative nonpharmacological treatment methods.

During the past year, NIDA continued large-scale clinical testing of LAAM (levo-alpha acetylmethadol), initiated a study to determine what effect the introduction of LAAM will have on the methadone treatment system, began clinical trials of naltrexone, completed a double-blind comparison of Darvon-N and methadone, and initiated investigations of the effect of treating depression in depressed addicts.

New treatment research goals for FY 1978 are:

- To introduce LAAM as a standard therapeutic drug in the treatment of heroin addiction. This will serve to decrease methadone diversion and consequent "street" overdoses, and,

through LAAM's longer action and decreased dosage, allow the client to develop a more normal lifestyle.

- To assess further the psychodynamic concepts and psychiatric treatment therapies for alleviation and cure of addiction and to determine whether these concepts provide clues to psychological factors predisposing individuals to substance abuse and addiction.

- To investigate what other nonchemotherapeutic treatment approaches are effective beyond the symptom-suppression of some pharmacologic therapies.

- To begin studies of the step progression concept of drug abuse treatment. This concept aims to provide a step progression of treatment modalities in a controlled environment starting with drug maintenance and gradually moving through nonchemotherapeutic stages toward achievement of abstinence within a given period of time.

- To complete clinical testing of the narcotic antagonist Naltrexone and make it available as a standard therapeutic drug.

- To conduct clinical testing of long-term depot release mechanisms for use with Naltrexone.

5. Basic Research

The goal of biomedical basic research is to advance our knowledge of the pharmacology, biochemistry, and neurophysiology of abuse drugs, their sites and mechanisms of action, their relation to analgesia, their behavioral effects, and the processes of drug tolerance, dependence and addiction.

During the past year, at least one major advance was made in our understanding of the basic mechanisms involved in opiate action at the molecular level. Subsequent to the discovery of opiate receptors in the brain, naturally occurring opiate-like substances were isolated. These are called endorphins, and may function as neurotransmitters or neuromodulators which control responses to pain or stress in a manner similar to opiate drugs.

Among its initiatives in FY 1978, NIDA will:

- Conduct further studies to determine the nature and function of the newly discovered endorphins which may have profound relevance for elucidating the basic physiological phenomena of drug tolerance and dependence.

- Conduct further studies of drug effects on the so-called "reinforcing areas" of the brain to test whether they may mediate the addicting properties of drugs.

6. General Research Support

Grants and contracts in this category provide for the development of methods and other resources required to further drug abuse research. Relevant activities are the development of quantitative drug assays, supply of controlled drugs and chemicals to researchers, analysis of research data, and the publication of monographs and reports. Initiatives for FY 1978 include development and refinement of current assay methods, quality control techniques for analyzing large numbers of assays, and implementation of a research analysis program to ensure maximum utilization of presently available research findings with minimal time loss between findings and their application.

7. Research Career Development Awards

These long-term awards to individuals with demonstrated drug abuse research potential enable the recipients to prepare for independent drug abuse research in a productive scientific environment. In FY 1978, NIDA will support continuation costs of awards already committed and provide for 10 new awards, thereby helping to ensure a future pool of competent drug abuse researchers.

8. Direct Operations

This activity supports the Addiction Research Center in Lexington, Kentucky. ARC was founded in 1935 and since its inception has represented a Federal commitment to the investigation of the mechanisms and treatment of drug abuse. The current research program of the ARC is unique in involving two complementary approaches, basic and applied research, in one facility. The basic research program goal is to understand the psychological and physiological mechanisms underlying drug abuse. The applied research programs primary goal is the prevention, diagnosis and treatment of all types of drug abuse.

On January 1, 1977, the Bureau of Prisons terminated approval for research using prisoners. As a result of this decision some reorientation of A.R.C. programs was necessary. Direct addiction studies for abuse liability assessment have been discontinued. However, the program of animal studies on abuse liability has been expanded and a treatment oriented clinical program is being developed. Also, an operations

research capability has been established for systematic study, analysis, and integration of research data to provide an empirical basis for policy development.

The FY 1978 budget request will support efforts to:

- Make possible the use of volunteer patients rather than prisoner subjects for clinical research using new pharmacologic agents in a therapeutic context.

- Further expand research on animal models for assessing the abuse liability of new analgesics, stumultants and depressants.

- Expand the program of studies initiated in FY 1977 on the basic mechanisms of tobacco dependence.

Summary Objectives for FY 1978

NIDA will continue its existing efforts to determine the physiological mechanisms and sites of drug dependency, to consolidate research findings on marihuana and determine its long-term health effects, and to develop more effective treatment methods. Specific goals for FY 1978 include the introduction of LAAM and Naltrexone as standard therapeutic drugs in the treatment of heroin addiction, the National Survey of Illicit Drug Use, studies on the relationship between illicit drug use and crime, economic behavior and suicide, and studies of the impact on drug use of drug abuse policy changes.

Drug Abuse Education

The Drug Abuse Education Act of 1970 (P.L.91-527), enacted December 7, 1970, authorized drug abuse education demonstration projects in schools and communities and dissemination of information on durg abuse. The program was designed to alleviate the drug abuse crisis among youth by promoting awareness and understanding of the nature of the problem and developing and disseminating prevention and early intervention strategies aimed at attacking the causes of drug abuse rather than merely treating its symptoms.

P.L. 91-527 expired on June 30, 1973. The program operated at reduced level in fiscal year 1974 under a one-year extension of the Act. In September 1974, the Act was amended and extended through June 30, 1977 under P.L. 93-422. Initially, the program funded projects in 55 State and territorial education agencies to develop curricula and conduct in-service training programs for local education agencies and supported 57 local school, community, and college-based demonstration projects.

As experience with these and other projects accumulated, it became evident that virtually all communities have or could have some sort of drug problems, which vary widely in nature and scope form community to community. It became clear that a key factor in successful projects was coordination of the efforts of all segments of a community - family, school, church, social, health and civic agencies and local government.

It was deemed that the pervasiveness of the problem suggested that a realistic Federal role would be to provide training for school and community leaders to help assess and define their problems, state their goals in attainable and measurable terms, assess recommended strategies, methods and materials as tools appropriate to the realization of their particular goals and involve their communities in cooperative efforts.

In fiscal year 1973, in addition to continuing support for State education agency and demonstration projects, and the National Action Committee, the technical assistances area of the program, the program supported seven regional training and developmental assistance centers which provide two weeks of training and follow-up site assistance for 800 teams of five to seven individuals, bringing the totai to approximately 1,700 communities served. In fiscal year 1974, an additional 240 community teams were trained, a nationwide program for training of and developmental assistance to 336 local school district teams in prevention and early intervention was initiated. Two

models for the college level per-service training of educational personnel were instituted. In one model a total of 180 teams (900 administrators, faculty and students) from colleges of education were given three days of training and were provided follow-up assistance on request. In the other model, six projects for development and validation of pre-service training models were initiated. The National Action Committee was continued.

In fiscal year 1975 under the school-based primary prevention and early intervention program 200 additional local school district teams were trained at 5 regional training centers. The 6 preservice demonstration projects were continued for a second year. The National Action Committee continued to provide technical assistanct to USOE funded projects as well as State Education Agencies and Single State Agencies.

In fiscal year 1976, the 5 regional training centers did not train any new school or community teams. Rather they concentrated on providing technical assistance to the universe of some 3,000 teams trained since 1972. The pre-service demonstration projects were continued for their third and final year. The National Data Base, an information support system providing varieties of data on local activities generated by school and community teams, was continued. The National Action Committee continued to function as the technical assistance arm to the entire program. Finally, the Self-Knowledge project, a research project at the University of Massachusetts to develop validated measures of human development, was supported for its third and final year.

Elementary and Secondary Education Title III, Supplementary Education Centers and Services

Originally, the Commissioner made grants directly to local education agencies under Title III, ESEA, (P.L. 98-10). Beginning in fiscal year 1971, 85 percent of Title III funds were administered by State educational agencies, with fifteen percent to be used at the Commissioner's discretion.

The Title III State Plans program reported that over 83,000 students were in drug education classes in fiscal year 1972. These students were in 14 single component type projects and 26 multiple component type projects that studied the drug abuse problem. In fiscal year 1973, over 625,000 students were in drug education classes. These students were in 16 single component type projects and 30 multiple component type projects. It is estimated that the number of students served in fiscal year 1974 was about the same as in fiscal year 1973. It is expected that approximately 562,000 students will be served in fiscal year 1975 and approximately 310,000 students will be served in fiscal year 1976.

The purpose of Title III were incorporated into ESEA Title IV, Part C, by the Education Amendments of 1974.

Higher Education Title I, University Community Services - Drug Abuse

Title I of the Higher Education Act of 1965 (University Community Service) pioneered the use of Federal funds to direct higher education resources toward the solution of the drug abuse problem before the enactment of the Drug Abuse Education Act of 1970. Since that time, Title I activity in this area has declined.

In fiscal year 1975, three projects dealing with drug abuse were funded, reaching above 2,500 participants. It is anticipated that the fiscal year, 1976 activity in this area is at the same level.

There has been no budget request for the Title I program for FY 1977 or FY 1978. Currently in fiscal year 1977, Federal funds are being made available under a Continuing Resolution.

SOCIAL AND REHABILITATION SERVICE

Public Services Administration

Drug Abuse

The Public Services Administration has responsibility for administering the Social Services program authorized under Titles I, IV-A, X, XIV, XVI, and XX of the Social Security Act, as amended. Except for Guam, Puerto Rico and the Virgin Islands, Title XX superseded all of the authorizing titles cited above as of October 1, 1975.

Under Title XX, grants are made to States for services to eligible individuals based on income or public assistance status. States may choose the services they will provide, as long as each service conforms to at least one of the five goals stated in the Act.

Within the broad spectrum of services provided to eligible individuals are those directed at preventing, solving or alleviating problems brought on by drug abuse.

OFFICE OF HUMAN DEVELOPMENT

Rehabilitation Services Administration

DRUG ABUSE

Unless drug abusers are provided those services which will allow them to prepare for, enter, and remain in gainful employment, the long-term success of drug abuse treatment programs will be questionable. State rehabilitation agencies are important resources for providing services such as vocational evaluation, work adjustment, vocational training, counseling, and placement assistance to eligible drug abusers. The experience gained in serving alcoholics and the mentally ill has been carried over to working with these clients.

The Rehabilitation Services Administration has worked closely with the National Institute on Drug Abuse to develop strategies for the more efficient utilization of services and has been a continuing contributor to the Domestic Council White Paper on Drug Abuse.

State vocational rehabilitation agencies usually serve drug abusers in close cooperation with specialized drug abuse treatment programs. The rapid growth of these programs has resulted in increased demands for vocationally-oriented services for treated drug abusers.

The Rehabilitation Act of 1973, as amended, requires State agencies to give service priority to the more severely handicapped. Competing claims for service by persons disabled by other conditions make it unlikely that the number of rehabilitated drug abusers will increase. Projections indicate that the present level of rehabilitations will remain substantially unchanged.

Rehabilitation Research

Research and Demonstration projects concerned with drug abuse have shown the effectiveness of a drug rehabilitation program conducted under the auspices of a State Department of Mental Health. The project has been incorporated into the ongoing programs of the State under total State funding. Another project, conducted within the organization and policies of a psychiatric hospital, has shown great success in rehabilitating psychiatric drug abusers. This project, no longer receiving Federal support, is continuing under hospital auspices as an ongoing unit of the hospital.

The Special Foreign Currency Program administered by the Office of Research and Evaluation is supporting one project in Egypt which involves the delivery of rehabilitation services in an outpatient type facility where the clients are called "members" and the families of the clients are intimately involved in service delivery. The "family unit" is kept intact, which tends to enhance rehabilitation.

Number of Drug Abuse Rehabilitants

	Persons Rehabilitated	
Fiscal Years	Total	Drug Abusers
1974	361,138	4,520
1975	324,039	4,394
1976	303,328*	4,300*
1977	295,000*	4,200*
1978	286,000*	4,100*

*Estimated

EPILEPSY

Our brains are constantly receiving information from inside and outside our bodies by way of sense organs. The brain sorts that information, evaluates it, stores some of it for future reference and acts on the rest through a network of nerves and muscles.

To keep this intricate mechanism working, brain cells (neurons) generate energy impulses which sweep rhythmically along the neuronal networks. When there is a job to be done, neurons which control the part of the body to be activated send impulses until the work is finished, and then "turn off." Sometimes, some neurons do not shut off when a job is done. Sometimes adjacent neurons are excited and send additional unnecessary impulses involving the whole body and producing erratic movements. These excessive physical and mental activities are called "epileptic seizures." When they happen repeatedly to an individual, the person is said to have epilepsy.

The usual epileptic seizure is of short duration characterized by a fall, a jerky and violent contraction of the body musculature and a loss of awareness of surroundings. A seizure usually runs its course quickly. The brain energy necessary to maintain the seizure has then presumably been exhausted. Because this energy is not rapidly replaced, a stupor or brief sleep may follow.

Obligations for Programs in the Epilepsies

	1974	1975	1976	1977 estimate	1978 estimate
National Institutes of Health: National Institute of Neurological and Communicative Disorders and Stroke	$6,132,000	$10,421,000	$12,960,000	$14,135,000	$14,676,000

NATIONAL INSTITUTES OF HEALTH

National Institute of Neurological and Communicative Disorders and Stroke

The Problem

Epilepsy is not a simple problem. There are wide variations in the types and severity of seizures, seizure frequency, causes, age of patient at onset, and medical treatability. In 1969, a Commission on Terminology

of the International League Against Epilepsy established a new, highly detailed classification of convulsive seizures. The most common of these are: generalized tonic-clonic (grand mal), partial secondarily generalized (petit mal), complex partial (psychomotor, temporal lobe) and simple partial (Jacksonian). Determining precisely which types of seizures an individual is having is vital because response to medication can vary according to seizure type. There are many other descriptive terms to describe seizures. A common term is "febrile convulsions" when high temperature of an illness is present.

Epilepsy afflicts between one and four percent of the American population. Estimates vary because the definition of epilepsy is not uniform and diagnosis is complicated and not always precise. Many people with epilepsy are either unaware of it or unwilling to reveal it.

The Federal Government spends $325 million for aid, rehabilitation benefits, and veteran's care. State and local governments spend about $85 million for special education and other programs. A little over $10 million goes for research into causes, prevention and treatment for the epilepsies.

Seizures often begin in early childhood. Studies indicate that more than half of those who have epilepsy are under age 20. Epilepsy does not shorten the life span of most of its victims. Fortunately, most cases can now be partially or completely controlled with a drug or combination of drugs. This is in sharp contrast to the thousands of years when the only treatment was magical, semi-medical, or religious therapies. Although the cause of epilepsy is not fully understood, much more is now known about the problem. Many people with epilepsy continue to function very effectively even when having frequent seizures. However, some persons' seizures do not respond to present therapy. Research must continue to find other therapy to control their seizures in order that they, too, may have productive lives.

It is known that seizures may occur in association with birth trauma or birth defects, brain infections, drugs or alcohol abuse, head injury, tumor, and strokes. But the specific underlying cause is not known--why seizures occur in one person and not in another with a similar disease or injury. The National Institute of Neurological and Communicative Disorders and Stroke (NINCDS) scientists believe that an interdisciplinary neuroscientific approach will ultimately clarify the cause or causes of epilepsy. Such an effort including improved methods of fine structure analysis, electrophysiology, neurochemistry, and neuropharmacology, will lead to more detailed knowledge of brain structure and function. Research of this type, both basic and clinical, is currently being conducted and supported by the Institute.

Epilepsy Research

Interest in the field of epilepsy has increased greatly during the last decade. Practically every aspect of the disorder is receiving intensive study. In addition to laboratory research, studies are being conducted on rehabilitation, education, occupational and general life adjustment. Some of the advances and indications of future research directions are presented in publications sponsored by the Institute. These include the following: Basic Mechanisms of the Epilepsies, (1969); Antiepileptic Drugs, (1972); Experimental Models of Epilepsy, (1972); Neurosurgical Management of the Epilepsies, (1975); Complex Partial Seizures and Their Treatment, (1975); and Infantile Spasms, (1976). Numerous scientific epilepsy papers appearing in journals monthly appear in Epilepsy Abstracts, which is partially funded by NINCDS.

Diagnosis

For some time, diagnosis of epilepsy has been made by a general physical and neurological examination. Often specialized diagnostic techniques are used. These include an electroencephalogram (EEG); x-rays of the skull; psychological tests; lumbar puncture; brain scan; pneumoencephalogram; arteriography; neuro-ophthalmological evaluation; and blood and urine tests. The most recent advance in diagnosis is a non-invasive and painless technique called Computerized Axial Tomography (CAT) which provides a two-dimensional view of the brain by scanning the head with x-rays and computing the resulting data.

A physician must first determine whether there is a recognized cause of the seizures such as tumor or cerebrovascular disease. In most cases, a cause can not be determined. Then the type of seizure must be determined. Until recently, seizures other than the tonic-clonic type have been poorly described and often inaccurately diagnosed, particularly among children where complex partial and absence seizures are frequently confused. Recent advances in recording equipment have led to the development and increasing use of a combined long-term EEG and television monitoring of patients. Split-screen techniques showing the patient and the EEG picture simultaneously are helpful in diagnosis. Telemetry has made it possible to monitor a patient's seizures in various settings, free from laboratory or hospital restrictions. EEG cassette recording systems are being developed which allow patients to be monitored in their homes without restrictions.

Therapy

Drug control of seizures began in 1857 when bromide was introduced. Modern medication started with use of phenobarbital, in 1912. Phenytoin (diphenylhydantoin), trade name Dilantin, was not introduced until 1938.

Although the barbiturates or the hydantoins, alone or in combination, controlled seizures in a significant proportion of the epileptic population, patients with absence seizures and complex partial seizures were least improved. Also, when doses of these medications were increased, undesirable side effects became more apparent. The first drug specifically for control of absence seizures was not developed until 1946. In 1954, primidone (mysoline) was introduced for use in complex partial seizures. The most recent additions--carbamazepine (Tegretol) and clonazepam (Clonopin) became available in the United States in 1974 and 1975.

For the past six years the Institute has evaluated and compared the efficacies of standard and new anticonvulsant drugs. The Epilepsy Branch of the NINCDS's Neurological Disorders Program coordinates most of the nation's research in these areas. This research is guided by an NIH Advisory Committee on the Epilepsies including physicians, pharmacologists, and other specialists from medical schools and the drug industry. One promising new drug being investigated by the Institute and Abbott Laboratories is sodium valproate (Depakine) which has been used extensively in Europe and Japan for at least 10 years. Efficacy and safety studies are being conducted at the University of Virginia School of Medicine, Charlottesville, the New Castle, Indiana, Developmental Disabilities Center, and the NIH Clinical Center. Foreign use of the drug has shown it effective against a variety of seizures without serious side effects. It appears that valproate's anticonvulsant activity is related to brain gamma-aminobutyric acid (GABA). Critically controlled clinical trials and further research is needed to better understand how it works.

The Anticonvulsant Screening Project of the Antiepileptic Drug Development (ADD) Program began in January 1975 to provide evaluations of the anticonvulsant activity of new chemical compounds. In the first year, more than 750 compounds were submitted. Four hundred were from 30 chemists at universities and 350 were supplied by 20 commercial firms. In addition, 50 compounds were selected to be standards. Forty of these reportedly had anticonvulsant properties. Primary evaluation of 435 experimental compounds has been completed. Two hundred and five demonstrated some anticonvulsant activity and the most potent of these are scheduled for secondary evaluations.

Within the past 10 years, a wealth of information has been accumulated on the most frequently used antiepileptic drugs. Also the newer analytical methods of gas-liquid chromatography and immunoassay make it possible to determine accurately the amount of an antiepileptic drug in a patient's blood. Such measurements have assured that the correct amount of drug is present in a patient and helps the physician to prevent many toxic side effects and to improve the results of therapy. Physicians who rely on blood drug level measurements have become increasingly concerned over the variability of results reported by the laboratories who make the measurements. The Epilepsy Foundation of America, a voluntary

health agency, established an Antiepileptic Drug Level Quality Control Program in 1974 after a survey of clinical laboratories revealed unacceptable variabilities. The program helps each laboratory evaluate its own performance. Participation in the program does not assure quality of performance or imply reliability but it provides a reference for the laboratory and assistance as needed.

Surgery is sometimes used for patients who do not respond to drugs. Stimulation of the cerebellum has been tried experimentally as therapy. How cerebellar stimulation helps some patients is not understood. Neither is it known what patient characteristics make them more likely than others to have successful results or what the ultimate long-term implications will be.

There is much interest in the possibility of reducing seizures by so-called feedback modification of EEG activity. Much controlled research and data analyses are needed to know whether this technique is beneficial in controlling seizures. It is considered an exciting possibility as it might provide seizure control without anticonvulsant drugs or surgical intervention. However, because of research design difficulties, it will probably be some years before the role of feedback in seizure treatment is known.

Experimental Animal Studies

In 1969, it was reported that a generalized convulsive seizure state could be created in rats, cats, and monkeys by repeated localized application of brief, low intensity electrical stimulation to their brains. This development of seizures was called "kindling." Others have confirmed that the model is good and that convulsions occur whenever the original stimulus is reapplied to a kindled animal.

Prognosis

The NINCDS Collaborative Perinatal Project collected data on mothers in over 50,000 pregnancies and their offspring from 1959-1974 in an effort to learn about many neurologic disorders including epilepsy. Researchers recently examined the data on children who had febrile seizures (convulsions that accompany fever of illness) and learned that the prior neurologic and develomental status are important predictors of epilepsy after febrile seizures. Children whose neurologic or developmental status was suspect or abnormal before any seizure and whose first febrile seizure was complex (longer than 15 minutes, multiple or focal) had a much higher rate of development of subsequent epilepsy. If small subgroups of children at high risk for subsequent epilepsy development can be determined, it may be possible to prevent their epilepsy.

Infantile spasms are an unusual form of epilepsy that are limited to infants and children. The seizures are frequently accompanied by developmental retardation and a chaotic electroencephalographic pattern called "hypsarrhythmia." This triad of abnormalities is often called West's syndrome. A unique feature of infantile spasms is the age of onset. The spasms characteristically begin in the first year of life, suggesting a developmental disaster of the cortex. Infantile spasms are highly resistant to conventional antiepileptic therapy. Mental retardation often persists after the spasms have ceased. To stimulate research interest in the catastrophic problem of infantile spasms, the Institute has published a systematic and thorough review of current knowledge about categorization, diagnosis, and treatment of infantile spasms.

Comprehensive Epilepsy Research Programs

Five Comprehensive Epilepsy Research Programs are being developed at the Medical College of Georgia, Augusta; the University of Minnesota Health Sciences Center, Minneapolis; Good Samaritan Hospital and Medical Center, Portland, Oregon; University of Virginia Medical Center, Richmond; and the University of Washington School of Medicine, Seattle. The programs coordinate basic and clinical research to ensure the rapid transfer of technology from concept to clinical application. They will provide excellence in epilepsy research, epilepsy education, and patient care, including the latest and best methods of prevention, diagnosis, treatment and rehabilitation. They will also develop new methods of prevention, diagnosis, treatment and rehabilitation and distribute knowledge as widely and as quickly as possible.

Commission For The Control of Epilepsy and Its Consequences

Legislation signed by the President in July 1975 directed that a nine member national commission be appointed to conduct a one-year study of epilepsy and the way the country is dealing with it. The Commission's findings are to be reported to the Congress. Seven regional meetings--in Dallas, Portland, Denver, Chicago, New York City, Atlanta, and San Juan, Puerto Rico--have recorded public testimony of all aspects of the epilepsy problem. A preliminary report is expected March 1, 1977 and the final report is scheduled for July 1, 1977.

Research Centers

The University of California at Los Angeles, and the Universities of Washington, Wisconsin, Yale, Baylor, and Stanford have epilepsy centers supported by the Institute. Each center focuses on brain mechanisms and functions and on new treatments. NINCDS also supports 57 other research projects in 22 states and 1 foreign country.

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Communication

To ensure rapid communication of epilepsy research results to scientists and physicians, the Institute published "Infantile Spasms" through Raven Press; sponsored a Symposium on the Reliable Quantification of Anticonvulsant Drugs in Kansas City, Missouri (proceedings to be published by mid-1977), to help laboratories improve their methods and standards; and sponsored a meeting of the Basic Research Subcommittee of the NIH Epilepsy Advisory Committee at La Jolla, California, to plan a workshop and subsequent publication on the way antiepileptic drugs work. It has also continued sales of a motion picture, "The Absence Seizure" through the National Audiovisual Center and free loan distribution by the National Medical Audiovisual Center.

Through its Office of Scientific and Health Reports, NINCDS has responded to requests from the scientific, medical, paramedical, and lay public for 21,000 epilepsy pamphlets, monographs, magazine reprints, and specific personal information. Materials available for general public inquiries included newspaper and magazine articles, health columns, radio and TV spots, and TV appearances by Institute scientists also generated interest in the publications and work of the NINCDS.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

REPORT ON POPULATION AND FAMILY PLANNING ACTIVITIES

A REPORT TO THE
HOUSE COMMITTEE ON APPROPRIATIONS

PREPARED BY

OFFICE OF POPULATION AFFAIRS

FEBRUARY 1977

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INTRODUCTION

This report describes the population research and family planning activities of the Department of Health, Education, and Welfare.

Population research and family planning activities in the Department of Health, Education, and Welfare include support of services--making family planning information and services available and accessible; training--meeting the professional and lay manpower needs in health, social services, and education; research--promoting and supporting research and research training in the biomedical and broad behavioral aspects of fertility, sterility, population dynamics, and program implementation; and public education--increasing opportunities for sex education, public understanding of human sexuality, and information about family planning and population growth.

Family planning services, as an integral part of adequate medical care, have been routinely and easily available to the majority of the population. In his message to the Congress, President Nixon emphasized that "...no American woman should be denied access to family planning assistance because of her economic condition." Under the Social Security Amendments of 1967 (PL 90-248), subsidized family planning services are available through a variety of sources to some of those who want but cannot afford them. The Social Security Amendments of 1972 (PL 92-603) required that family planning services be offered and provided promptly upon request to all recipients of Aid to Families with Dependent Children (AFDC). The Social Services Amendments of 1974 (PL 93-647) added a Title XX[1/] to the Social Security Act (SSA). Under Title XX, family planning services continue to be mandated for those AFDC recipients desiring them. States may also elect to provide family planning services to individuals whose family monthly gross incomes are less than 115 percent (or, at State option, a lower percentage) of the median income of a family of four in the State, adjusted for size of family. Under the Social Services Amendments of 1976 (PL 94-401), States may elect to provide family planning services to individuals regardless of their income.

The Family Planning Services and Population Research Act of 1970 (PL 91-572) established Public Health Service (PHS) Act Title X, the major direct source of Federal support for family planning services programs. PHS Act Title X was extended through fiscal year 1977 by PL 94-63.

Legislative Highlights - FY 1968 Through FY 1976

1. On January 2, 1968, the Social Security Amendments of 1967 (PL 90-248), which included the Child Health Act of 1967, were enacted. This Act established categorical project grants for family planning services and required that not less than six percent of the monies appropriated for Maternal and Child Health under SSA Title V be available for family planning services. This same legislation required that under SSA Title IV-A, the AFDC program, family planning services were to be offered in all appropriate cases. Acceptance of such services was to be voluntary.

1/ SSA Title XX applies to the 50 States and the District of Columbia. Family planning social services for Guam, Puerto Rico, and the Virgin Islands are available under SSA Titles I, IV, X, XIV, and XVI.

2. On December 24, 1970, the Family Planning Services and Population Research Act of 1970 (PL 91-572) was enacted. This Act was passed to assist in making comprehensive voluntary family planning services available to all persons desiring such services.

3. On October 30, 1972, the Social Security Amendments of 1972 (PL 92-603) was enacted. This Act made it mandatory to inform all recipients of AFDC of the availability of family planning services and to provide or contract for services to all eligible persons voluntarily desiring them. The Act imposes a penalty of one percent per annum on the Federal share of AFDC funds on States which fail to provide these services to eligible persons desiring them. In addition, the Act increases the Federal share of matching for family planning services under Title IV-A -- AFDC -- to 90 percent from 75 percent and increases the Federal share for family planning services under Title XIX -- Medicaid -- to 90 percent from a variable formula with a range from 50 to 83 percent Federal matching.

4. On June 18, 1973, PL 93-45 extended the funding authorizations in PL 91-572 one additional year to June 30, 1974.

5. On January 4, 1975, the Social Services Amendments of 1974 (PL 93-647) were enacted. This law established SSA Title XX which placed major responsibility upon the States to develop their social services programs to be responsive to the needs of the citizens of each State. Title XX continues to require that family planning services be offered and provided promptly to those AFDC recipients desiring such services. States may also elect to provide family planning services on the basis of income eligibility status. In addition, States must provide three services to recipients of Supplementary Security Income (SSI) payments to the aged, blind, and disabled, of which family planning can be one service. The Federal share of matching continues at the 90 percent rate.

6. Enacted on July 29, 1975, PL 94-63 extends PHS Act Title X through fiscal year 1977.

7. On September 7, 1976, PL 94-401 amended SSA Title XX, adding a provision that States may provide family planning services to individuals regardless of their income.

The two tables that follow list some of the functions carried out by Department of Health, Education, and Welfare (DHEW) agencies.

Table 1 summarizes DHEW family planning programs for delivery of services by function, local delivery agency, and DHEW operating agency with funding and program responsibility.

Table 2 summarizes other DHEW population and family planning programs (research, training, education, and evaluation) by function and DHEW operating agency with funding and program responsibility.

Table 1

DHEW Programs for Delivery of Family Planning Services
by Function, Local Delivery Agency, and DHEW Operating Agency

Function	Local Delivery Agency	DHEW Operating Agency with Funding and Program Responsibility
Medical Services, Information, Counselling, and Referral	Hospitals and Clinic Services	HSA[1/] -- Indian Health Service -- Bureau of Medical Services -- Bureau of Community Health Services SRS[2/] -- Medical Services Administration -- Public Services Administration
	Health Departments	HSA -- Bureau of Community Health Services SRS -- Medical Services Administration -- Public Services Administration
	Voluntary Health Agencies	HSA -- Bureau of Community Health Services SRS -- Medical Services Administration -- Public Services Administration
	Private Physicians	SRS -- Medical Services Administration -- Public Services Administration

1/ Health Services Administration
2/ Social and Rehabilitation Service

Table 1 (Cont'd)

DHEW Programs for Delivery of Family Planning Services
by Function, Local Delivery Agency, and DHEW Operating Agency

Function	Local Delivery Agency	DHEW Operating Agency with Funding and Program Responsibility
Information, Counselling, and Referral Only	Income Maintenance Agencies	SRS -- Assistance Payments Administration
	Public Social Service Agencies	SRS -- Public Services Administration
	Voluntary Social Agencies	SRS -- Public Services Administration -- Assistance Payments Administration
	Employee Health Services	HSA -- Bureau of Medical Services

Table 2

Other DHEW Population and Family Planning
Activities by Function and DHEW Operating Agency

Function	DHEW Operating Agency with Funding and Program Responsibility
Training Programs for Population and Family Planning	
1. Short-term Pre-Service and In-Service Training of:	
(a) Physicians, nurses, other professional health personnel	HSA -- Bureau of Community Health Services CDC[1/]
(b) Social workers and other public assistance personnel	SRS -- Public Services Administration -- Assistance Payments Administration
(c) Teachers	OE[2/]
(d) Subprofessional workers	SRS -- Public Services Administration HSA -- Bureau of Community Health Services OE -- Adult and Vocational Education
2. Curriculum Development for Above Programs	SRS -- Public Services Administration OE
Research Training in Population and Family Planning	NIH[3/] -- National Institute of Child Health and Human Development HSA -- Bureau of Community Health Services CDC

1/ Center for Disease Control
2/ Office of Education
3/ National Institutes of Health

Table 2 (Cont'd)

Other DHEW Population and Family Planning
Activities by Function and DHEW Operating Agency

Function	DHEW Operating Agency with Funding and Program Responsibility
Education Programs	
1. Sex and Family Life Education at Elementary and Secondary School and College Levels	OE
2. Professional Schools	
(a) Physicians, nurses, and other health professions	HSA -- Bureau of Community Health Services
(b) Social workers	SRS -- Public Services Administration
(c) Teachers	OE
3. Curriculum Development for Above Programs	SRS -- Public Services Administration OE
Research	
1. Reproductive Physiology and Contraceptive Development; evaluation of safety and possible adverse effects	NIH -- National Institute of Child Health and Human Development FDA[1/]
2. Social Research	SRS -- Public Services Administration HSA -- Bureau of Community Health Services HRA[2/] -- National Center for Health Statistics NIH -- National Institute of Child Health and Human Development

1/ Food and Drug Administration
2/ Health Resources Administration

Table 2 (Cont'd)

Other DHEW Population and Family Planning
Activities by Function and DHEW Operating Agency

Function	DHEW Operating Agency with Funding and Program Responsibility
3. Administrative Research	
(a) Utilization studies	SRS -- Public Services Administration -- Medical Services Administration -- Assistance Payments Administration
(b) Demonstrations in innovative service delivery mechanisms	HSA -- Bureau of Community Health Services
(c) Evaluation methods	HRA -- National Center for Health Statistics
Evaluation	
1. Overall Evaluation and Coordination	OS[1/] -- Office of the Assistant Secretary for Planning and Evaluation OASH[2/] -- Office of Population Affairs
2. Medical Services Evaluation	HSA -- Bureau of Community Health Services
3. Social Services Evaluation	SRS -- Public Services Administration -- Medical Services Administration

1/ Office of the Secretary
2/ Office of the Assistant Secretary for Health

II

OFFICE OF THE SECRETARY

Office of the Assistant Secretary for Planning and Evaluation

The Assistant Secretary for Planning and Evaluation has primary responsibility for the preparation of the five-year budget plan and the Department's program memoranda. This office is also responsible for the overall evaluation of the Department's programs.

The Office of the Deputy Assistant Secretary for Health Planning and Evaluation works closely with the Office of Population Affairs in the development of appropriate planning documents, program memoranda, and evaluation studies.

Office of the Assistant Secretary for Human Development

In July 1969, the Office of Child Development (OCD) was established in the Office of the Secretary of HEW to serve as a point of coordination for Federal programs for children and their families and to act as a national advocate of services for children. On April 1, 1973, OCD became part of a new Office of Human Development at HEW which focuses on groups of Americans with special needs.

While the Office of Child Development does not directly operate any programs on family planning, Project Head Start and other OCD demonstration programs such as Home Start and Child and Family Resource Programs make social services available to parents. Social worker aides and health specialists in these programs are in contact with community agencies that conduct planned parenthood education and distribute information on family planning. Much of the material published and distributed by these agencies encourages parents to space their children and to talk to a physician or social worker about family planning.

III

PUBLIC HEALTH SERVICE

Office of the Assistant Secretary for Health

The Office of Population Affairs (OPA) serves as a focal point for coordination of Department population research, population education, and family planning services activities. The Deputy Assistant Secretary for Population Affairs heads the OPA and has full line authority and responsibility for directing population research and family planning services within the health agencies. PL 91-572, the "Family Planning Services and Population Research Act of 1970," establishes the OPA by statute and delineates the

> The Secretary shall utilize the Deputy Assistant Secretary for Population Affairs--
>
> (1) to administer all Federal laws for which the Secretary has administrative responsibility and which provide for or authorize the making of grants or contracts related to population research and family planning programs;
>
> (2) to administer and be responsible for all population and family planning research carried on directly by the Department of Health, Education, and Welfare or supported by the Department through grants to, or contracts with, entities and individuals;
>
> (3) to act as a clearinghouse for information pertaining to domestic and international population research and family planning programs for use by all interested persons and public and private entities;
>
> (4) to provide a liaison with the activities carried on by other agencies and instrumentalities of the Federal Government relating to population research and family planning;
>
> (5) to provide or support training for necessary manpower for domestic programs of population research and family planning programs of service and research; and
>
> (6) to coordinate and be responsible for the evaluation of the other Department of Health, Education, and Welfare programs related to population research and family planning and to make periodic recommendations to the Secretary.

In addition to its primary program direction activities, the OPA serves as a staff office for the Assistant Secretary for Health. This function involves advising the Secretary, through the Assistant Secretary, on policy and new legislation; participating in legislative and fiscal planning; and preparing reports on

departmental and inter-departmental activities for the Secretary and the Congress. The OPA also prepares staff documents for the Secretary and for the White House.

Besides direct coordination of DHEW programs, the OPA works in close cooperation with, and provides leadership to, population research, population education, and family planning activities of other Federal agencies.

A continuing partnership between the Government and other concerned organizations is essential. The past work of private agencies in population-related fields has laid a foundation on which the official agencies continue to build. Therefore, the OPA maintains effective liaison with interested public and private organizations.

The OPA also maintains close communication with the population centers of major universities so that training can be geared to actual needs as they are revealed in ongoing DHEW programs.

In order to stimulate concerned professional and citizen groups to develop family planning resources, the OPA provides leadership at regional meetings, conferences or similar activities.

The OPA is lead office for population education in DHEW. It is responsible for promoting and coordinating support for population education activities in federal agencies and for encouraging population education efforts in the non-federal sector. The primary objective of population education is to provide to all sectors of the American public greater knowledge and understanding of U.S. and world population issues.

The OPA advises the Assistant Secretary for Health and the Secretary of HEW on national needs, policies and program goals in population education.

The OPA consults regularly with officials at universities, secondary and elementary schools regarding educational needs and objectives in curriculum development and teacher training. The Office has also reviewed school textbooks to aid in developing criteria for evaluating the extent and quality of popualtion-related information in educational materials.

The OPA has played a major role on the Subcommittee on Population Education of the Federal Interagency Committee on Education. A report published by this committee in November 1976, entitled Population Education and the Federal Role, recommends that Federal agencies broaden their programs to encourage and support population education. To enhance the population education programs of educational institutions and population organizations, the OPA makes educational materials available on a long-term basis.

The Office of International Health (OIH), a staff office to the Assistant Secretary for Health, is the focal point within the Department for international health relations and for policy development and program coordination relating to international health.

One of the office's responsibilities is the overall administration of the Scientific Activities Overseas (Special Foreign Currency) Program. This program enables the health agencies to use U.S.-owned excess foreign currency to support selected health research and related activities in designated foreign countries. The countries designated as excess currency countries by the Treasury Department for fiscal year 1978 are Egypt, Burma, Guinea, India, and Pakistan.

There are about 250 active projects under this program at the present time. These include twelve in the field of population and family planning representing a total obligated cost of $2.7 million in foreign currencies. Included among these projects are studies of thromboembolism and oral contraceptives, biochemical tests of sperm in relation to fertility, tryptamine receptors in the isolated rat uterus, and methods of demographic projection analysis.

Despite the potential for such research in the excess currency countries, no new population or family planning projects were funded during fiscal year 1976. A number of new projects have been proposed for development and possible funding during fiscal year 1978. These include development of methods for reversible sterilization of men and women and of implantable contraceptive drug delivery systems, establishment of serum baseline levels of reproductive hormones in fertile and infertile couples, studies to determine whether certain steroidal drugs used in oral contraceptives cause damage to reproductive organs, as well as studies directed toward improving family planning services and providing insight into factors which motivate acceptance of family planning.

The office also provides services to the Agency for International Development (AID) on population and family planning programming and facilitates coordination and exchange among concerned U.S. and international agencies. The AID program provides assistance to about seventy developing countries through bilateral or regional projects. Many of these projects are implemented through AID contracts and grants to U.S. institutions and international agencies.

The OIH staff contributes mainly to those AID projects aimed at the development of more adequate systems for the delivery of clinical and educational services and the preparation of manpower. The services provided to AID include problem analysis, project design, identification of technical resources, review of project proposals, program evaluation, planning of training workshops, and guidance on implementation problems. This entails field visits to the AID assisted countries; working with international organizations; participating in AID task forces, committees, and meetings; and, provision of information and resource materials as requested by AID Missions, AID contractors, and individuals concerned.

Although not directed specifically at population and family planning programming, those areas comprise a significant element of the office's technical consultation services to AID in health planning and health sector assessment. The activities are conducted in a number of underdeveloped countries by OIH staff in cooperation with other consultants, AID Mission personnel, and foreign national officials of Ministries of Health and other health-related national agencies.

National Institutes of Health

The research programs of the Department in the population sciences are directed by the National Institute of Child Health and Human Development. Section 444 of the Public Health Service Act authorizes the Institute to conduct and support research and training relating to maternal health, child health, and human development, including research and research training in the special health problems and requirements of mothers and children and in the basic sciences relating to the processes of human growth and development, including prenatal development. Section 1004 of Public Law 94-63 authorizes the Secretary of Health, Education, and Welfare to make grants and to enter into contracts "...to promote research in the biomedical, contraceptive development, behavioral, and program implementation fields related to family planning and population..."

Total expenditures by the Institute in fiscal year 1976 for population research were $56.2 million. They are projected to be $59.5 million for fiscal year 1977. Of the projected expenditures in FY 1977, $52.2 million is applicable under the authority of P.L. 94-63.

Other components of the National Institutes of Health provided $11.6 million in fiscal year 1976 to support a variety of extramural activities with important implications for population research. Research in reproductive endocrinology supported by the National Institute of Arthritis, Metabolism and Digestive Diseases totalled approximately $4.0 million in fiscal year 1976. These studies provide basic information essential in the development of new methods for controlling reproductive processes. The National Cancer Institute's interests in reproductive endocrinology, other reproductive processes, and carcinogenic effects of synthetic estrogens are relevant to understanding normal function and fertility control. In fiscal year 1976, $1.6 million was spent to support these studies.

The National Heart and Lung Institute awarded $0.4 million for studies of the effects of estrogens, progestogens, and steroid contraceptives on blood clotting mechanisms and the physiology of circulation. Several studies in reproductive neuroendocrinology, genetic aspects of reproduction, and toxic effects of environmental agents on reproduction were supported by the National Institute of Neurological and Communicative Disorders and Stroke and the National Institute of General Medical Sciences, and the National Institute of Environmental Health Sciences respectively. Support for population research in these three Institutes totalled about $0.5 million in fiscal year 1976. The Division of Research Resources administers approximately $5.2 million in general research support relevant to the population field.

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The National Institute of Child Health and Human Development (NICHD) and its Center for Population Research (CPR) are responsible for the primary Federal effort in population research. Support is provided through grants and contracts for:

-Fundamental biomedical research on reproductive processes relevant to problems of human fertility and infertility.

-Research on solutions to major problems related to population and reproductive behavior, such as a) high risk pregnancy, especially adolescent childbearing, and b) the relationships between nutrition and reproduction.

-The development of new and improved methods for fertility regulation.

-The evaluation of the safety and effectiveness of contraceptive methods currently in use.

-Behavioral and social science research on the reproductive motivation of individuals, and the causes and consequences of population change.

Each of these activities is integral to the solution of individual, family, national and international problems. They are described according to the substantive areas listed above. In addition, there is a description of CPR efforts to support institutions, develop scientific manpower, facilitate the coordination of Federal population research programs, and communicate population research information.

1. Human Fertility and Infertility

Research on fertility will continue to be concerned with the reproductive processes involved in the fertility of men and women and with animals having reproductive processes similiar to those in human beings. CPR is the largest single source of support for such work. Knowledge of reproductive processes is required for the development of safe, efficacious, and acceptable new contraceptive measures and for the alleviation, amelioration or cure of infertility and reproductive diseases or disorders.

A major effort of this research program is aimed at understanding how hormones act in controlling reproduction. The acquisition of the knowledge required for such an understanding will afford an opportunity to manipulate hormone action for solving fertility and infertility problems. Through their action on reproductive organs and feedback interactions with the brain, the sex steroid hormones regulate such reproductive events as ovulation, sperm development, egg transport, preparation of the uterus for the attachment and maintenance of the developing embryo, breast development and secretion, action of the prostate gland, labor and birth, and numerous other aspects of reproduction.

It now appears certain that sex steroid hormones affect reproduction by activating genes in their target organs, such as, the ovary, testis, and uterus. Investigators supported by NICHD previously reported remarkable progress in the elucidation of the step-by-step manner in which genes are activated by estrogen and progesterone (the major sex steroid hormones in women). Interference with one or more of the steps in estrogen or progesterone-induced gene activation could lead to the development of new measures for the regulation of fertility or for the alleviation of reproductive diseases causing infertility.

NICHD grantees have made considerable progress in the advancement of knowledge of reproductive processes. Much has been learned about the structure and function of Luteinizing Hormone (LH), Follicle Stimulating Hormone (FSH), and human Chorionic Gonadotropin (hCG). These large protein hormones are called gonadotropins because of their control of the male and female gonads (testis and ovary). The structures of these complex gonadotropins have been determined, and they have been shown to bind to specific receptors on the gonadal cell surface where they initiate a chain of reactions leading to the release of sex hormones, eggs in the female or sperm in the male animal. The new knowledge regarding gonadotropins and their mechanism of action may help us to devise new measures for the alleviation of infertility and the control of fertility.

Institute grantees are leaders in research on a part of the brain, the hypothalamus, which controls gonadotropin secretion by the pituitary gland. The hypothalamus secretes a small peptide hormone, called Gonadotropin Releasing Hormone (GnRH), which stimulates the pituitary gland to secrete LH. When released at the proper time, LH causes the ovary to release one or more eggs (ovulation). New compounds (analogs) that are similar to GnRH are being used to block ovulation (contraceptive effect) while others promote fertility by stimulating ovulation in the infertile subject through the release of LH.

Research on two inhibitors in ovarian follicles has provided significant new leads for contraceptive development. Small follicles appear to contain a substance that inhibits the formation of the ovarian structure (corpus luteum) which secretes progesterone. Egg development within the follicle appears to be blocked by a second inhibitor. If these inhibitors can be identified and used effectively, they might restrict fertility by blocking the progesterone required for pregnancy or by keeping the egg in an immature state so that it cannot be fertilized. These new research leads offer promising approaches to fertility regulation because the putative inhibitors are naturally-occurring substances which might have minimal undesirable side effects in the body.

Our grantees have also contributed significantly to our understanding of male fertility. Until recently, the functions of the Sertoli cells of the testis could not be specified. Now it is known that the surfaces of these cells form junctions which together create the environments required for the formation of new sperm cells. Moreover, these cells secrete a substance, Androgen Binding Protein (ABP), which promotes sperm formation.

Progress continues to be made in the elucidation of the immediate sequence of events leading to successful fertilization and implantation of the egg. Included among the areas of research are factors involved in the: 1) transport of sperm and eggs in the reproductive tract; 2) union and penetration of the egg by the sperm head; and 3) survival and implantation of the fertilized egg. It has been found that stress induces increased sex steroid hormones from the adrenal gland, which appear to have a role in controlling hormones that regulate the ovaries and testes.

2. Adolescent Pregnancy

Teenage pregnancy and illegitimacy are causing increasing concern in the United States. Women under the age of 20 are contributing an increasing proportion of all births, and although birth rates are generally declining for all teenagers, rates for those under 17 have risen. In 1974, one in every five births in the U.S. was to a teenage mother. Of these 608,000 births, 221,000 were illegitimate, and 122,000 were to girls under the age of 17.

These developments have serious implications for the well-being of young mothers, who are socially, psychologically and economically less well equipped to assume the responsibilities of parenthood than more mature married women, and for their children. Births to such mothers run a variety of health risks: the fetal death rate is higher than at later maternal ages, the proportion of children born prematurely or with low birth weight is higher, and the infant mortality rate is higher. Furthermore, women who have their first births at very young ages tend to bear additional children at a more rapid rate in comparison with women who started their childbearing later. This close spacing of pregnancies brings with it additional health risks to both mothers and children.

Other high-risk obstetrical conditions involve the risk factors related to particular methods of abortion and to the use of oral contraceptives and/or other contraceptive methods. Data from other nations suggest that induced abortions increase the risk of prematurity and second trimester abortion in subsequent pregnancies. Studies are exploring the relation between various contraceptive methods and birth defects and other adverse manifestations among the infants.

While there has been a decline in both teenage marriages and childbearing among younger groups of American women as well as older ones, the incidence of childbirth before and just after the first marriage is on the rise. Teenage fertility has declined less than that of older women, and an increasing proportion of births are to teenage women. The number of births to girls under the age of 20 has remained high and fairly stable from 1960 to the present, due to a combination of declining fertility rates for those 15-19 and the increasing population in that age group. The birth rate to girls under 15 years of age has, however, actually risen, and the number of out-of-wedlock births to teenagers has more than doubled since 1960.

Research on fertility behavior among teenage women in the U.S. has found that: (1) approximately 30 percent of U.S. females 15-19 years of age are sexually active before marriage; (2) nearly 30 percent of those who are sexually active become pregnant while still unmarried; (3) almost two-thirds of first premarital pregnancies are unwanted; (4) less than 14 percent of those females whose first pregnancy was unwanted tried to prevent it through contraception; (5) almost one in five of sexually active females 15-19 years of age have always used contraception; (6) there is no association between marriage plans and the use of contraception even though the frequency of intercourse is greater among those who have plans to marry; and (7) of premarital first teenage pregnancies of known outcome, 42 percent end as out-of-wedlock births and 14 percent as abortions.

There are some preliminary findings concerning the social and psychological factors influencing illegitimacy. They indicate that rates of premarital intercourse among adolescents are rising, with a greater increase for women than men. Similarly, a study of college freshmen has found that attitudes favoring sexual permissiveness have risen between 1967 and 1975, especially for females. It also has been found that the legalization of abortion in California correlated with a dramatic drop in the illegitimacy rate there.

This program includes research on the determinants of adolescent fertility involving such specific issues as (1) the factors which influence adolescent sexual behavior, including the pressures and sanctions which induce adolescents to engage in or refrain from sexual activity; (2) the factors leading to the use or non-use of contraception among sexually-active adolescents, for example, how the accessibility and acceptability of contraceptive methods and services and abortion services influence the use of these methods by adolescents; and (3) the factors influencing the immediate resolution of adolescent pregnancy, such as by abortion, marriage, adoption, or raising the child out-of-wedlock.

Studies also investigate the consequences of teenage pregnancy and childbearing from the standpoint of (1) the teenage mother, involving the psychological consequences of pregnancy, abortion, adoption, or of raising a child within or outside of wedlock and such aspects as sex-role orientation, aspirations, attitudes and outlook; (2) the child, including consequences such as social and emotional development, sex-role orientation, school adjustment and achievement, fertility behavior, marital adjustment, and occupational attainment; (3) the father dealing with the effects on education, employment, and social and psychological adjustment; (4) other family members sharing the responsibility of caring for the child and the economic, psychological and social consequences for them; and (5) society, including the societal consequences incurred when young people curtail their education due to pregnancy, such as the expense of special schooling, aid to dependent children allowances, daycare, and other services for teenage mothers.

3. Nutrition and Reproduction

Nutritional factors are known to affect reproductive functions, but the interrelationships are poorly understood. Few attempts have been made to correlate nutritional adequacy with problems of hormonal balance that affect fertility. Both overnutrition and undernutrition can result in reproductive malfunction. Undernutrition is one of the prime causes of amenorrhea (failure to menstruate), and in the U.S. its incidence appears to be increasing due to the popularity of food cults and other factors.

Nutrition has a direct effect on reproductive performance in various ways. Nutrition influences the span of reproductive life. Poor nutrition has been related to delayed onset of menarche and premature menopause, and it affects fecundity. Another effect of nutrition is on fetal outcome and infant survival. Nutrition and reproduction also interact in their relation to breastfeeding, which is involved in preventing another immediate pregnancy through the maintenance of lactational amenorrhea.

The research to be emphasized in this area includes involvement of dietary factors in reproductive processes, the reproductive consequences of malnutrition, the relationship between contraceptive use and nutrition, and the role of nutrition in population dynamics.

Few projects have been supported in nutrition and reproduction as this previously has not been a major area of emphasis. One study supported for fifteen years has yielded many significant results about the critical role that Vitamin E plays in the production of sperm in experimental animals. It appears from these studies that Vitamin E may be required by the testis for the production of certain kinds of prostaglandins. The prostaglandins, in turn, may regulate testicular function. Thus, Vitamin E deficiency, according to this hypothesis, leads to reduction or cessation of sperm production by interfering with the synthesis of the required prostaglandins. Moreover, data from this study suggest that vitamin E may be critical for all rapidly dividing cells for the production of their membranes. If these results are confirmed, they may serve as a basis for the management of certain types of infertility in men.

Another ongoing study suggests that ascorbic acid (Vitamin C) may be intimately involved in the chemical changes occurring in the follicle of the ovary when it ruptures to release the egg at ovulation. Vitamin C appears to have a role in the decomposition of the collagenous connective tissue of the follicle. This study has shown that the ovulatory surge of luteinizing hormone initiates a release of a significant amount of ascorbic acid from the ovary. As more is learned about the sequence of events occurring just before and at the time of the actual release of the ovum, the potential for regulation of fertility at the ovarian level should be increased. Since in many respects tissue changes during ovulation are comparable to those in rapidly growing tumors, it seems plausible that knowledge on cellular changes associated with ovarian growth may provide insights into the mechanisms of tumorous invasions, particularly of the reproductive organs.

In a pilot study of the relationship between nutritional status and secondary amenorrhea, normal cycles resumed when subjects attained a weight within 10% of normal.

Studies have revealed that contraceptive steroids affect numerous dietary nutrients. These include reductions in levels in various vitamins like folate, B-6 and vitamin C, effects on minerals resulting in a decrease in plasma zinc level, and an increase in copper levels. The significance of these observations is as yet not completely understood. There is speculation linking mood changes including depression among pill users to the oral contraceptive effect on vitamin B-6. The observations about certain changes in the appearance of cells in cervical smears of women on contraceptive steroids, suggesting folate deficiency, are the subject of a controlled clinical trial.

A study has identified a relationship between triglyceride levels and vitamin B-6 metabolism in oral contraceptive users. It appears that supplementation with vitamin B-6 will decrease triglyceride levels in OC users. This relationship will be systematically studied in a controlled clinical investigation.

In the research area of the role of nutrition in population dynamics, a project is being supported to develop a model to describe the relationship of the pressure of population growth to nutrition and food supply problems.

4. New Contraceptives

The program in contraceptive development continues to involve efforts to develop new drugs, devices and other methods for fertility regulation, for both men and women, which are safe, effective, inexpensive, reversible, and acceptable to various population groups. The objective of this program is to develop an array of methods that can be used successfully by different couples under various circumstances. Research activities to develop a variety of safe fertility regulation methods include (1) continued synthesis and biological evaluation of promising new compounds for the female or male; (2) development of technology for improved drug administration; (3) development of improved vaginal and uterine contraceptives based on chemical or physical methods; (4) continued clinical trials of sex steroids for suppression of sperm production and the consequent development of chemical contraceptives for males; (5) clinical and toxicological evaluation of long-acting progestin as a female contraceptive; (6) laboratory studies and clinical trials to develop and ascertain the efficacy of antifertility methods based on periodic abstinence; (7) studies required for clarification of mechanisms of action of specific drugs.

a. Product Development

Drug Synthesis and Testing. An intensive drug synthesis program has uncovered a number of potential leads which have been evaluated in laboratory animals. Potential areas of utility for these drugs include the inhibition of ovulation, regulation of male fertility, and improved postcoital contraception. It is anticipated that within the next two years, some of these drugs will undergo toxicological evaluation and initial human clinical trials for efficacy and safety. The success of the drug synthesis program has been optimized as a result of comprehensive biological testing and evaluation.

Drug Delivery Systems. New methods for drug administration have been formulated and evaluated. It is presently possible to administer a drug in a formulation to extend the activity of the drug for long periods of time (3-12 months). This has been accomplished by incorporating the contraceptive drugs into biodegradable polymers which release the drugs after they have been implanted or injected into the body. New drug delivery systems promise to improve the safety of present contraceptive agents by lowering the total intake of the drug and by eliminating the need for daily medication.

Clinical Trials. Drugs from the product development program must undergo clinical trials before their utility can be properly assessed. This effort has been expanded and presently includes investigations of drugs for both male and female fertility regulation. The aim of the male clinical trials is to establish the fact that male fertility can be suppressed without inhibition of the libido. Preliminary results suggest that drugs presently used for other clinical indications can accomplish this goal. The practicality and long-term safety of such approaches need to be established. Although progress during the past five years has clearly shown that fertility regulation in the male is possible, it will take additional time before the right drugs are obtained to safely regulate male fertility.

Clinical trials involving female fertility regulation have centered on two approaches. First, extensive trials are in progress to establish the efficacy and safety of estrogens other than diethylstilbestrol (DES) as postcoital contraceptive agents. Presently available data indicate that ethynyl estradiol and conjugated natural estrogens are highly effective in preventing pregnancy when they are administered after coital exposure during the woman's fertile period.

Another approach to female contraception currently under investigation involves a progestational agent that is effective for two-three months after a single intramuscular injection. The research program involves both Phase I clinical studies in a limited number of volunteers and concurrent toxicological investigations prescribed by the FDA. The drug in question, norethindrone enanthate, can provide an alternative to the present day oral contraceptives.

Studies are also being supported to seek improvement of family planning methods which stress avoidance of intercourse during the woman's fertile period. A large clinical trial is in progress to ascertain the efficacy of two methods which rely on the recognition by couples of the period during which intercourse can result in pregnancy. Both methods are based on sound scientific evidence, and the results obtained will be dependent on the teaching programs and on the motivation of the couples involved. While no results are presently available to substantiate the anticipated success of this trial, nevertheless this periodic abstinence approach to fertility regulation may offer an alternative to those people who do not wish to use contraceptive drugs or devices.

b. Directed Fundamental Research

There has been significant progress in our overall understanding of reproductive processes and the utilization of this knowledge for fertility regulation.

Ovum transport through the oviduct is facilitated by both muscular contractions and by the activity of cilia. The dominance of either one of the mechanisms is dependent on the portion of the oviduct within which the ovum resides at a given time. Bioengineering has provided scientists with microminiature transducers that can accurately measure muscular activity as well as ascertain the presence of ova within specific segments. These sophisticated tools will enable scientists to study normal processes of ovum transport and will help to clarify the effects of a variety of drugs on transport.

In the area of ovarian function, we have gained a clearer understanding of the enzymatic mechanisms responsible for the production of female sex hormones. As a consequence of these studies, we know that the inhibition of specific enzymes can lead to the disruption of reproductive processes. Although the experimental drugs presently used to inhibit the specific enzymes are of limited practical utility, they help to identify potential leads for the drug synthesis program.

Another area where directed fundamental studies have resulted in a potentially practical application involves the cervix. We have gained an understanding of how circulating hormones influence cervical function, as well as increased knowledge of the biochemistry of cervical secretions. Since the cervix comprises a functional barrier to sperm passage, better understanding of this organ's function can lead to effective contraception. Current efforts are attempting to develop a contraceptive method based on the delivery of progestational drugs to the cervical lining with the intent of producing mucus that will be impenetrable to sperm.

Penetration of the ovum by the spermatozoon is dependent on enzymes that help to break down the protein layers surrounding the ovum. The properties of one of the sperm enzymes, acrosin, have been extensively studied. Inhibition of this enzyme results in failure of fertilization. A number of natural and synthetic inhibitors of this enzyme have been investigated, and some of them are potentially useful for incorporation into contraceptive formulations.

Research Resources. One of the more important functions and achievements has been the provision of critical research materials to the scientific community. These materials have been obtained as a consequence of sponsored research, as well as through the intramural research program within NICHD. For several years the Institute has provided the human pregnancy hormone called human Chorionic Gonadotropin (ChG) to scientists all over the world. This hormone has been widely utilized in basic studies on mammalian reproduction and in studies aimed at developing an antifertility vaccine. Two other hormonal preparations have also been made available to the scientific community.

Two important diagnostic kits are presently available for work with non-human primates. One of these kits is used to detect pregnancy and the other to measure the levels of follicle stimulating hormone (FSH). Both kits provide indispensable aids in research on the development of new drugs or devices.

5. Contraceptive Safety

The program in contraceptive evaluation will continue to direct its efforts to the evaluation of the safety of fertility regulating methods which are currently in use, particularly with respect to long-term safety. The emphasis is on the enumeration of hazards associated with contraceptive use and the identification of risk factors, which should provide a rational basis for counseling individuals at special risk to use methods of contraception which are less hazardous to them.

The identification and understanding of the hazards associated with methods of contraception remains a problem of continuing concern and vast public health implication. Millions of people of reproductive age are practicing family planning. Because of the wide-spread use of these methods of contraception, by mostly healthy young people, risks associated with its use, even though small, assume considerable significance. The scope of the program includes the evaluation of the safety of contraceptive steroids and of intrauterine devices, hazards associated with conventional methods of contraception, primarily the diaphragm and condom, immediate and long-term risks of methods of sterilization for men and women, and also the possible adverse consequences of pregnancy termination for the health of the women particularly regarding future pregnancy performance. Research into the mechanisms by which complications come about is most urgently needed, since it is this understanding which is most likely to lead to improved safety. It would also be extremely helpful towards the development of safer methods of contraception.

The Institute's contract program in contraceptive evaluation has resulted in the following findings:

The suspected relationship of the risk of thrombosis and thromboembolism to the dose of estrogen in the combination pill was confirmed. Women using oral contraceptive (OC) preparations containing more than

100 micrograms of estrogen had a relative risk which was about twice that of women using preparations with less than 100 micrograms of estrogen.

A six to eight-fold increase in relative risk of stroke has been identified among OC users. Additional risk factors are hypertension, cigarette smoking and a history of symptoms indicative of migraine headaches.

Contraceptive steroids affect several components involved in the blood coagulation process, including the vessel wall. Research of the mechanism by which contraceptive steroids lead to an increased risk of thromboembolism and stroke has as yet not provided any clues as to how to identify women at risk of these complications.

A recently completed study of the relative risk of breast cancer among users of contraceptive steroids has revealed an apparent increase in breast cancer in three subgroups of women. These were women who were exposed from two to four years to oral contraceptives, those who had used oral contraceptives to postpone the first pregnancy, and finally a group of women with a history of benign breast disease confirmed by biopsy who were exposed to oral contraceptive steroids for six or more years. This is the first time that an association has been demonstrated between contraceptive steroids and breast cancer. These findings urgently require confirmation or refutation with data from other projects.

Research on the relationship of the pill to carcinoma in-situ of the cervix has been inconclusive. Studies of the relationship to cervical cancer are complicated by the existence of numerous confounding factors which are difficult, if not impossible, to control.

An ongoing prospective investigation of women on contraceptive steroids has identified numerous adverse effects of the pill. Among these are a several-fold increase in the risk of hypertension, an increase in subclinical urinary tract infection, a slight increase in carcinoma in-situ of the cervix after long exposure, and also possibly in melanoma, a cancer of the skin. Other important findings have emerged regarding the effects of the pill on carbohydrate and lipid metabolism.

A study concerned with the metabolism of oral contraceptive steroids in women has demonstrated that daily use of oral contraceptives results in accumulation of metabolites of the administered steroids in blood. The norethindrone and mestranol themselves appear promptly in blood after pill ingestion and then disappear within 24 hours, but various conjugated metabolic products of the native drugs appear in increasing amounts throughout the 20 days of pill taking. The levels of these metabolites decrease during the menstrual period when no pills are taken but do not disappear completely by the start of the second cycle of oral contraceptive use. The accumulation of long-lasting metabolites of steroid contraceptives is an original finding which may be of particular significance in relation to some of the reported adverse effects of these agents.

One of the contracts involving animal studies of the pharmacology of contraceptive steroids has demonstrated marked species differences in the effects of these agents on lipid metabolism. Studies of the mechanisms involved in these effects are being pursued in rats, a species in which the steroid-induced changes are similar to those which occur in human subjects. This study has also demonstrated immunodepressant effects of contraceptive steroids in several species. An immunodepressant effect in women has been implied in case reports of remission in various immunologic diseases in oral contraceptive users.

Oral contraceptives result in shifts in the glucose tolerance curve among users towards a pattern closely linked to diabetes. There is as yet no conclusive evidence that exposure to contraceptive steroids increases the risk of diabetes among normal women or among women with a family history of diabetes. A significant portion of women on contraceptive steroids show increased levels of cholesterol and triglycerides.

Antibodies to sperm appear in a substantial proportion of vasectomized males several months after the procedure has been completed. Long-term follow-up of selected sub-groups of vasectomized males has revealed no effects on the endocrine system. Studies of vasectomized men have continued to demonstrate no clinical disease at intervals up to 2-3 years after vasectomy. Circulating levels of gonadotrophic and gonadal hormones remain within normal limits, autoantibodies to non-genital antigens occur very infrequently, humoral antibodies to sperm and testicular antigens occur in the majority of patients, and cellular immunity to sperm antigens has been demonstrated by one contractor during the first six months after vasectomy.

In one animal model (rabbit) vasectomy has resulted in autoimmune disease. This is the first demonstration of serious adverse effects of vasectomy in any species. The finding of immune complex disease appears to be unequivocal, but whether similar pathology occurs in other species as a result of vasectomy remains to be determined. Preliminary data from one other contractor suggest similar immunopathologic findings in vasectomized guinea pigs. While these data cannot be directly applied to man, this observation is of some concern and is being explored further using other animal models.

Progress is being made in evaluating the suitability of the beagle as an animal model for toxicity testing of contraceptive steroids. Research focuses specifically on the delineation of the breast lesions observed in beagle dogs after exposure to various progestins. In an ongoing study, small adenomas of the liver have been observed in beagles exposed to a specific progestin.

6. Population Dynamics

Research on population dynamics in the behavioral and social sciences is concerned with the factors governing variations in the growth, distribution, and characteristics of people and the impact of population changes on the health and welfare of individuals, families, and society as a

whole. Such knowledge is essential for the formulation of desirable population goals and effective public policies as well as other means of achieving them. Research emphasis is on (1) the social, psychological and economic causes of changes in fertility, since population growth is the single most dynamic factor of population change in the United States; (2) the effects of population size, composition, and distribution on the lives of individuals and families and on the social and economic institutions in which they participate; (3) the conditions which precipitate migration and the nature of its consequences, as migration continues to be an important element of social and economic change in our country.

Population change results from the balance between births and deaths and of migration into and out of any area. Throughout the world, death rates have already been brought low or are being reduced by improvements in public health and by advances in medical sciences, and the values of mankind demand that they remain low. Such urgency as attaches to concern with population growth must therefore be directed toward factors influencing fertility behavior and migration, and their consequences. Research in the social sciences has accordingly concentrated upon these latter variables. Primary emphasis has been placed upon fertility, its causes and consequences. Secondary emphasis has been placed upon migration, though the latter must be understood not only because migratory behavior is often related to fertility as both cause and consequence, but also because its causes and consequences have great social, economic, and political significance in the modern world.

Research in this program emphasizes the demographic, social and economic factors which influence the level of the birth rate and the factors which influence variations in family size among individuals and groups. Special attention is given to motivation for fertility regulation, variations in the perceived value and costs of children, changes in the structure and functions of the family, factors affecting adoption and effective use of contraception on the part of both men and women, and the related effects of changing roles in our society, particularly of women.

Major efforts will continue to be made to support studies which provide insights into fundamental questions regarding factors influencing variations in the level of fertility. Studies which monitor and describe the trends taking place in fertility in the nation are basic to the program because such studies identify changes occurring by age, region and sub-groups of the population. A major focus of research will also continue to be the social, economic, and psychological cause and consequences of varying levels of fertility for the population as a whole or segments of it. This research explores the effects of social and economic policies upon the birth rate, changes in family structure, marriage, divorce, and changing roles of men and women in society as these affect fertility and fertility-related variables, such as marriage, divorce, illegitimacy, etc. It also concerns family decision-making processes which affect the adoption of contraception, selection of contraceptive methods, and effectiveness with which the latter are used.

The effects of family size and the timing of births upon the health and the social and economic welfare of parents and children are also important because public knowledge of such effects can influence decisions made by individuals regarding age at marriage, timing and spacing of births and completed family size. Similarly, sound knowledge regarding the consequences of population change for society can provide a foundation for the adoption of public policies designed to affect such change in the future or to make appropriate provisions for adjustment to them.

Research is necessary to create the scientific basis for formulating judicious population policies. In the field of population policy, it is necessary to estimate the influence that socio-economic conditions have on population change so that policy makers can understand how public policy can affect population change directly or indirectly through the diverse elements of our socio-economic system. Often, research is conducted to evaluate how well existing attempts to influence population are operating. Also, some types of population change are virtually impossible to modify through public intervention and, in these cases, research must indicate how society must adjust to new demographic conditions.

a. Trends in Fertility. Studies have documented the decline in fertility in recent years among nearly all segments of the population, urban and rural, among both blacks and whites, and among various religious groups. These declines are correlated with a rise in average age at marriage, greater proportions of men and women single at the younger ages, as well as some evidence of delays for first births and greater spacing of subsequent births. Both the National Fertility Survey of 1970 and data collected by the Census Bureau reveal a reduction in desired family size. While few respondents expect to be childless or to have only one child, an overwhelming majority indicate a preference for no more than two children. In 1975, three-fourths of women 18-24 years of age expected to have no more than 2 children, as compared to only 45 percent with these expectations in 1967. Moreover, the proportion of women having a child in the first two years of marriage is lower than in the period 1955-1965. The National Fertility Survey of 1970 also reports a marked increase in the use of contraceptives in all groups and increasing utilization of sterilization by both men and women, particularly among those over 30 years of age.

The many studies of American fertility patterns indicate a trend toward the realization of the ideal of controlled fertility. The incidence of unwanted fertility has diminished, indicating an ever increasing level of contraceptive success among American couples. It is also noteworthy that the average age of childbearing has increased rather markedly raising questions as to whether the dramatic fall of American fertility is a permanent phenomenon or a temporary deferral of childbearing.

b. Determinants of Fertility. A number of studies have examined the effects of economic factors upon fertility. The National Fertility Surveys of 1970 and earlier as well as Census data, confirm the inverse relation between fertility and income. A study of the black population

points to the narrowing gap between blacks and white in proportions completing the twelfth grade and improvement in occupation and income among blacks as contributing to the decline of black fertility. Increasing education and rising occupational levels have also been found to be associated with declining fertility among Spanish-Americans.

On the other hand, the very great rise in fertility following World War II and continuing into the 1950s has been attributed to the marked rise in income of the population in that period. According to this hypothesis, the increase in income for young people entering the child-bearing period, as compared with incomes of their parents when they were growing up, facilitated earlier marriage, earlier childbearing, and eventually larger families. The hypothesis is supported by analysis of census and vital statistics data using econometric techniques. Research using data from surveys in the period since 1955, however, has failed to support the hypothesis. It therefore needs clarification and further testing.

c. Status and Roles of Women. A number of studies have focused upon various aspects of women's role identities as they affect fertility intentions and behavior. In one study, indicators of female status--labor force participation, education, and potential earnings--are strong predictors of fertility variations among groups, and upward trends in these indicators appear to be associated with the decline in fertility between 1960 and 1970. Another study has indicated that women who feel that activities other than motherhood can be gratifying are more likely to postpone a birth and limit their family than women whose definition of womanhood is tightly bound to motherhood. However, a study of new mothers has shown that many young women enter motherhood without clear motivation for the role or desire to have a child at that time. Another has indicated that the role model provided by a girl's mother influences the timing of her first birth.

Sex role attitudes undoubtedly influence and are influenced by the perceived costs and values attached to children. One study has indicated that perception of negative aspects of number of children dominate in the decision to limit family size, whereas the motivation to have children may be more a function of idealized expectations of what children are like or response to felt social pressures and social expectations. Women who themselves have no children evaluate larger family sizes more positively than those who have already borne one or more children. Another study has shown that cultural origin, education and socio-economic status are related to the extent to which men see children as enhancing life. Another is concerned with how women in low-income areas assess the relative advantages and disadvantages of additional children and how perceived costs and rewards are affected by each additional birth.

d. Consequences of Population Growth. Research on the consequences of population growth has been pursued from the standpoint of both societal and individual welfare. Two major studies dealing with the effects of various rates of population growth upon the per capita well-being in the U.S. converge in their findings that, over a wide range of assumptions regarding future economic development, per capita welfare rises more rapidly with slower rather than faster rates of growth.

A number of studies deal with the effects of family size on child development and achievement. One is studying the effect of age at marriage and time of first birth on family interrelationships and children's personality and cognitive development. Another is analyzing effect of birth order and sex of infants on mother-child interaction and on the cognitive and emotional development of infants. Unique findings from this research show that birth order and spacing have affected mother-infant relationships and the child's cognitive performance as early as three months of age. Another study reports an inverse correlation between intelligence of offspring and family size, even when socio-economic status and intelligence of parents are taken into account. Reduced interaction with parents as family size increases apparently adversely affects the verbal development and operative intelligence of children. A recently completed study similarly shows that educational achievement is lower the larger the family size, even when income is held constant. Further, the number of siblings that a child has exerts a strong negative influence on completed schooling, even when controlling for parents' schooling and income.

Two studies are primarily concerned with the effect of family size and the spacing of children on health. One of these relates spacing and family size to fetal, infant and early childhood mortality in a rural population, and the other relates the impact of childbearing and spacing patterns on the health of the mother and the development of the child in an urban milieu. Preliminary findings from the first show that pregnancies conceived in less than 12 months from the last pregnancy have a higher risk of early fetal death, especially if the last pregnancy resulted in a live birth, and a higher postneonatal mortality rate for live births resulting from less-than-12 month inter-pregnancy intervals.

e. Migration and Population Distribution. One study has explored how the absolute level of individual and family income interact with other variables to influence decisions to move, the distance moved, and region of destination. Except for the effect of migration upon progress in school, which is slightly negative, the burden of the findings so far is that migration is economically profitable to migrants. One emphasis in the study has been upon individuals in the United States below the poverty level. Only the West had a net in-migration of people below this level, the other three major regions in the U.S. having exported more of them than they gained. At the same time, data suggest that individuals on public assistance are less likely to move than those not on public assistance. An interesting result of the analysis is the determination that black migrants from the South to northern cities have higher incomes than those blacks born or reared in northern cities because the former have higher labor force participation rates.

Another study dealing with economic costs and benefits of migration concluded that benefits outweighed the costs from the standpoint of both migrants and areas of destination. For a number of years, migration was from the rural countryside and smaller cities to metropolitan areas, followed by a sizeable movement to suburbia and a concentration of

blacks within central cities. According to one study, blacks continue to be concentrated in central cities and a few suburbs, but the increasing attitudinal receptivity of whites and the rising economic potential of blacks portend shifts of blacks to the suburbs with increasing residential and educational integration. At the same time, a study on non-metropolitan population changes found that the open countryside in Pennsylvania is attracting more migrants than are the small non-metropolitan towns and cities, and that past and potential migrants appear to prefer non-metropolitan residence, but at sites within comfortable reach of the economic, social and cultural resources of larger cities. These findings are consistent with other research which is showing a turn around from migration into metropolitan areas to migration to non-metropolitan counties. Many of our central cities are losing population at a large rate which is contributing to a number of urban, social and economic problems.

Several studies indicate that there seems to be an increasing incidence of return migration, i.e., an exact reversal of past migration trends. We have been able to document which areas are losing population (Northeast and Northcentral sections) and gaining population (South and Southwest) due to this phenomenon. Also, certain groups (e.g., the retired) seem to be major contributors to the first wave of the new migration pattern. It is unclear whether the magnitude and composition of this phenomenon will sustain itself in the future and why migration patterns are changing at such a remarkable rate.

f. Population Policy. In the area of fertility regulation, many studies have documented that in this country and around the world, the desire to limit fertility is there, and the existence of family planning programs can have an effect in reducing the population growth rate. A long-term study of Taiwan is an outstanding example of how the existence of a family planning effort coordinated with a vigorous program of economic development can reduce fertility to manageable levels. Similarly, studies in this country tend to show that American families are exercising more control over their fertility. Other studies have found that the success of family planning programs is uneven with respect to age, income, ethnic and social groups. Efforts to date have been least effective for adolescents and low-income minority groups. It is unclear at this time whether an increased family planning program will be necessary to affect the fertility of these special groups.

There are many policies limiting population movement, and these policies have attracted increased attention in recent years. For instance, resettlement efforts in developing countries have been adjudged failures in a majority of studies, and similarly, policies designed to prohibit certain types of rural to urban migration have enjoyed only mixed success. In this country, many types of land-use restrictions have been used to influence population distribution and movement, and research has not yet produced a definitive evaluation of their efficacy. International migration is universally regulated, causing problems like

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the "brain drain" and enforcement problems. Several studies are under way which may eventually delineate the socio-economic pressures on U.S. immigration from Latin America, and preliminary research indicates that much of the migration into the U.S. is in response to short-run surges in labor demand in this country. This implies that U.S. immigration authorities may find it exceedingly difficult to regulate this type of immigration during periods of economic growth in the United States.

7. Institutional Development

a. Institutional Programs in Population Research (IPPR's) - Projects and Population Research Centers

IPPR grants are awarded to leading institutions in the United States to enable them to establish Program Projects and Population Research Centers on the basis of long-term commitments of support for the combination of research projects, services and facilities and research environments required for the establishment and maintenance of interdisciplinary population research programs of high quality. Because of their enormity and complexity, some of the research problems in the reproductive and behavioral sciences cannot be solved by the individual investigator working alone in his discipline or in relative isolation from scientists of other disciplines. For their solution, these problems require the concerted efforts of highly-skilled scientists from a variety of disciplines. Ascertainment of the mechanism of action of reproductive hormones or prediction of the acceptability and consequences of widespread use of new contraceptives are examples of population goals that are likely to be achieved only by investigative teams comprised of scientists chosen on the basis of potential contributions from their respective disciplines and their willingness to work together toward common research objectives.

The three IPPR programs are: 1) Program Projects, 2) Population Research Centers, and Specialized Population Research Centers. Program Project grants are designed especially for small groups of investigators who require support for research projects and research resources for the conduct of interdisciplinary research on a specific population problem. Population Research Center grants are awarded to institutions for the support of the organizational framework and research resources required to increase the quality and productivity of ongoing population research projects of high quality. Specialized Population Research Center grants are awarded to institutions for support of population research areas specified by the NICHD. The high priority areas of eligibility for these centers are: 1) fertility regulation, with the development of new methods, the improvement of existing measures, and evaluation of non-contraceptive effects; 2) reproductive neuroendocrinology; 3) mechanisms of action of reproductive hormones; 4) reproductive immunology; 5) control of the ovarian cycle and ovulation; 6) post-puberal male reproductive processes and their control systems; 7) gamete transport in male and female reproductive tracts; 8) mechanisms of fertilization and implantation;9) methods of fertility regulation not requiring drugs or devices; 10) human population genetics; 11) alleviation of infertility and other reproductive diseases; 12) acceptability of measures for the regulation of fertility; 13) adolescent fertility;

14) economic determinants and/or consequences of population change; 15) sociological determinants and/or consequences of population change; 16) consequences of a stationary population in the United States; 17) antecedents and consequences of legal and illegal immigration in the U.S.; 18) redistribution of the U.S. population; and 19) policies affecting population in developed societies.

On the list of 27 IPPR's at the end of FY 1976 were: six Program Projects, fourteen Population Research Centers, and seven Specialized Population Research Centers.

The recipient institutions and principal research areas of Population Research Centers supported during fiscal 1975 are: 1) Vanderbilt University - reproductive hormone actions and their molecular controls; 2) The University of Texas at Austin - population dynamics of minority groups; 3) Population Council at the Rockefeller University - fertility regulation and the antecedents and consequences of fertility; 4) University of Wisconsin - demography and human ecology; 5) University of Chicago - molecular biology and human reproduction; 6) Johns Hopkins University - fertility in teenage women, male reproductive biology, and demography; 7) Baylor Medical College - molecular biology of reproductive processes; 8) University of North Carolina - behavioral-social population problems; 9) Columbia University - steroid biochemistry and female reproduction; 10) Princeton University - demography, population economics and statistics; 11) University of Pittsburgh -research in primate reproduction; and 12) Harvard University - reproductive biology and human reproduction.

The recipient institutions and principal research areas of the Program Projects supported during fiscal 1975 are: 1) Columbia University - reproductive endocrinology relevant to problems of human reproduction; 2) The University of Michigan - reproductive endocrinology from molecular to physiological levels; 3) The Northwestern University Medical School - molecular, cellular and tissue mechanisms operative in the action of hormones upon target cells and tissues; 4) The Oregon Regional Primate Research Center - factors which control the events culminating in fertilization in non-human primates; 5) The University of Pennsylvania School of Medicine - biochemical, biological, and morphological events in the early processes of reproduction and development prior to implantation; 6) The University of Texas at Austin - control mechanisms at molecular to organismic levels; 7) Harvard University Medical School - reproductive biology, fertilization, embryogenesis; 8) Case Western Reserve University - reproductive biology of events from ovulation to implantation; 9) University of Texas at Houston - male reproduction function; 10) University of California at San Diego - gametogenesis and reproductive biology; 11) Washington University - hormonal regulation of the reproductive tract; 12) University of Washington - gamete transport in mammals; 13) Mayo Foundation - mechanism of action and molecular biology of estrogen, progesterone and the gonadotropins; 14) Salk Institute for Biological Studies - neuro-endocrinology of reproduction and growth; and 15) Massachusetts Institute of Technology - migration and migration policies in relation to socio-economic development.

b. Population Research Manpower Development

Within the context of the NICHD mandate to facilitate the development and maintenance of population research programs of high quality, the Institute supports the development of highly-skilled population research manpower through the following mechanisms: 1) individual postdoctoral fellowships; 2) institutional training grants; and 3) Research Career Development Awards. Individual fellowships are awarded to men and women who have recently obtained a terminal degree with emphasis in one or more disciplines of the population sciences. These awards are made directly to young people, for up to three years of support, to enable them to choose a research trainor commensurate with their interests and to devote full time to the development of expertise in an eligible field of population research.

Institutional training grants are awarded to leading institutions in the United States with outstanding trainors to enable them to establish and to maintain an appropriate environment for population research training of high quality. Such awards provide funds for support of both predoctoral and postdoctoral research trainees selected by the recipient institution.

Research Career Development Awards (RCDA's) are made to senior postdoctoral candidates who can provide confirmable evidence of outstanding research potential. The purpose of such an award is to enable such a man or woman to obtain a release from his teaching and administrative responsibilities and to devote full time to the development of his or her research program.

On the basis of its projections of national needs, and developing or extant deficiencies in highly-skilled population research manpower, the Institute has designated the following areas of eligibility for population research manpower development: 1) fertilization, implantation and reproductive biology; 2) human population genetics; 3) reproductive hormones; 4) neuroendocrine control of reproductive processes; 5) reproductive disease; 6) infertility; 7) nutrition and reproduction; 8) adolescent fertility; 9) population dynamics; and 10) population policy.

8. Coordination and Communication

The coordination of population research programs and the communication of research information in the population sciences is carried out through various means.

a. Coordination

The Interagency Committee on Population Research (ICPR) coordinates the population research activities supported by Federal agencies and fosters the exchange of information among Federal population research programs. The Committee was established by the Secretary of HEW on October 5, 1970, and has been extended through June 30, 1978. The ICPR is chaired by the Director of NICHD's Center for Population Research and reports to the HEW Deputy Assistant Secretary for Population Affairs.

It is comprised of representatives from the various Federal agencies concerned with research related to human population problems. Significant products of the ICPR include three publications, produced annually with the assistance of NICHD staff: Inventory of Federal Population Research, Inventory of Private Agency Population Research, and the Analysis of Federal Population Research.

Close collaboration has been developed by the Center with the population research programs of the Agency for International Development, the World Health Organization, the Population Council, and the Ford Foundation. It involves holding of joint meetings, exchange of progress reports, and staff consultations. Close contact is also maintained with the National Cancer Institute, the National Heart, Lung, and Blood Institute, and the Food and Drug Administration. Since the introduction of new drugs and devices in the U.S. is regulated by the FDA, the Center maintains a close liaison with this agency.

On issues concerning the behavioral sciences aspects of population research, CPR staff work with the members of other Federal, private, and international organizations having related interests. Recent activities included participation in an HEW interagency committee on population education; a committee to advise the National Center for Health Statistics on statistics needed for national policies related to fertility; an interagency task force on data needed on family planning programs; and various consultations concerning surveys and data dissemination.

b. Communication

The ICPR issued its Inventory of Federal Population Research - Fiscal Year 1975, which is the seventh of such reports, updated annually. The Inventory represents a cooperative effort on the part of each of the reporting Federal agencies which funds projects in population research. The scope of the Inventory encompasses a broad spectrum of research in the biological, medical, social, and behavioral sciences and covers all projects--grants and contracts, intramural and extramural--in which population research constitutes a major substantive category, classified according to the principal focus of the research.

The second edition of the Inventory of Private Agency Population Research, which is updated annually, was issued by the ICPR for 1974. This companion publication to the Federal Inventory includes the population research projects sponsored by the major private organization. The three principal agencies involved with research in the population sciences, the Ford and Rockefeller Foundations and the Population Council, have provided the data on their research projects in the same way as the Federal agencies, and the information has been published in a format comparable to the Federal Inventory.

Another product of the ICPR is the Analysis of Federal Population Research - Fiscal Year 1975. This report, which is prepared annually by the Committee and submitted at the end of each fiscal year, fulfills an assigned function of the ICPR, namely, to make recommendations on actions to be taken to meet research gaps in the population sciences. It contains a summary of current Federally-supported population research with recommendations for needed research, based on the projects reported for the Federal and Private Agency Inventories of Population Research.

The communication of population research information is enhanced through the publication of Population Sciences: Index of Biomedical Research. Approval was received to publish the journal on a monthly basis, and periodic publication began in October 1973. This bibliographic citation journal provides a useful resource to those who wish to be currently informed about the biomedical literature in the field of population research. It is the counterpart of Population Index, a bibliographic journal devoted to population research in the social sciences, which the Office of Population Research at Princeton University publishes and which NICHD has helped support for several years. Population Sciences: Index of Biomedical Research is produced with the cooperation and assistance of the National Library of Medicine and is based on the information contained in the Library's Medical Literature Analysis and Retrieval System (MEDLARS).

Another means for enhancing the dissemination of information undertaken by NICHD is through publication of its Population Research Monographs. These provide a comprehensive review and evaluation of the state-of-the-art in specialized areas of population research in the biomedical or social sciences, a conceptual analysis of the relevant research literature, and indication of future research directions to obtain needed knowledge. The monographs which have been published include: The Walnut Creek Contraceptive Drug Study; Rural-Urban Migration Research in the United States; and Population Psychology: Research and Educational Issues. NICHD conferences and workshops in the population sciences also continue to result in publications which constitute a valuable addition to the population research literature.

Food and Drug Administration

Programs of the Food and Drug Administration (FDA) of DHEW are authorized by the Food, Drug and Cosmetic Act of 1938, as amended. The FDA approves contraceptive drugs for safety and effectiveness before they are marketed and maintains surveillance over both contraceptive drugs and "non-drug" contraceptive devices (those which do not incorporate releasable metals or drugs) after they are marketed. The Medical Device Amendments of 1976, enacted on May 28, 1976 provide the FDA with the authority for more extensive regulatory controls over contraceptive devices such as intrauterine devices (IUDs) intravaginal devices, and diaphragms. The agency is currently developing regulations to implement the provisions of the new law. FDA involvement in population research and family planning services lies primarily in:

(1) Sponsoring or monitoring the progress of research necessary to carry out its regulatory responsibilities relating to oral contraceptive safety.

(2) Using its regulatory functions with regard to the safety and effectiveness of contraceptive drugs and devices.

(3) Maintaining a reporting system which serves as a clearing-house for information concerning adverse reactions associated with contraceptives.

The first oral contraceptive agents were approved by the FDA for general use in 1960. By 1976, there were over 50 such agents on the market. Several new drug applications are currently under review, including a three-month injectable contraceptive. In 1976 the marketing of sequential oral contraceptives was discontinued.

Having published its "Second Report on the Oral Contraceptives" in August 1969, the FDA Advisory Committee on Obstetrics and Gynecology continues to assist in activities related to family planning. This Committee has participated in revising oral contraceptive labeling, in updating guidelines for clinical investigations of oral contraceptives, and in evaluating the influence of estrogen content in the thromboembolic action of oral contraceptives. The Committee has also deliberated upon the problem of the tumorigenic action of certain steroidal contraceptives and has assessed the safety and efficacy of certain systemically-administered contraceptives and of IUDs incorporating releasable metal or a hormone.

FDA provides expert advice to the pharmaceutical industry and the academic community in the conduct of studies to obtain data concerning the safety and efficacy of contraceptive drugs. In addition, FDA solicits the views of consumers and other interested parties on proposed consumer information materials to accompany the contraceptive market package.

In order to develop adequate information to assure the safety and effectiveness of contraceptive drugs and devices, the FDA has initiated several research projects. The FDA is supporting an investigation of the carcinogenic and diabetogenic potential of certain oral contraceptive steroids in long-range studies in Rhesus monkeys and beagle dogs at the International Research and Development Corporation in Mattawan, Michigan. These studies follow the protocol prescribed by FDA to the pharmaceutical manufacturers in 1967, and under which already-marketed as well as investigational compounds are currently being evaluated. The dog studies have been completed, and the Armed Forces Institute of Pathology has become the repository for all records, tissues, blocks and slides pertaining to the dog and monkey studies. The monkey studies are continuing. The long-range design of the investigations is intended to provide some indication of the possible carcinogenic hazard to long-term human users of the contraceptives, as well as any other possible toxicity to target organs or systems. These studies are intended to be "positive controls" for industrial studies and have resulted in administrative decisions over the past seven years to stop clinical investigations of some products, to stop marketing other products, to restrict the clinical investigation and use of one product, and to permit continued investigation and use of still other products.

Utilizing funds from the PL-480 program in Yugoslavia, the FDA has entered into four Collaborative Programs relating to the safety of oral contraceptives. The first of these was a two-year study of 200 women by scientists at the Institute for Mother and Child Welfare in Zagreb, Yugoslavia. The objective was to study the effects of selected oral contraceptives on carbohydrate and lipid metabolism over a longer period than had been studied before. The final report was dated December, 1975, and confirmed and extended the findings of W.N. Spellacy, et. al.,indicating that oral contraceptives can influence glucose tolerance adversely, but not cholesterol, free fatty acids and triglycerides.

A second collaborative study was begun at the University Teaching Hospital for Obstetrics and Gynecology, and the Family Planning

Institute, in Ljubljana, Yugoslavia. This study has two different objectives: 1) to determine in a small controlled study (the offspring of 200 mothers) whether congenital anomalies or abnormal karyotypes develop in the offspring of women using oral contraceptives within three months of conception, and 2) to determine in a large observational study (over 28,000 women have been entered) whether oral contraceptives increase the risk of cervical cancer as compared to users of mechanical devices or no method. This study was aided by a contract from FDA for one more year of data gathering. Data were collected up to mid 1976, and are now on magnetic tape. Data will be analyzed, and a final report will be written in 1977.

A third FDA PL-480 project at the Institute of Hygiene and Social Medicine in Sarajevo, Yugoslavia, is expected to continue until 1979. This study also has two objectives: 1) To compare the changes in cervical cytology in 6,000 oral contraceptive users with those in a similar group of women using other family planning methods. (2) To study all women (7,600) delivering in three population centers to ascertain the possible relationship between abnormal pregnancies and malformed infants and the use of drugs, hormones, and exposure to environmental hazards. A final report of the latter study has been submitted and is being evaluated.

A fourth FDA PL-480 study in Belgrade, Yugoslavia, originally scheduled for completion in December 1974, was extended until June 1976. This four-year study was aimed at investigating the effect of oral contraceptive use on coagulation mechanisms. The study has been completed as scheduled, and the final report is being prepared.

The FDA is continuing to gather information regarding the possible association between liver tumors and oral contraceptive use. It is cooperating in a National Institute of Child Health and Human Development (NICHD) study regarding hepatomas development in women who use oral contraceptives.

Four small intramural projects relevant to population research are being conducted by the Division of Drug Biology, Bureau of Drugs. The projects should all be initiated and completed during Fiscal Year 1977. Hamsters are being used as the test animals. The objective of one of the studies is to test new, proposed male contraceptives for their action on the hypothalamic-pituitary-testis axis, to study applicable protocols and their results and to develop supplemental ones. The second study is intended to assess adverse drug reactions involving protein synthesis on ovulation. The third study is designed to investigate the use of hamsters to decrease testing costs, obtain results more rapidly, corroborate findings in other species, and reveal new or unsuspected phenomena. The fourth study involves an investigation of embryo and fetal toxicity and the effects of furosemide and other selected drugs.

on the ovulation, pregnancy, and fetus of the hamster. Teratogenicity test protocols for hamsters will be elaborated and validated.

The Division of Drug Chemistry is developing assay procedures suited to regulatory purposes for the various formulations of oral contraceptives.

Recognizing that prostaglandins may have significant potential in family planning, the FDA is monitoring ongoing prostaglandin research and has developed protocols for their pharmacological and clinical investigation. The agency approved their use as a second trimester abortifacient in 1973. Ongoing studies are being conducted to evaluate the use of prostaglandins in inducing labor at term, in missed abortion and in intrauterine fetal death. A new drug application for a prostaglandin vaginal suppository is currently being reviewed.

Proposed revisions to the oral contraceptive labeling directed to physicians and patients were presented by the FDA to its Obstetrics and Gynecology Advisory Committee for evaluation and comment on September 30 and October 1, 1976. In the December 7, 1976 Federal Register, the FDA issued a notice and proposal revising the physician and patient labeling that is to be followed by all manufacturers and distributors of oral contraceptive drug products. Comments are invited on or before February 7, 1977.

On December 1, 1975, evidence was presented to the FDA's Obstetrics and Gynecology Advisory Committee that among oral contraceptive users who had cancer of the uterus, the majority had taken sequential oral contraceptives. In late December, FDA asked the three U.S. manufacturers of sequentials to submit information identifying which women are likely to benefit from taking sequentials compared to the combination pills. All three companies submitted data, but did not prove to FDA's satisfaction that the sequentials meet a unique requirement for any group of women.

FDA decided that sequentials should be removed from the market after concluding:

(1) They are somewhat less effective than combination birth control pills.

(2) They are associated with a higher risk of blood clotting than the combination pills.

(3) They appear to have the potential for a higher risk of cancer of the uterus than the combination pills.

On February 18, 1976, FDA officials met with the manufacturers' representatives and requested that they voluntarily withdraw the sequential oral contraceptive products from the market. By February 26, 1976, the three manufacturers had notified the FDA that they were discontinuing the marketing of these products immediately. The products withdrawn from the market were: Oracon, made by Mead-Johnson and Co., Evansville, Indiana; Ortho-Novum SQ, made by Ortho Pharmaceuticals, Raritan, New Jersey; and Norquens, made by Syntex Laboratories, Palo Alto, California. Women who were taking the sequentials were advised to continue through their current cycle and to contact their physicians for an alternative contraceptive product.

In the June 5, 1971, Federal Register (revised and clarified on March 7, 1973), the FDA Commissioner published a proposal to make intrauterine devices (IUDs) which incorporate heavy metals, drugs, or other added substances, "new" drugs. Thus, a "Notice of Claimed Investigational Exemption for a New Drug" must be submitted to the FDA to cover clinical investigations of the safety and efficacy of such contraceptives. Moreover, an approved New Drug Application is required for marketing such devices which currently remain under the jurisdiction of the Bureau of Drugs. As a result of the "Medical Device Amendments of 1976," these IUDs will be transferred to the Bureau of Medical Devices and Diagnostic Products in the future.

Under the "new drugs" procedure, three New Drug Applications (NDAs) have been approved by the Bureau of Drugs for the marketing of "drug" IUDs.

On February 25, 1974, a NDA for Cu-7 (Intrauterine Copper Contraceptive) sponsored by G.D. Searle and Company was approved. On February 4, 1976, an application for Progestasert (Intrauterine Progesterone Contraceptive System) sponsored by Alza Pharmaceuticals Division of Alza Corporation; and on November 4, 1976 an application for Copper T Model T Cu 200 B (Intrauterine Copper Contraceptive) sponsored by the Population Council were also approved.

All approvals were made under the condition that additional studies be performed to collect specific information after marketing. At the present time, the Cu-7 physician's labeling recommends replacement every two years since the contraceptive effectiveness after two years has yet to be established. The labeling for Copper-T states that it must be removed and a new one inserted on or before 36 months from the date of insertion. For the Progestasert, which releases a hormone gradually over a one-year period, the device must be replaced after one year.

The FDA authority, prior to passage of the 1976 Medical Device Amendments, was to prove misbranding or adulteration of non-drug intrauterine devices. FDA continued to maintain surveillance over such marketed devices to ensure their safety and efficacy within its authority.

In June 1974, when the safety of the Dalkon Shield IUD was brought into question, the FDA set up an ad hoc Obstetrics and Gynecology Advisory Committee to evaluate the available data and make recommendations to the Commissioner of the FDA on the safety and efficacy of the IUDs in general and the Dalkon Shield in particular. In addition to evaluating the safety and efficacy of the Dalkon Shield, the Committee endorsed the concept of professional and patient labeling of IUDs to ensure that physicians and patients are fully informed on the safety and efficacy of both drug and non-drug IUDs. Proposed FDA physician and patient labeling was published in the Federal Register on July 1, 1975.

While there is an abundance of scientific literature and research on drug and non-drug IUDs, it is largely uncoordinated and of limited particular value to those who insert IUDs. Therefore, the FDA contracted with the Battelle Human Research Center to assist in updating the 1968 "Report on Intrauterine Contraceptive Devices".

Based on the comprehensive review and analysis of the scientific and clinical data, the updated report represents an attempt to:

1. Identify clinical studies in which there is valid evidence of the effectiveness of both drug and non-drug IUDs.

2. Identify any hazards associated with drug and non-drug IUDs.

3. Identify any physiological and histochemical effects produced by IUDs other than contraceptive effects.

4. Identify the mode of action by which the contraceptive effects are produced.

5. Identify criteria and procedures for use in the selection and insertion of IUDs.

6. Identify the nature of the information which should be made available to physicians and patients.

The contract report was submitted to FDA on August 11, 1975, and is being utilized in developing FDA program responsibilities.

On May 28, 1976, the Medical Device Amendments of 1976 were signed into law giving the FDA the authority to approve devices for safety and effectiveness before they are marketed and maintain surveillance over such devices after they are marketed. The FDA has set up advisory panels to assist in classifying medical devices into three regulatory classes: Class I, General Controls; Class II, Standards; and Class III, Premarket Approval. The following contraceptive devices are tentatively classified into the Premarket Approval category: IUDs, tubal occlusion devices, and hysteroscopic devices for female sterilization. The contraceptive devices tentatively classified into the Standards category are: abortion devices, laparoscopic and culdoscopic devices for female sterilization, and diaphragms.

The FDA is to approve new non-drug IUD's, new tubal occlusion devices and hysteroscopic devices for female sterilization for safety and effectiveness before they are marketed, and maintain surveillance over such devices after they are marketed. The FDA will require the submission of safety and efficacy data on those non-drug IUD's and tubal occlusion devices that are already on the market as well as on new products coming on the market. There will be requirements for post-marketing surveillance for possible long-term adverse effects or failure of these devices.

The FDA will promulgate performance criteria for devices in the Standards category. Technical assistance will be provided to small manufacturers to assist them in complying with statutory requirements in their efforts to introduce new products.

If the FDA determines that a device presents an unreasonable risk of substantial harm to the public health, it has the authority to ban the device, to inform all health professionals, and to require the manufacturer to repair, replace or refund the product cost. In addition, manufacturers are required to keep records on device experience and make reports to FDA.

The FDA will continue its research relating to contraceptive devices in order to ensure their safety and efficacy.

Health Services Administration

The Health Services Administration (HSA) is the major administrative support agency for Federal programs of subsidized family planning services. In the HSA, family planning services activities are administered by the Bureau of Community Health Services (BCHS), the Indian Health Service (IHS), and Bureau of Medical Services (BMS).

Review and approval of services project grant applications is carried out in the DHEW Regional Offices. Regional Family Planning Program Consultants serve as coordinators for family planning activities in each region.

The Bureau of Community Health Services administers family planning activities under two major legislative authorities: the "Family Planning Services and Population Research Act of 1970" (PL 91-572), which established Title X of the Public Health Service Act and was subsequently amended by PL 93-45 and PL 94-63; and Title V of the Social Security Act as amended by the "Child Health Act of 1967" (PL 90-248) and the "Public Debt Limitation Act of 1973" (PL 93-53).

Title X of the Public Health Service (PHS) Act authorizes project grants for voluntary family planning services, grants and contracts for training family planning services personnel, grants and contracts for services delivery improvement research, and grants and contracts for family planning information and education. Categorical project grants under PHS Act Title X represent the major Federal source of direct funding for family planning services.

Title V of the Social Security Act (SSA) authorizes maternal and child health formula grants to assist States in extending and improving their services for promoting the health of mothers and children, especially in rural areas and areas suffering from severe economic distress. PL 90-248 specifies that not less than six percent of the annual appropriations under SSA Title V must be available for family planning services.

The broad purposes of Public Law 91-572 are stated in the law as follows:

1. To assist in making comprehensive voluntary family planning services readily available to all persons desiring such services;

2. To improve administrative and operational supervision of family planning services;

3. To enable public and non-profit private entities to plan and develop comprehensive programs for family planning services;

4. To develop and make readily available information (including educational materials) on family planning to all persons desiring such information;

5. To evaluate and improve the effectiveness of family planning service programs; and

6. To assist in providing trained manpower needed to effectively carry out family planning programs.

Title X of the PHS Act authorizes funds for family planning service projects, training grants and contracts, information and education activities, and services delivery improvement research.

The Bureau of Community Health Services (BCHS) is responsible for allocating Title X of the Public Health Service Act funds to the ten DHEW Regional offices. The Regional office officials are responsible for making grant awards to individual service providers and for monitoring the grantees' family planning activities. BCHS also distributes Title V of the Social Security Act (Maternal and Child Health) funds to the States as prescribed by a legislatively mandated formula based on each States population. The States must use Title V funds for programs of projects which include family planning services as one type of project. BCHS is responsible for monitoring use of Title V funds.

The organized family planning service providers funded by Federal, State, and local governments, and non public agencies are expected to provide services to about 4.2 million patients in FY 1977. Title X funds awarded to 227 grantees will provide at least partial support to agencies which will serve an estimated 3 million of these patients.

In 1976 Title X funds ($95 million) were a little less than 50% of the funds available to organized providers of family planning services. Title V funds ($25 million), indirect Federal funding from Titles XIX and XX of the SSA ($50 million) and State and local governments and non public agencies ($45 million) were the sources of the rest of the funds.

Family planning services are provided in clinic settings by hospitals, health departments, neighborhood health centers, planned parenthoods and other public and private non profit agencies and through private physicians under contract to organized provider agencies. Title X grantees distribute funds to over 2,500 delegate agencies which provide services in about 4,500 clinics.

Grantees who receive funds from Title X are required to provide a full range of fertility regulation methods and also a wide range of health screening procedures. Since over 3 million women receive services through clinics which receive partial support from Title X, these clinics are a significant source of preventive health care for low income women of child-bearing age.

In fiscal years 1977 and 1978 BCHS will work with Regional office officials to continue the established level of family planning services, to help establish services in unserved counties, to increase access to services in underserved areas, and to improve services to high risk females (teenagers and older women), males and handicapped persons.

The training program in fiscal years 1977 and 1978 will continue to emphasize training projects designed to aid service providers improve services to high risk patients (teenage females and older women), handicapped persons and males. Training projects to improve management skills of agency staffs, especially in program planning and financial management, are also continuing. A significant training accomplishment has been the training and utilization of 817 Family Planning Nurse Practitioners who have become the key service clinician in many family planning gencies. The number of persons trained annually with Title X grants and contracts has doubled since the early years of the program. About 10,000 persons will be trained in fiscal year 1977.

The emphasis of information and education in fiscal years 1977 and 1978 will be on developing and improving materials to inform patients and the general public about available contraceptive methods with emphasis on high risk females, handicapped persons and males. A National Clearinghouse for Family Planning Information to support service provider and client needs, will become operational in FY 1977 and will be expanded in FY 1978. Other activities will include: development of educational materials for English and Spanish speaking clients; workshops for service providers and community leaders to discuss problems associated with providing family planning services to emotionally handicapped persons; and educational programs and materials specifically designed to aid teenagers and males to utilize contraceptive services.

The purpose of the services delivery improvement research program is to conduct operational research studies to clarify service problems and to develop more effective and efficient methods and techniques for delivering family planning services. Special studies and activities are carried out to develop and improve family planning services responsive to family planning program priorities, patient needs, and Regional, State and local variations.

In fiscal year 1977, a study of family planning manpower development and utilization will be completed. This study will update earlier manpower projections and identify current needs. The operating methods of some family planning projects will be examined and analyzed. The results of this study will assist regional staffs to assess grant applications and review project efficiency. A curriculum developed in fiscal year 1976 for training instructors in natural family planning will be validated and implemented. This curriculum will be used to improve the quality of staff counselling in the provision of natural family planning services. A study will be con-

ducted to identify geographic areas in which adolescents appear to be underserved. Demonstration projects will be conducted to aid in dissemination of information on family planning.

In fiscal year 1978 attempts will be made to identify problems that prevent specific groups such as adolescents and males from obtaining services. Research efforts will include studies and demonstration projects relating to these specific groups.

In addition to formula grant support to organized family planning service providers, Social Security Act Title V maternal and child health formula grants to States support projects of maternity and infant care which provide family planning services as one of their health services.

In FY 1976 an Improved Pregnancy Outcome Program was introduced in several States. Family Planning Services were extended through this approach in Mississippi, Arkansas, West Virginia, Alabama, Illinois and South Dakota. In FY 1977 plans are to extend services in North Carolina, South Carolina, Tennessee, Georgia, Florida, Louisiana and the District of Columbia.

Efforts are being made to increase access to family planning services in geographic areas which (1) contribute excessively to the infant mortality rate, (2) have a high teenage birth rate, and (3) are medically underserved.

Under the SSA Title V program of projects, family planning services are provided in each State. These projects, are coordinated with the ongoing maternal and child health services covered by the MCH State plan. In some States, programs are statewide while in others the area served is limited to local communities.

While the remaining BCHS programs do not have a primary focus on family planning, they encourage the integration of family planning activities within the range of health services which they offer.

Community Health Centers (authorized under Section 330 of the PHS Act) foster the delivery of family-oriented health services, including family planning, to approximately 3,876,000 persons in medically underserved areas. These centers are generally located in areas with a high concentration of urban and rural poor, areas where many persons desiring family planning services are likely to reside.

Migrant and seasonal farmworkers and their families are provided access to health care services a 394 service sites which are supported through 144 migrant health grants (authorized under PHS Act, Section 319). Some of the sites include family planning among the range of services provided.

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Formula Grants to States for Public Health Services (authorized under PHS Act, Section 314 (d) assist the States in establishing and maintaining adequate public health services in accord with State-established priorities. Many States have used the flexibility of these grants to support family planning services.

The National Health Service Corps (authorized under PHS Act, Section 329) currently has 606 health professionals assigned in 371 communities which were previously "critically short" of health manpower. Family planning services are among the services provided to persons residing in these communities. The integration of Corps staff and resources with other programs, through the Rural Health Initiative, improves the overall Federal health delivery effectiveness and efficiency in rural areas. Family planning activities will be strengthened as a result of this approach.

The Indian Health Service of the Health Services Administration provides comprehensive health services, including family planning, to American Indians and Alaskan natives under PL 83-568. The Indian Health Service has been active in the field of family planning since fiscal year 1965. Family planning services are provided in general medical, surgical, and field health clinics rather than in separate family planning clinics.

From fiscal year 1967 through fiscal year 1976, the number of women, aged 15-44, provided services increased by 122 percent. This is approximately a 12 percent increase per year. In fiscal year 1976, 27,783 women received family planning services. Of these women, 5,364 were new patients and 22,419 were continuing patients. The 27,783 who were rendered services during fiscal year 1976 represent approximately one-fourth of the estimated total 108,000 Indian and Alaskan native women, aged 15-44. These women made 51,000 visits during fiscal year 1976, an average of 1.8 visits per program participant. The portion of the population participating and the average number of visits per participant in the program has remained relatively constant over the past three years. From the inception of the program through fiscal year 1976, family planning services have been provided to an estimated 70,600 women.

The Department of Health, Education, and Welfare has a legislative mandate to provide direct health care services to specified beneficiaries under provisions of the Public Health Service Act and the Dependents' Medical Care Act. This responsibility is discharged, in part, through the Bureau of Medical Services (BMS) of the Health Services Administration and, within the Bureau, through its Division of Hospitals and Clinics and Division of Federal Employee Health. The program authorities of the Bureau's Divisions of Emergency Medical Services and Health Maintenance Organizations do not encompass the direct delivery of health care services.

The Division of Hospitals and Clinics provides comprehensive health care services to American Seamen, active duty members of the U. S. Coast Guard, members of the National Oceanic and Atmospheric Administration, and to active duty Commissioned Officers of the U.S. Public Health Service. Services may also be provided to retired members of the uniformed services and to dependents of active duty and retired members of the uniformed services under the authority of the Dependents' Medical Care Act.

In addition, the Public Health Service Act permits the providing of limited health services to Federal employees by the Bureau's Division of Federal Employee Health.

Health care services within the Division of Hospitals and Clinics (DHC) are provided by eight general medical-surgical hospitals, one specialized treatment center (Hansen's Disease), 26 free-standing

outpatient clinics, and more than 400 contract physicians and hospitals located throughout the United States. This major system constitutes a nationwide network within the Department for the delivery of comprehensive health care services, for training, and for research. In addition, the Division of Federal Employee Health operates 136 clinics in Federal installations across the country.

As compared to Fiscal Year 1975, total workload increased throughout the system, particularly with respect to ambulatory care visits which registered a 7.9% increase during Fiscal Year 1976.

Funds for clinical research studies are distributed through the Central Clinical Investigations Committee of the Division of Hospitals and Clinics, a formally-constituted body, that is also responsible for monitoring and evaluating research programs. During the year, approximately $260,000 of Fiscal Year 1976 funds of the Division of Hospitals and Clinics were expended for clinical research, of which $40,000 was allocated to research in family planning. Other studies in PHS hospitals received $1,028,000 from the National Institutes of Health and $389,000 from the National Center for Health Services Research during Fiscal Year 1976.

Family planning services provided by the Division of Hospitals and Clinics include the prescription and provision of pharmaceutical preparations, oral contraceptives, mechanical devices, surgical sterilization and counseling. All USPHS hospitals and outpatient clinics provide family planning services upon request. There were an estimated 7,920 visits to family planning clinics of the DHC during F.Y. 1976 including the transitional quarter. The estimated cost of these services was $190,000 based on an average cost of $24 per visit.

At the USPHS Hospital in New Orleans, which has the only obstetrical service within the Bureau of Medical Services, all postpartum patients are offered family planning information and services as part of the follow-up medical care. Community oriented family planning services are provided at the USPHS Hospital in Boston through an agreement with the Massachusetts State Department of Health. This program continues to be very active with new visits averaging 15% of the family planning patient load each month. As a result of the steadily increasing patient load, additional gynecological staff has been assigned. The program at the USPHS Hospital in Staten Island provides outpatient and inpatient medical services for clients of the Family Planning and Health Clinics (FPHC) of the Staten Island Community Corporation. The FPHC is the only such program on Staten Island. The USPHS Hospital in Staten Island has been told that it performs a particularly valuable service for this clinic, in that the critically needed medical backup expands the scope of services available to enrollees in the family planning program, e.g., the diagnosis and treatment of tuberculosis or surgery for cancer of the cervix.

Center for Disease Control

The Center for Disease Control (CDC) provides training to Epidemic Intelligence Service (EIS) Officers of the U.S. Public Health Service. Some individuals in the EIS program, as well as other CDC career staff, are trained in an epidemiologic approach for evaluating family planning and population programs. The Family Planning Evaluation Division, CDC, provides evaluation assistance to the Bureau of Community Health Services of the Health Services Administration, to HEW Regional Family Planning Program Consultants, and to State and local health agencies in the evaluation of family planning programs. In addition, evaluation assistance is provided to international health agencies and national programs in other countries under an agreement with the AID Office of Population. EIS Officers and/or Public Health Advisors are assigned in New York, Georgia, Minnesota and California to improve and maintain data processing systems for family planning service statistics, to analyze contraceptive use effectiveness and risks and benefits associated with contraception, to determine the number of women at risk of unwanted pregnancy and the proportion of these women receiving services, and to conduct special studies and analyses based on the above program activities. In addition to these continuing assignments, short-term assistance is given to family planning programs for improving program management, designing and/or improving service statistics systems, conducting clinic flow and cost analyses, evaluating family planning program performance, and conducting contraceptive utilization surveys.

Legally induced abortion has emerged as one of the most frequent surgical procedures in the United States today. To assist in eradicating preventable abortion-related mortality and minimizing morbidity, CDC maintains surveillance of abortion, encompassing the following four general functions: (1) compilation of national abortion statistics, (2) investigation of all abortion-related maternal deaths, (3) study of early medical complications of abortion, and (4) performance of special studies and provision of technical assistance. First, in collaboration with individual States, CDC collects both demographic and technical information on patients obtaining abortion. As the legal status of abortion has changed, the national total has expanded from approximately 22,000 reported abortions in 1969 to 814,790 in 1975. CDC publishes a statistical analysis of reported abortions in its annual Abortion Surveillance Report. The second major activity in abortion surveillance is the monitoring of all maternal deaths related to abortion. The number of deaths has declined from 132 in 1969 to 38 in 1975. CDC investigates each case to ascertain risk factors and elements of preventability, and it disseminates these findings through national meetings and publications. The third major activity in abortion surveillance is the administration of the Joint Program for the Study of Abortion/CDC (JPSA/CDC), a prospective multicenter study of early complications of abortion. Including reports of over 100,000 abortions between 1971 and 1976, JPSA/CDC represents the largest abortion study to date. Analysis of JPSA/CDC is underway, and the series of publications from this work have updated existing knowledge of abortion morbidity and the potential for its prevention.

The fourth major activity involves conducting special studies and providing technical assistance related to abortion at the request of State and local health officials. A recently undertaken study has identified factors influencing women's delay in obtaining abortion. Through these four abortion surveillance activities, CDC strives to minimize the risks to the increasing numbers of women seeking abortion each year. Since 1972, CDC has directly assisted the states of New York, Arkansas, Kansas, California and New Jersey as well as the cities of New York, Dallas, Philadelphia, Buffalo, Chicago, and Portland (Oregon) with abortion-related health problems.

Epidemiologic field investigations of the medical consequences of fertility control methods used in family planning programs are being conducted. During the past year, CDC conducted a field study of the possible association between oral contraceptive use and the development of benign liver tumors. Field interviews of 81 surviving reproductive age women who developed such a tumor since 1960 and of 237 age-matched neighborhood control women are now complete. Data will be analyzed in 1977. Each year increasing numbers of U.S. couples are seeking the effective and permanent fertility control that surgical sterilization offers. Epidemiologic assessment of surgical sterilization is continuing. In 1974, about 600,000 women of reproductive age had contraceptive sterilization operations, making this type of surgery the fifth most frequently performed in U.S. hospitals. Between 1965 and 1974, there was a fourfold increase in the yearly rate of tubal sterilization. Women 25-34 years old had the highest tubal sterilization rate, accounting for over half the operations performed during this time period. It is estimated that there may be as many as 200 deaths associated with female contraceptive sterilization operations each year in the U.S. In order to describe the medical complications of surgical sterilization and to assess long-term sequelae, CDC has just initiated a three year multi-center study of sterilization in 1977. As these data are collected, it will be possible to assess the preventable complications associated with female sterilization operations. Also planned for 1977 is further work in monitoring deaths associated with these operations and assessing them for factors of preventability. As these studies proceed, results will be disseminated through scientific publications and presentations at national meetings.

Health Resources Administration

The National Center for Health Statistics (NCHS) derives its authority in population from the general data collection and research provisions of Sections 304 and 306 of the Public Health Service Act, and from the transfer of certain functions relating to vital statistics from the Census Bureau to the Public Health Service. NCHS is responsible for collecting and analyzing the wide range of health and demographic statistics needed for health planning and program evaluation.

The NCHS collects, analyzes, and publishes national vital statistics on live births, deaths, fetal deaths, marriages, and divorces or dissolutions of marriages. It also conducts research on the dynamics of population change associated with these vital events and examines some of the relevant socioeconomic factors. Under an agreement with the Center for Disease Control, the NCHS is establishing a national abortion reporting system in which it will receive data on abortions from all States meeting NCHS reporting standards.

The NCHS conducts periodic vital records followback surveys based upon samples of births and deaths reported in the registration system. These surveys are designed primarily to expand the scope of data beyond that which can be routinely collected from the birth and death records. In the birth and infant death followback surveys, the respondents have included the mother, the attending physician, and the health facility where the baby was born. Data have been collected on such topics as the mother's marital, pregnancy, and employment history; whether the most recent pregnancy was wanted; the mother's expectations of additional births; sterilization procedures following the birth of the last child; maternal and infant health care; and income.

The NCHS has recently established a biennial National Survey of Family Growth to collect data on factors affecting trends and differentials in the birth rate, family planning, and infant and maternal health. This survey is based upon personal interviews with representative samples of ever-married women in the childbearing ages. Data from the first biennial cycle of the National Survey of Family Growth are being released in 1976 and 1977. Data for the second cycle were collected in mid-1976 and will represent the U.S. contribution to the World Fertility Survey Program.

NCHS and the Research Triangle Institute in North Carolina have collaborated in the development of a computer model intended to simulate the dynamics of population growth. A manual has been prepared and disseminated to enable others, within this country and abroad, to apply the model to their own population structure and problems.

NCHS is responsible for operating a uniform national reporting system for family planning services. This system was developed for use by all federally-supported family planning programs, clinics, and service points and other agencies wishing to participate. Because data have been

collected on a 100-percent basis, the National Reporting System for Family Planning Services (NRSFPS) has been able to provide monthly, quarterly, and annual reports that have been used for the development, operation, and evaluation of family planning programs throughout the Nation.

During 1976 work was undertaken to revise both the basic data collection document used by the NRSFPS (the Clinic Visit Record for Family Planning Services, or the CVR) and the Reporting System itself. This revision was necessitated by the decision to convert the 100-percent reporting system to a sample survey by April 1977. A sample survey will allow the Department to take advantage of the benefits of sampling in terms of the efficiency, economy, and better quality control of the data and the data collection. In addition, sampling will allow resources previously directed toward 100-percent reporting to be redirected toward obtaining data from sample family planning service sites previously out of scope or otherwise not reporting to the NRSFPS. Since these sites are mostly those which are not federally funded or affiliated with Planned Parenthood Federation of America, Inc., the data from the Reporting System would thus become representative of the total picture of family planning services in the clinical setting in the United States and its territories.

Only annual estimates at the national, regional, and State levels will be produced from the sample NRSFPS. These estimates will be used for both overall planning and evaluation of the family planning program and research purposes, primarily at the national level. They may also be used by persons at other levels in the family planning service delivery program.

A second NCHS program for providing information on family planning services (The National Inventory of Family Planning Services) was initiated in 1974. The National Inventory is a comprehensive listing of all sites in the United States that provide family planning services, whether these services are medical or non-medical. Periodic censuses of the Inventory provide basic data on each facility, including information on staffing and services offered. The Inventory is also expected to provide the base for special sample studies from which additional, more detailed information can be acquired.

IV

SOCIAL AND REHABILITATION SERVICE

Public Services Administration

Family planning services are included in the Social Services Program authorized under Titles I, IV, X, XIV, XVI, and XX of the Social Security Act (SSA). Administration of these programs is in the Public Services Administration.

Family planning services include the provision of information, personal counseling, medical services, payment for medical services, referral for medical care, follow-up of medical referrals, provision for transportation and child care arrangements so that parents may obtain medical care, and the development of medical resources when none exist.

The Social Security Amendments of 1967 (PL 90-248) required that under SSA Title IV-A, family planning services were to be offered in all appropriate cases. Acceptance of such services was to be voluntary and was not to be a prerequisite for or impediment to eligibility for the receipt of any other service or financial aid.

The Social Security Amendments of 1972 (PL 92-603) provided significant new incentives for the provision of family planning services. This Act makes the informing of the availability and the prompt provision of family planning services mandatory to all present recipients of Aid to Families with Dependent Children (AFDC) who are of childbearing age and imposes a penalty of one percent per annum on the Federal share of AFDC funds on States which failed to provide these services in the previous year to eligible persons desiring them. In addition, the Act increases the Federal share of matching for family planning services under Social Services from 75 percent to 90 percent.

The Social Services Amendments of 1974 (PL 93-647) added a Title XX to the Social Security Act. Under Title XX the three major provisions of PL 92-603 continue in effect: (1) Family planning services must be offered and provided promptly upon request to all AFDC recipients, (2) States are penalized one percent of the Federal share of their AFDC funds for failure to provide family planning services to eligible persons desiring them, and (3) The Federal share of matching for family planning services under Title XX continues at the 90 percent rate. States may also elect to provide family planning services to individuals whose family monthly gross incomes are less than 115 percent (or, at State option, a lower percentage) of the median income of a family of four in the State, adjusted for family size. States may charge a fee for services to AFDC recipients or to individuals whose family monthly gross incomes are less than 80 percent of the median income of a family of four in the State, adjusted for family size, or the median income for a family of four in all States, adjusted for family size, whichever is less. However, such fees must be consistent with regulations issued by the Secretary of DHEW. In addition, States may elect to provide family planning services to recipients of Supplementary Security Income (SSI) as one of the three mandated services to this group under Title XX.

The Social Services Amendments of 1976 (PL 94-401) amended Title XX, adding a provision that States may provide family planning services to individuals regardless of their income.

Medical Services Administration

The Social Security Amendments of 1965 (P.L. 89-97-- approved July 5, 1965) added Title XIX, "Grants to States for Medical Assistance" to the Social Security Act. Under the Federal-State medical assistance program which it established, known as Medicaid, States participating in the program were required to provide medical assistance to all recipients of cash assistance. At State option, they could also finance medical care for the medically needy, i.e., those persons who would otherwise be eligible for cash assistance except that the level of their income is sufficient to sustain themselves, but too low to provide necessary medical care. In addition, States could opt to provide coverage to children under 21 from low-income families.

Under the original legislation, inclusion of family planning services was a State option. However, P.L. 92-603, passed in October 1972, made coverage of family planning services for cash assistance recipients under Title XIX mandatory on the States. In addition, the rate of Federal financial participation for family planning services for both the categorically and medically needy was increased to 90 percent on the date of enactment of the Bill.

Medical assistance for family planning includes payments for appropriate medical examinations, diagnosis, medical counseling and treatment, laboratory services, surgical procedures, drugs, supplies and devices. These services may be provided in doctors' offices, clinics, hospitals (on both an inpatient and outpatient basis), family planning centers, or any other suitable settings.

Because of the increased responsibilities placed on the State agencies to assure that family planning services are offered and available to all eligible persons who wish to utilize them and the increased Federal matching, a sizeable increase has occurred in Title XIX expenditures for family planning from FY'72 through FY'76.

V

EDUCATION DIVISION

Office of Education

The Office of Education (OE), through its various grant programs, enables educational institutions at all levels to include family life, sex education, and support for innovative family-related projects in their programs. All decisions concerning curriculum, teaching methods, qualifications of teachers, and classroom materials are made by State and local authorities acting within the framework of State law.

Elementary and Secondary Education

The Elementary and Secondary Education Act of 1965 (PL 89-10) and its amendments provide several titles under which family life and sex education activities are eligible for support.

Title I, Grants for the Disadvantaged, assists in expanding and improving educational programs aimed at meeting the special needs of educationally deprived children from low-income families, handicapped children, delinquent or neglected children, and migrant children. Further payments are made to the Secretary of the Interior for grants to benefit Indian children in Federal schools administered by the Bureau of Indian Affairs as well as out-of-State Indian children in elementary and secondary schools. Recipients of Title I grants may use the funds for projects relating to dropouts, preschoolers, teenage unwed mothers, and other approaches for remedying education deprivation. However, the components of these projects which are concerned with family life and sex education are not identifiable per se.

The purpose of ESEA Title III, Supplementary Educational Centers and Services, is: to enable schools to provide programs currently unavailable to children; to improve educational services already offered; and to stimulate the development and evaluation of experimental elementary and secondary educational programs which can serve as models. Fifteen percent of program funds is mandated for projects serving handicapped children. Other funds are mandated for guidance, counseling and testing projects. Although not dealing directly with family life and sex education, Title III projects in environmental education provide information on population environmental affairs.

Originally, the Commissioner of Education made grants directly to local education agencies. Beginning in fiscal year 1971, 85 percent of Title III funds were to be administered by State education agencies, with fifteen percent to be used at the Commissioner's discretion within the State.

The purposes of ESEA III were incorporated into ESEA IV, Parts B and C by the Education Amendments of 1974.

The Dropout Prevention program, Title VIII, Section 807 of the Elementary and Secondary Education Act, has no family planning projects as such. However, several projects for pregnant women in fiscal year 1974 included components related to family planning such as pre - and post-natal care, personal counseling, and child care. Under this program, funds are used to support demonstration projects designed to reduce the number of dropouts in low-income areas and in areas where a high percentage of children do not complete elementary or secondary education. Since pregnancy and/or early marriage constitute the largest cause of dropout by teen-age girls, the need for family life and sex education in a comprehensive school program is apparent.

Vocational Education: Consumer and Homemaking Education

Under the Vocational Education Act of 1963 as amended by the Vocational Education Amendments of 1968 (Part F, PL 90-576) and 1976 (Subpart 5, Section 150, PL 94-482), formula grants are allocated to States to support Consumer and Homemaking Education programs. The purpose of consumer and homemaking education is to prepare males and females, youth and adults for the occupation of homemaking including, but not limited to, consumer education, nutrition education and use of foods, family living and parenthood education, child development and guidance. Such programs, services, and activities are designed to improve the quality of personal and family life, and to enhance employability.

For example, consumer and homemaking instructional programs may include parenthood education and family living at all levels from preschool through postsecondary and adult. Such programs enhance skills in the following areas: understanding interpersonal relationships in the light of current social needs; learning to utilize available resources to cope with feelings of frustration and despair; feeding, clothing and nurturing of young children and the aged; understanding concepts related to the home and to family living conditions; and appreciating the contributions of individuals and families in performing the occupation of homemaking. The decision to include family planning within this program is left to the discretion of the individual school system, and only then, when medical personnel are involved in the classes and with parental consent.

Programs for child care/development are available in a variety of school or out-of-school settings. Child care/development programs are concerned with the child's total growth and development including care, guidance, and nurturing of young children to help them cope with their social, emotional, intellectual and physical needs. These programs also assist youth and adults, males and females to improve their skills as parents.

Some specific examples of parenthood education and family living and child care/development programs or activities include:

- Parent Education Programs in Washington State are designed to enable parents to become directly involved in the their children's education as well as to assist them in controlling their own education. A Preschool laboratory is supported by Consumer and Homemaking Education funds in cooperation with parents who hire the teacher with the assistance of the local school system. Parents help plan activities and are engaged in a cooperative learning effort with their children.

- Parenting Class at Okaloosa-Walton Junior College, Florida is a joint effort between the College and the County Welfare Department to offer Parenthood classes to parents whose children have been removed from their home due to child abuse or neglect. The children have been placed with approved foster parents until their parents have participated in classes which assist them in understanding the importance of being a natural parent, the importance of a "good" self-concept as a parent, and the ways of meeting the basic needs of young children, e.g., nutritional meals, nurturing of children of all ages, and the need for adequate rest of the young child. In the meantime, the foster parents are also given classes on child care techniques and principles of child care and growth.

- Ohio's Family Life Education Programs are composed of two major types of programs. First, the "Infant Stimulation program" is designed to promote and utilize not only consumer and homemaking education facilities and teachers, but to involve other organizations in assisting parents with infants who have special mental or physical problems. For example, the "Infant Stimulation program" has made an impact in Akron, Zanesville, Toledo, and Youngstown. For training purposes, these cities utilize a "well-baby clinic" as well as secondary and adult laboratory facilities. One community has donated a van and driver to transport parents and children to the "Infant Stimulation Center." The second Ohio program involves a series of television programs which reinforce the "Infant Stimulation program." These two programs have benefited approximately 9,039 adults, over 2,300 infants, and 2,063 school age children.

- Enrollment in the two specialized programs, "Parenthood Education and Family Living" and "Child Care/Development" has increased from 160,179 enrollees in 1967 to 290,000 in 1975. An additional 4.5 million were enrolled in the "Comprehensive Consumer and Homemaking Education programs", which include both Child Growth and Development and Parent Education/Family Living.

- Curriculum Development relevant to the needs of Consumer and Homemaking Education enrollees is imperative if quality programs are to continue to be offered. Qualified vocational home economics educators must also be selected since they are vital to the success of these programs.

Adult Education

The Adult education program authorized by the Adult Education Act of 1966, as amended, (PL 91-230, Title III, PL 93-380 and PL 94-482), is designed to serve undereducated adults. All adults with less than a high school education are eligible; major emphasis, however, is on those adults with less than an eighth grade education. The program's primary objective is to enable participants to become employable, productive and responsible citizens as well as self-reliant and competent individuals, parents and family members.

Actual cost data on programs and projects involving family planning are not available. However, since there is a growing emphasis on family-related content, inclusion of family planning as a content area and use of family planning materials may be assumed. The following discussion of family-related adult education indicates the broad family-related programs in which family planning content is included.

Parent and family-related education is a major focus in the Utah State adult education program and receives considerable emphasis in other States, particularly California, New York, and Maryland. With a marked increase in home-based adult education, family-related content is receiving more emphasis. In Vermont, approximately half of the adult education program is home-based to reach more effectively the largely rural population. In many communities, the local adult education program provides classes for mothers of children in Head Start and other child development programs.

Under Section 309 of the Adult Education Act, States are required to use not less than ten percent for special projects and for training persons to work in adult education programs. Activities carried out under this provision include curriculum development, experiments with innovative delivery systems, cooperation with other agencies and the establishment of competency-based personnel training. Family-related concerns are reflected in these activities; specific information (funds, time, students), however, is not available.

At the Federal level, the National Advisory Council on Adult Education gave evidence of concern in the broad area of family-related education with emphasis on parent education by preparing and distributing a position paper on Roles and Responsibilities of Adult Education with Family/Parent/Early Childhood Education priority.

A recent reported study known as the Adult Performance Level (APL) project includes family-related data. Under an OE grant to the University of Texas, the APL project is concerned with identifying the "functional competence" of the adult population. It (1) specified competencies for adults which are functional to economic and education success in today's society and (2) developed devices for assessing these competencies in the adult population in the United States. The project raised fundamental questions concerning the need for skills involved in five general knowledge areas of decisionmaking required for daily living: occupational

knowledge, consumer economics, health, community resources, government and law. Implications for content highlight education for family decisionmaking within the above categories.

Higher Education

Title I of the Higher Education Act of 1965 (PL 89-329) provides financial support to encourage colleges and universities to assist in the solution of community problems through specially designed continuing education and community service programs. A State desiring to receive its allotment of Federal funds under this Title must designate or create a State Agency which is required to submit an annually amended State plan to the U.S. Commissioner of Education for approval. The plan must set forth administrative policies and procedures and identify community problems it wishes colleges and universities to address. The State Agency reviews proposals from institutions of higher education and awards funds to approved projects on a 66 2/3 percent Federal and 33 1/3 percent non-Federal matching basis. Total appropriations for Title I for fiscal year 1976 was $12,125,000. Of this appropriation, an estimated $250,000 was allocated for family planning activities under the State Grant program.

No funds have been requested for the Title I program for either fiscal year 1977 or fiscal year 1978. In fiscal year 1977, Federal funds are being made available under a Continuing Resolution.

VI

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
POPULATION RESEARCH AND FAMILY PLANNING ACTIVITIES

Obligations, FY 1974 -- FY 1978

Agency and Program	Fiscal Year 1974	1975	1976	1977(Est.)	1978(Est.)
Total, Department of Health, Education, and Welfare	$321,216,000	$297,022,000	$323,890,000	$378,808,000	$398,003,000
PUBLIC HEALTH SERVICE					
Office of the Assistant Secretary for Health					
Office of International Health					
Scientific Activities Overseas (Special Foreign Currency Program, P.L. 480)1/	342,000	124,000	710,000	52,000	88,000
National Institutes of Health					
National Institute of Child Health and Human Development	51,025,000[2]	50,385,000	56,212,000	59,481,000	63,444,000
Health Services Administration					
Bureau of Community Health Services (BCHS)					
Maternal and Child Health					
Formula grants to States	$ 11,700,000	$ 30,000,000	$ 25,000,000	$ 25,000,000	$ 25,000,000
Project grants for maternity and infant care	4,500,000	---	---	---	---
Research	100,000	100,000	---	---	---
Family Planning	149,491,000[3]	99,826,000[4]	100,100,000	113,615,000	123,615,000
Subtotal, BCHS	165,791,000	129,926,000	125,100,000	138,615,000	148,615,000

1/ Not included in the PHS or DHEW total. All obligations are in U. S. - owned excess foreign currencies.
2/ Includes $6.2 million authorized under the FY 1973 continuing resolution, released for obligation in FY 1974.
3/ Includes $15 million previously administered by the Office of Economic Opportunity; also includes $30 million authorized under the FY 1973 continuing resolution, released for obligation in FY 1974.
4/ Includes $409,000 authorized under the FY 1973 continuing resolution, obligated in FY 1975.

Obligations, FY 1974 -- FY 1978 (Cont'd)

Agency and Program	Fiscal Year 1974	1975	1976	1977(Est.)	1978(Est.)
Indian Health Service	$ 1,061,000	$ 1,237,000	$ 1,347,000	$ 1,476,000	$ 1,476,000
Bureau of Medical Services	227,000	193,000	190,000	200,000	210,000
Subtotal, Health Services Administration	167,079,000	131,356,000	126,637,000	140,291,000	150,301,000
Center for Disease Control	253,000	368,000	524,000	615,000	615,000
Health Resources Administration					
National Center for Health Statistics	791,000	937,000	863,000	810,000	4,074,000
Total, Public Health Service	$219,148,000	$183,046,000	$184,236,000	$201,197,000	$218,434,000
SOCIAL AND REHABILITATION SERVICE					
Social Services	34,547,000	43,177,000	67,000,000	88,000,000	76,000,000
Medical Assistance	52,434,000	56,772,000	71,578,000	87,933,000	101,471,000
Total, Social and Rehabilitation Service	$ 86,981,000	$ 99,949,000	$138,578,000	$175,933,000	$177,471,000
EDUCATION DIVISION					
Office of Education					
Elementary and Secondary Education					
Grants for Disadvantaged (ESEA I)	5/	5/	5/	5/	5/
Support and Innovation Services	302,000 6/	240,000 6/	151,000 6/	455,000	488,000

5/ Funds expended for family-related activities which are components of larger projects cannot be separately identified. Allocations are made to the States on a formula basis, and States are not required to report the use of funds according to subject area.

6/ Totals shown for FY 1974 and FY 1975 were allocated under the Dropout Prevention and the Supplementary Education Centers and Services programs. In FY 1976, these funds were consolidated under the Support and Innovation grants consolidation program.

Obligations, FY 1974 -- FY 1978 (Cont'd)

Agency and Program	Fiscal Year 1974	1975	1976	1977(Est.)	1978(Est.)
Occupational, Vocational, and Adult Education					
Vocational Home Economics Education	5/	5/	5/	5/	5/
Adult Education	$ 14,550,000	$ 13,500,000	$ 675,000 7/	$ 973,000 7/	$ 1,610,000 7/
Higher Education					
Grants to States for Community Service and Continuing Education	235,000	287,000	250,000	250,000	---
Total, Education Division	$ 15,087,000	$ 14,027,000	$ 1,076,000	$ 1,678,000	$ 2,098,000

5/ Funds expended for family-related activities which are components of larger projects cannot be separately identified. Allocations are made to the States on a formula basis, and States are not required to report the use of funds according to subject area.

7/ Beginning with FY 1976, estimates are only for family planning rather than for all family-related activities. Family planning activities constitute approximately one to two percent of all family-related activities.

GENERAL MENTAL HEALTH

Obligations

	1974	1975	1976	1977 Estimate	1978 Estimate
Alcohol, Drug Abuse, and Mental Health Administration:					
National Institute of Mental Health:					
Budget Authority	$387,921,000	$418,023,000	$368,110,000	$454,334,000	$454,049,000
Obligations	(437,374,000) 1/	(434,236,000) 2/	(486,621,000) 3/	---	---
Saint Elizabeths Hospital: 4/					
Budget Authority	40,875,000	49,673,000	57,002,000	64,514,000	68,746,000
Obligations	(63,650,000)	(71,382,000)	(77,081,000)	(88,294,000)	(90,170,000)
Total, ADAMHA:					
Budget Authority	428,796,000	467,696,000	425,112,000	518,848,000	522,795,000
Obligations	(501,024,000)	(505,618,000)	(563,702,000)	(88,294,000)	(90,170,000)
Office of Human Development:					
Rehabilitation Services Admin.:					
Basic State Grants	165,100,000	161,160,000	164,951,000	171,011,000	182,500,000
Research	64,800	---	---	300,000	---
Training	125,000	175,000	175,000	175,000	100,000
Total, RSA	165,289,800	161,335,000	165,126,000	171,486,000	182,600,000
TOTAL, General Mental Health	$594,085,800	$629,031,000	$590,238,000	$690,334,000	$705,395,000

1/ Includes $49,453,000 in FY 1973 Court released funds.
2/ Includes $16,213,000 in FY 1973 Court released funds.
3/ Includes $118,511,000 obligated in Transition Quarter.
4/ Parenthetical amounts denote total obligations including reimbursements for patient care.

ALCOHOL, DRUG ABUSE, AND MENTAL HEALTH ADMINISTRATION

National Institute of Mental Health
GENERAL MENTAL HEALTH

Overview

The toll of mental illness is a high one. In economic terms, the cost of direct care for mental illness now amounts to 15 percent of all national direct health care expenditures, or $14.5 billion annually. The total cost of mental illness to the United States, including indirect costs for disability, productive time lost by individuals in treatment, and death, was conservatively estimated at $36.8 billion for 1974. Since such costs as those due to underemployment of the untreated mentally ill cannot be estimated, this figure only hints at the real economic cost of mental illness.

In human terms, the cost of mental illness is incalculable. There is no way to quantify the suffering of those who are themselves mentally ill or of their families. The general dimensions of the problem can be ascertained, however, from the numbers of those who receive treatment and from very general estimates of those who need but are not receiving mental health services. During any given year, an estimated five million persons, or two percent of the population, will have one or more episodes of care for a mental disorder, either in an organized mental health care setting or in the office of a private practitioner. Unmet needs for mental health services cannot be accurately estimated. Past efforts have produced estimates of the proportion of the population in need of direct and indirect services ranging from 10 to 25 percent.

Federal leadership in the effort to reduce the toll of mental illness has been placed with the NIMH, which has the Congressional mandate for the planning, direction and coordination of Federal efforts in the areas of research, training and services. Among the major problem areas addressed by the NIMH are the following:

1. Mental health of the aged: Approximately 5 percent of the Nation's aged live in institutions. Of these about 12 percent are in mental hospitals, with the remainder in nursing and other types of homes for the aged and chronically ill. The elderly comprise 8 percent of additions to state and county mental hospitals, and 28 percent of the resident patients. Approximately 75 percent of patients aged 65 and over who live in nursing and personal care homes have some degree of mental impairment. An estimated 10 - 25 percent of the aged living in the community have some degree of mental impairment. Death rates or suicide are highest in the 55 - and up - age group, accounting for 21 per 100,000 population, or almost double the rate for the population at large. NIMH conducts

studies relevant to the mental health of the aging including projects which deal with the etiology, diagnosis, and treatment of mental disorders; and the development and delivery of mental health services. The Institute's goals are carried out through grants and technical assistance, directed toward stimulating and encouraging (a) research into areas in which knowledge is needed; (b) incorporation of mental health consideration in programs for aging in which mental health components have been neglected; (c) development and evaluation of innovative programs for the delivery of mental health services to the aged; and (d) development and dissemination of information about mental health of the aging.

2. Mental health of children: Approximately 1/3 of the total U.S. population, or 70,220,000 people, are under 18 years of age. It has been estimated that 10 percent of this group, or some 7,000,000, is in need of psychiatric services, and that some 90 percent of that group, or 6.3 million, have unmet mental health needs. Approximately 1/3 of all admissions to state and county mental hospitals are young persons 10 - 14 years old. The suicide rate among young people has been growing since 1950. In 1964, it ranked fourth as the major cause of death among the age group 15 - 24. Between 1962 and 1975, there has been almost a doubling of the suicide rate. The NIMH is addressing this problem through its combined efforts of research, training and services. Studies are underway dealing with the biological, behavioral, and socio-cultural aspects of the major mental illnesses among children. Work is also being undertaken with respect to the major behavior disorders, and the mental health dimensions of dyslexia and learning disorders. The institute is creating opportunities for work across disciplinary lines, and promoting research training in areas relating to child mental health. NIMH is actively promoting public mental health education, seen as a primary prevention device, especially in the psychosocial dimension of severe mental illness, chronic physical illness, learning disorders, child abuse, and child an adolescent development. The requirement and provision for consultation and education services by the Community Mental Health Centers under Public Law 94-63 gives NIMH the opportunity to further extend its primary and secondary prevention activities through the CMHC program.

3. Crime and delinquency: Reported crime has increased by 32 percent since 1969, while population increased by only 5 percent. Crimes of violence have increased by 47 percent since 1969. Major crimes against property increased by 37 percent in the same period. The homicide rate has doubled over the last 14 years, and 45 percent of all arrests for murder in 1974 involved persons under age 25. During the period 1969 - 1974, there was a 51 percent increase in the number of persons under 18 years of age arrested on charges of murder. Risk of becoming a victim of serious crime has increased by 32 percent since 1969, and the annual cost of crime is estimated

in excess of $35 billion a year. Nineteen percent of all arrests for serious crimes in 1974 involved persons under the age of 15. Some 45 percent of these arrests involved persons under the age of 18. The NIMH emphasizes the efforts to understand and cope with problems of mental health which are, or may be, reflected in maladaptive, aggressive, and violent behaviors. The institute supports research and training grants and also technical assistance to criminal justice and other agencies at all governmental levels. The focal point for NIMH activities in this area is the Center for Studies of Crime and Delinquency, the mission of which is to generate more precise knowledge on criminal, delinquent, and violent behavior - including effects on victims. The Center develops and evaluates community-based treatment and rehabilitation programs as alternatives to institutionalization. The Center supports research on critical issues on law and mental health interactions, such as pre-trial competency, dangerousness, and right to treatment. Training grants are awarded to develop higher quality educational programs for future researchers and practitioners in crime and in the area of crime and delinquency. The NIMH Director serves on an advisory council for National Institute for Law Enforcment and Criminal Justice.

4. Depression: Depressive illnesses are the second leading cause of hospital admissions for psychiatric care in the United States. Of approximately 1.2 million hospital admissions, roughly 276,000 represent depressive illness. This proportion (22.5 percent) was second only to that for schizophrenia and surpassed that for alcoholism. The great majority of people suffering from depressive illness are not admitted to a hospital, but rather they are treated as out-patients. As a result, the foregoing statistics must be regarded as extremely conservative. Rough estimates of the prevalence of depressive illness point to a rate of between 2 - 4 percent of the population or 4 - 8 million Americans. It is further estimated that one out of five who are clinically depressed receive treatment, one of fifty is hospitalized, and about one in two hundred depressed persons commit suicide. A recent survey indicates that during any given year, 15 percent of all adults between the ages of 18 and 74 may suffer significant symptoms of depression. Unlike most categories of mental illness, the depressive illnesses may be fatal. Suicide, with an official mortality rate of 11.9 percent accounts for over 24,000 recorded deaths per year in the United States. It is the eleventh leading cause of death and the fifth leading cause of death among the most potentially productive members of our society (ages 25 - 44). Due to the stigma often associated with suicidal deaths, these figures are regarded as under-estimates. The current major NIMH research emphasis in the depressive illnesses is focused on psychobiology, in an attempt to elucidate the basic physiological derangement underlying the abnormal behavior which is recognized as depression. Genetic studies are undertaken to

understand the family aspects of some depressive illnesses, and suicide studies are aimed at clarifying this tragic outcome of depression for some. Programs in psychopharmacology address the issue of discovering newer and more effective modalities of drug treatment. Psychotherapeutic studies are seeking to discover treatments for the milder forms of depression.

5. Minority mental health: Approximately 34 million Americans are members of ethnic and racial minority groups (one person out of six). Of this total, 22 million are Afro-American; 9.5 million are Spanish-speaking Americans; 800,000 are Indian-Americans; and 1.4 million are Asian Americans. Of the 2.7 million people admitted to state and county mental health facilities, 17 percent were non-white admissions. This is a rate of 1,696 per 100 thousand population, as opposed to 1,173 per 100 thousand population for whites. The non-white admission rate is 45 percent higher than that for whites. The NIMH Center for Minority Group Mental Health Programs was organized to increase the institute's capabilities to meet the special mental health needs of minority groups. The Center focuses on mental health problems of 4 groups: Blacks, Spanish-speaking, Native Americans, and Asian Americans. A multi-disciplinary staff with minority group membership provides consultation on research, training, services, contracts and grants procedures. The review committee of the Minority Center is interdisciplinary and has representation from four minority groups.

6. Schizophrenia: It is estimated that at least 2 percent of persons born in 1960 will have an episode of schizophrenia some time during their life time. The affliction strikes hardest at those in the most productive years of life. Of the total additions to public hospitals in 1973, 51 percent were between the ages of 25 and 44, and an additional 21 percent were persons less than 25 years of age. Although the number of hospitalized schizophrenics continues to decline, half of the beds of mental hospitals throughout the Nation are occupied by schizophrenics - a number which has approximated 120,000 in state and county mental hospitals. Current NIMH efforts in schizophrenia involve a diverse, in-depth examination of the many components of the disorder. Because of the difficulties engendered by the lack of a reliable, valid and widely applied diagnostic system for research in schizophrenia, much recent work in this area has attempted to address these diagnostic difficulties. Current research in schizophrenia is also focused on several key questions, including what can be predicted, based on current data, about the rate of occurance of schizophrenia over the next decade. Based on these predictions, the Institute addresses the problem of what kinds of facilities should be planned; what effect has the community orientation in treatment had on patterns of facility used; and what is the true population prevalence of schizophrenia. Despite the impressive data that have recently accumulated from a variety of genetic studies, the basic questions of genetic trans-

mission remain unresolved. Current studies suggest a genetic predisposition to schizophrenia, but at the same time make clear that genes alone are insufficient to produce schizophrenia. This suggestion, in turn, has generated new interest of studies of genes - environment interactions. Basic neuroscience studies have contributed greatly to the understanding of the neural mechanism underlying normal and abnormal functioning of the human brain. Application of rapidly developing technology from the basic sciences to clinical populations may soon permit testing of current and newly developing biological hypotheses of schizophenia. The NIMH is also addressing the problem of schizophrenia through research in the areas of psychological functioning, studies of high-risk population, childhood schizophrenia and autism, and the family.

The problem areas described in the preceding material are dealt with through the combined efforts of research, training, and services. The operating programs within each of these activities are described in the material which follows:

Research

The purpose of the research program is to develop new knowledge and approaches to the causes, diagnosis, control and prevention of mental illness through basic, clinical and applied research.

1. Intramural research: The NIMH Intramural Research Program employes approximately 375 full-time permanent employees. Laboratories are located on the campuses of the National Institute of Health and Saint Elizabeths Hospital, with additional experimental facilities at Poolsville, Maryland. The Intramural research program plans and administers comprehensive long-term clinical, behavioral, biological, and special research dealing with the causes, diagnosis, treatment and prevention of mental disorders, and the biological and the psychosocial factors that determine human behavior and development. These laboratories provide a focus for national attention in the area of mental health research. Within the program, the Division of Special Mental Health Research plans and conducts studies in the areas of psychopharmacology, neuropharmacology, memory, human behavior, and biochemistry of learning. This Division also performs clinical evaluation and follow-up activities in connection with research patients. The Division of Clinical and Behavioral Research plans and conducts clinical and behavioral research dealing with the causes, diagnosis, treatment and prevention of mental disease. The Division of Biological and Biochemical Research deals with the basic biological processes that determine both adaptive and maladaptive behavior.

2. Extramural research: The Institute's extramural research programs are both process and problem oriented. Among the research categories receiving support are the following:

a. Behavioral sciences: This program supports research in the broad areas of personality and cognition, experimental psychology, neuropsychology, and social sciences.

In the areas of personality and cognition; research is supported on human personality structure and development, cognition, intelligence and higher mental processes, including human motivation, relationship of personality to perception and learning, emotional processes, attitudes, values, problem-solving, thinking, and creativity.

Experimental psychology programs are supported, which deal with basic studies of animal and human behavior in areas of learning, conditioning, memory, perceptual and sensorimotor processes, comparative and physiological psychology, behavioral genetics and animal ethology.

Research is supported in neuropsychology, psychobiology, and psychophysiology with emphasis on the relationship of behavior to the central nervous system including both the effect of behavioral change on central nervous system function and the effect of change in the central nervous system on behavior.

Social sciences research support is provided for projects with mental health relevance in anthropology, sociology, and social psychology in such areas as culture and personality, cross-cultural factors, social perception and attitudes, socialization, sex role behavior, social structure and dynamics, social change, family studies, and group processes.

b. Psychopharmacology: In the preclinical area support is provided for studies of the sites and mechanisms of action of psychoactive drugs, research on biochemical processes and mechanisms related to drug action and the etiology of mental disorders is also supported. Under this rubric are projects in physiology, biochemical pharmacology, neuropharmacology, drug metabolism, and related fields. Included are studies on drug development and synthesis, toxicology, and pharmacogenetics. Projects also involve the synthesis of chemicals needed in research. Work is supported to develop better methods of drug screening to provide psychotropic compounds or assays of psychotropic compounds and metabolites needed in research on drugs which seem potentially of value in therapy.

In the clinical area, studies evaluating the efficacy and safety of drug treatments in a variety of psychiatric patient populations are supported. These include the early testing of drugs for preliminary indications of safety and efficacy, as well as controlled studies evaluating drug efficacy in comparison with placebo, other standard drugs, or other psychiatric therapies. Also supported are long-term studies of drug maintenance as well as prediction studies of differ-

ential response to drug therapy. Patient populations, both inpatient and outpatient, include schizophrenics, depressives, neurotics, patients with character disorders, and patients with psychiatric disorders of childhood or advanced age.

c. Applied research: In the area of juvenile mental health, the range of concern extends from the impact of experience in infancy to problems of college stress, and includes studies of various milieu, e.g., home, school, day care, and of relationships, e.g., familial, peer. Research on intellectual stimulation and cultural enrichment procedures for children, early identification and intervention techniques with emotionally disturbed children, and the myriad problems of adolescence and young adulthood are also topics of interest. The social problems area is concerned with the nature of the nuclear family, including such phenomena as trends in marriage patterns and impact of divorce. Studies are also supported on changing roles of men and women, generational differences, aging, sexuality including sexual dysfunction, mobility, and occupational stress.

d. Clinical research: Schizophrenia and depression are core problem areas of clinical research. A broad-based program of psychiatric, psychological, biological, and sociocultural studies is supported on the two major mental illnesses. Special emphasis is placed on studies of the biological, psychosocial, and clinical aspects of the depressive disorders through collaborative research with several major clinical centers and investigators. Other disorders studied include organic brain syndromes, psychoses (including autism), neuroses, psychosomatic and psychophysiological disorders, and character and personality disorders. In addition to research on normal and clinical populations, research with animals (e.g., animal analogs of clinical phenomena) is also supported by the program.

e. Minority mental health: The minority mental health program serves as the focal point for institute activities which bear directly on improving the mental health of minority groups, and on increasing the number and competence of minority group members engaged in mental health projects. This program supports research designed to increase knowledge of minority group cultures, their relationships to other groups and the particular mental health problems associated with these cultures.

f. Metropolitan mental health: The Metropolitan mental health program deals with the impact of urban life on human well-being and mental health, emphasizing contemporary social issues and the relationship of urban social structure to individual family and community functioning. This program identifies, analysizes and evaluates current research and related program developments in the metropolitan mental health area, directing this information to citizens, administrators, and policy makers as an aid for assess-

ing policy and action alternatives.

g. Crime and Delinquency: The crime and delinquency program analysizes and evaluates current research and related program developments relating to the mental health aspects of violent or maladaptive behavior.

h. Services research: Mental health services research is directed toward the continued improvement of the quality and technique of mental health services. This goal is achieved through the planning, implementating, and supporting of research projects through which new service models are initiated, and improvements in existing programs and practices are introduced. The knowledge derived from these projects is interpreted and made available to the widest possible audience.

i. Epidemiology: This program supports research and demonstrations pertaining to the gathering of statistics on mental illness. This grant program is administered by the NIMH Division of Biometry and Epidemiology, which has over-all responsibility for development of mental health statistics at the national level.

j. Research Scientist Development: The research scientist development program is designed for the support of research investigators working on mental health problems. Its function is to stabilize careers of research scientists and to ensure continuity of effort in research programs. Research Scientist Development Awards are made for 5-year periods, and may be renewed for one second term, following competitive review. Two types of awards are made, one for persons with research potential but who require experience in a research environment, another for those who are functioning as independent investigators but who need additional research experience to realize their full potential. Research Scientist Awards support more senior scientists who are well qualified to conduct research independently and make significant contributions to the research programs of their sponsoring institutions. These awards are also made for a 5-year period and may be renewed for up to two additional 5-year terms, with competitive review.

Training

The purpose of the training activity is to train personnel for clinical service and teaching; to develop and evaluate models of innovative training for new types of mental health personnel; and to provide continuing education for existing mental health manpower.

1. Training in the core disciplines: Since 1948, NIMH has provided grant support for training in the four core disciplines of psychiatry, psychology, nursing, and social work. The purpose of the program has been to promote the quality and adequacy of mental health professional education, in order to meet the need for mental health services. Efforts have been made to strengthen the educational capability in the core discipline fields, foster experimental and innovative approaches to the problems of professional education and manpower planning, and promote special projects dealing with educational standards and curriculum development. The FY 1978 budget provides an increased level of support for the core disciplines, while effecting a redirection of training priorities for the purpose of placing greater emphasis on service delivery programs.

2. New initiatives: During the current year, the National Institute of Mental Health is implementing a redirection of its clinical training programs based on the premise that a comprehensive manpower strategy should derive from a mental health service strategy. Grants will be awarded (a) to initiate a major thrust to augment the psychological and psychiatric components in the training of those people associated with the delivery of primary care; (b) to develop research and demonstration training and manpower programs; and (c) to provide limited support for states, to help them develop their own capacities in the areas of manpower planning, training, and administration. These programs are intended to promote the quality and adequacy of mental health professionals, strengthen the educational capability of the various core-discipline fields, foster experimental and innovative approaches to education

programs, and promote special projects dealing with standards and curriculum development.

3. Special programs: Problem-oriented training programs are supported in the areas of minority mental health, metropolitan problems, and crime and delinquency. These program are administered by the Institute's Division of Special Mental Health Programs, which brings a combination of research, training, and services to bear on these three problem areas. The Institute also supports grant programs in epidemiology training, sponsored by the NIMH Division of Biometry and Epidemiology.

4. Fellowships: The NIMH has supported fellowships to provide training for research relating to the problems of mental illness, and to raise the level of competence and increase the number of individuals engaged in such research. Predoctoral, postdoctoral and special fellowships have provided stipends based on the individual's training and experience along with other factors. An allowance is also made to the sponsoring institution to cover tuition and fees, and other costs of research training. The 1978 budget purposes the phase-out of predoctoral fellowships. The Institute will continue to support efforts in the postdoctoral area, however.

5. Hospital staff development: The purpose of the hospital staff development program is to increase the effectiveness of staff in mental hospitals, and to translate rapidly increasing knowledge into more effective service to patients. Funds are used for the costs of staff development programs at the subprofessional and the professional levels, providing orientation, refresher and continuation training, and for special courses for those who conduct training. This program does not include individual training stipends.

Services

Funds provided under this activity heading are used for the improvement of the organization, allocation, and delivery of mental health services. In 1975, the Health Services, Revenue Sharing, and Nursing Training Act (Public Law 94-63) was enacted. Title III extends and amends the Community Mental Health Centers Act, and Title I requires plans to eliminate inappropriate institutionalization of the mentally ill, and to improve the quality of care for those who do require institutionalization. Together, the two Titles spell out a long-range strategy for Federal, state, and local efforts to meet the entire range of mental health service needs. P.L. 94-63 strengthens the community mental health centers program in a number of respects, and establishes six grant mechanisms, which are discussed in the material which follows. In addition,

the National Institute of Mental Health continues to provide support for those staffing and child mental health grant projects initiated prior to the new legislation. Grants are authorized under various provisions of the Community Mental Health Centers Act as follows:

1. Programs under P.L. 94-63:

a. Planning: Section 202 authorized funds for grants designed to (a) assess need for services; (b) design a Center based upon such an assessment; (c) assemble financial and professional assistance and support for the proposed Center program; and (d) initiate and encourage continuing community involvement in development and operation of the program.

b. Operations: Section 203 authorized appropriations to finance the cost of operations grants. This authority replaced staffing support under the old Community Mental Health Centers (CMHC) Act.

c. Conversion: Under Section 205, funds are authorized to enable Centers to meet additional costs associated wtih converting existing Centers to add services to the elderly, children, alcoholics, and drug abusers; assisting courts in screening residents recommended for referral to state mental hospitals; follow-up services; and halfway house services.

d. Consultation and education: Separate grants are authorized (Section 204) to provide consultation and education services to Centers which have completed four years of Federal support, and to entities which meet the definition of a Community Mental Health Center.

e. Distress: Section 213 authorizes financial distress grants to Centers terminating final Federal staffing support if, without this support, there will result an inability to provide, or a significant reduction in, the types or quality of services required under the new Act.

f. Facilities Assistance: These grants are authorized to enable a Center to acquire new facilities or remodel the existing plant. Also included are authorities to lease, construct, and initially equip such facilities.

2. Old Legislation:

Funds provided under this category are used to provide continuation support for CMHC staffing and child mental health grants awarded prior to June 30, 1975, and which have not changed to support under the new authority, 203d. The authority to continue these awards is in Section 203e.

Special Institute Efforts

The NIMH is organized to deal with a variety of current social problems having mental health implications, and to provide support activities having general application to the total mental health field. Among these programs and activities are the following:

1. National Center for the Prevention and Control of Rape: Part D, Title III of P.L 94-63 authorized the establishment in NIMH of a National Center for the Prevention and Control of Rape. The Center is mandated to conduct a continuing study of rape, including investigation of the following:

a. The effectiveness of existing Federal, state, and local laws dealing with rape;
b. The relationship, if any, between traditional legal and social attitudes toward sexual roles, the act of rape, and the formulation of laws dealing with rape;
c. The treatment of victims of rape by law enforcement agencies, hospitals or other medical institutions, prosecutors, and the courts;
d. The causes of rape, identifying social conditions which encourages sexual attacks, and the motives of offenders;
e. The impact of rape on the victim and family of the victim;
f. Sexual assaults in correctional institutions;
g. The actual incidents of forcible rape as compared to the reported incidents of forcible rape and the reasons for any differences;
h. The effectiveness of existing private and local programs designed to prevent and control rape.

The Center is responsible for compilation, analyses and publication of summaries of the continuing studies enumerated above, and for support of research and demonstration projects. The Center is also charged with the responsibility to develop and maintain an information clearinghouse dealing with the subject of rape prevention and control, and for the compilation and publication of training materials for personnel who are engaged or intend to engage in programs for rape prevention and control. The Center also gives assistance to Community Mental Health Centers and other entities in conducting research and demonstration projects in this field, and provides assistance to Community Mental Health Centers in meeting and promoting community awareness of specific locations in which sexual attacks are most likely to occur.

2. Center for Studies of Mental Health of the Aging: The NIMH Center for Studies of Mental Health of the Aging was established in August 1975. Although the mental health of the elderly has long

been an NIMH priority, it was given additional emphasis with enactment of Public Law 94-63, which directed the Secretary of Health, Education, and Welfare to appoint a committee on mental health and illness of the elderly. The Center has been actively involved in the establishment of this committee. The Center on Aging also coordinates research, training, and services for the prevention and treatment of mental illness among this group of citizens. Since persons 65 years of age and older now constitutes approximately 10 percent of the population and display the highest incidence of new cases of psychopathology, it follows that a significant portion of the NIMH effort should be directed toward their problems and needs. The Center closely coordinates its activities with the National Institute on Aging, NIH.

3. Disaster Assistance: The Disaster Relief Act of 1974 recognizes a Federal responsibility toward mental health problems associated with disasters. Staff of the NIMH Division of Special Mental Health Programs are made available to provide counseling and technical assistance to communities which have experienced major disasters. A limited amount of contract funds is also available for this purpose.

4. Center for Studies of Child and Family Mental Health: The NIMH Center for Studies of Child and Family Mental Health plans and administers special research and demonstration programs in child, youth, and family mental health such as child advocacy, runaway youth, and child abuse. The Center coordinates these programs with other Federal, state, and local agencies and organizations, and provides related technical assistance. This organization also analysizes and evaluates current research and program development in child and family mental health.

5. National Clearinghouse for Mental Health Information: The National Clearinghouse for Mental Health Information (NCMHI) collects scientific, technical and other information on mental illness and health from sources outside the Institute, including international, national, state and local agencies, and private, professional, and lay organizations. The NCMHI classifies, stores and retrieves data for dissemination to the biomedical community, and to private and lay organizations, as well as other components of Government. NCMHI also responds to public inquiries by abstracting appropriate information from available literature, transmitting publications, or providing syntheses of available information.

Accomplishments and Objectives

Research

A total of 593 new and competing awards will be funded during 1977. Areas of study included rape prevention and control; services

development; depression; schizophrenia; minority and metropolitan mental health problems; and female crime and delinquency. The intramural program addressed problems of schizophrenia and depression at the more basic level, and examined drug treatment of hyperkinetic children. The latter effort sought to develop methods of more accurately gauging optimum dosage levels for individual children.

A total of 417 new and competing awards will be supported in 1978. The NIMH will move forward with collaborative research on psychological, psychosocial, and cultural factors which influence the development and cause of depression, as well as research into the causes and prevention of rape. Programs of basic psychological, biomedical, and genetic research into the causes of schizophrenia will be continued. Child mental health research will be directed toward studies of hyperkinetic disorders, mental health dimensions of learning disorders, and problems of early adolescents. Intramural research efforts will address the development of treatment for mental disorders of children, and will attempt to develop an early diagnosis and treatment procedure for potential depressives.

Training

In 1977, a total of 273 new and competing grants will be awarded, including 138 institutional awards, 102 fellowships, and 33 hospital staff dvelopment projects. NIMH has implemented a redirection of the clinical training program, with the objectives of linking the training of mental health manpower more closely with service delivery needs by (1) improving the psychosocial and psychiatric components of curriculum for primary caretakers; (2) moving toward a research and development model which emphasizes short-term Federal involvement; and (3) providing technical assistance to states, to help them develop capacities in the areas of manpower planning, training, and administration.

Research training grant activities and predoctoral fellowships will be phased-out in 1978. Support will be provided for 209 new postdoctoral fellowships.

Services

Accomplishments in 1977: The 1977 appropriation will support a total of 141 new awards, including 20 planning grants, 30 operations grants, 42 consultation and education projects, 33 conversions, and 16 distress grants. The CMHC program in total has supported 670 centers. Of this total, 590 will be operational by the end of FY 1977, and approximately 2.1 million patients will be treated during this year.

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Objectives for 1978: No new awards will be made under this program in 1978. The budget proposes consolidation of this program into a health bloc grant program.

Saint Elizabeths Hospital

The National Institute of Mental Health has responsibility for the operation of Saint Elizabeths Hospital, which provides treatment and rehabilitation of the mentally ill, including approximately 2,400 inpatients and 3,100 outpatients. The Hospital operates a community mental health center which services District of Columbia residents in the southeast quadrant of the city.

In FY 1977 the Administration intends to submit legislation to transfer the Hospital to the District of Columbia by FY 1980. This legislation will also provide for authorization of funds for construction and renovation of the hospital.

The Hospital will treat an estimated 9,350 patients during 1978. A total of 4,000 is expected to be admitted, compared with 3,950 to be discharged from the rolls. In terms of daily averages, the inpatient load is expected to average 2,400, compared with an outpatient load of 3,100.

OFFICE OF HUMAN DEVELOPMENT

Rehabilitation Services Administration

General Mental Health

The Mental Health Association (formerly the National Association for Mental Health) estimates that there are about 20 million people in the United States who suffer from some form of mental or emotional illness, ranging from mild to severe, and who could benefit from psychiatric treatment. On any one day, approximately 760,000 of these people are patients in mental hospitals or psychiatric wards of general hospitals. The 2,000 public and private outpatient clinics in the country, many of which operate on a part-time basis and most of which have long waiting lists of people in need of psychotherapy, serve nearly 1 million persons in the course of a year. The magnitude of the problem is also reflected in statistics for the State-Federal program of vocational rehabilitation, which indicate that about one quarter of the total number of disabled people rehabilitated by the State rehabilitation agencies have a mental or emotional disorder as their primary impairment. In FY 1978, an estimated 69,000 people in this disability category will be rehabilitated. With the mandate in the Rehabilitation Act of 1973 to afford service priority to the severely disabled, State rehabilitation agencies are directing their attention increasingly to people with severely-incapacitating psychiatric conditions, particularly those in the psychotic and neurotic diagnostic groups.

It is commonly accepted that no system of services for the mentally ill can be viewed as comprehensive unless it includes a viable vocational rehabilitation component designed to assist the individual in attaining the optimal vocational adjustment of which he or she is capable. This has been recognized in the Community Mental Health Center Amendments of 1975, which stress the need for providing community support services, in addition to treatment resources, for people with severe mental illness. Since this legislation was passed, the Rehabilitation Services Administration has been represented on a Community Support Work Group established by the National Institute of Mental Health to identify roles and responsibilities of the various agencies which are expected to participate in the development of support-service programs for the mentally ill. A formal Statement of Principles of Cooperation between NIMH and RSA is being completed as a basis for fostering closer working relationships among State rehabilitation agencies, community mental health centers, and institutions for the mentally ill.

The Innovation and Expansion Grant program authorized by Sections 120-121 of the Rehabilitation Act of 1973 has proven a useful resource in developing programs to meet the multiple rehabilitation needs of people with severe mental illness. Initiated by State rehabilitation agencies, projects under this authority often involve cooperative programming with community mental health centers, institutions, and other components of the mental health system. A project at the San Pedro Residential Center, California, for example, serves a population of the chronically mentally ill who are not only unready for competitive employment but also educationally deprived and disadvantaged by a poor work history. Another California project, located at the West Oakland Health Center, administers an industrial therapy program for people so severely disabled by mental illness that, in their present condition, there is not a reasonable expectation that they can become employable, and who have been unable to work for at least a full year. A grant to the Massachusetts Association for Mental Health supports an intensive, vocationally-oriented Day program of pre-vocational and vocational training for former patients at Worcester State Hospital. A project at the Southwest Community Mental Health Center, Columbus, Ohio, focuses on the shared responsibility of the State rehabilitation agency and the community mental health center in team planning for patients about to be released from public and private mental hospitals in a catchment area. At Winter Haven, Florida, a project assists the mentally ill toward independent living by affording a semistructured environment in a halfway house based on "therapeutic community" concepts that is utilized in the deinstitutionalization process or as an alternate to hospitalization.

The Rehabilitation Services Administration has made good use of its Training authority to develop manpower skilled in the provision of vocational rehabilitation services for the mentally ill. Two long-term training grants are supporting special courses in psychiatric rehabilitation for personnel employed by State rehabilitation agencies, one at Nebraska Psychiatric Institute and the other administered by the Human Services Training and Research Council, Inc., Charlottesville, Virginia. Under a short-term training grant, the Federation of the Handicapped, New York City, will conduct Regional seminars throughout the country for State agency staff in techniques to improve the learning capacities of emotionally disturbed people. Under another short-term training grant training is being provided in interagency coordination for personnel from State mental health and vocational rehabilitation agencies throughout New England, a program which is expected to be duplicated in other Regions.

An Advisory Committee on Psychiatric Rehabilitation, with representation from a broad range of voluntary agencies and facilities concerned with mental illness, has recently been established

by the RSA Commissioner to recommend ways of improving and expanding rehabilitation services for the mentally ill. To complement this approach, RSA expects to enter into a contractual arrangement with a nonprofit consulting firm for a study of the current "state of the art" in psychiatric rehabilitation, an analysis of exemplary programs in this area, and the development of service delivery models that may be replicated with appropriate adaptations at State and local levels.

Rehabilitation Research

Research and Evaluation projects concerned with the rehabilitation of the ex-mentally ill client have shown the efficacy of a rehabilitation program coordinated with the psychotherapeutic intervention program. A recently completed project has demonstrated that positive rehabilitation outcomes can be achieved through the use of such techniques as transitional employment; transitional living situations; group placement; and extended post-placement follow along services. The basic concepts and approaches developed and tested in this project have been utilized in at least 36 other rehabilitation facilities throughout the country servicing the ex-mental patient.

In FY 1977 RSA Research Strategy contains within it at least two projects directed toward this category. One project area is to investigate, systematically, the array of services necessary to place the client on a job, and the other project will be to determine the array of services necessary to maintain the client on the job.

The Special Foreign Currency Program will also be involved with research projects in this area. A project is ongoing in Pakistan which is replicating the domestic project mentioned earlier but in a totally different cultural setting. Two new projects, in the planning stages at this time, are scheduled; one in Egypt and one in Pakistan. The two projects are envisioned as a cross-cultural consortium of projects to augment and complement those planned for domestic program.

Rehabilitations of Persons with Mental Illness

Fiscal Year	Total Rehabilitations	Mental Illness Rehabilitations
1974	361,138	91,729
1975	324,039	76,797
1976	303,328*	69,462*
1977	295,000*	68,145*
1978	286,000*	68,640*

*Estimated

GENETIC DISEASES

Genetic diseases result from abnormalities of the hereditary material--the genes and chromosomes--and for the most part are transmitted vertically to offspring by one parent or both. The underlying defects that result may be single-gene, or polygenic or multiple gene in origin. Nearly 2,000 genetic syndromes have been described, in which the effects are pronounced and often very severe, ranging from acute illness with early death to chronic life-long physical and/or mental impairment.

While most genetic disorders are rare and affect relatively few families, many occur much more frequently. Twelve million Americans are said to suffer one or another form of serious inherited disease. A large fraction of this suffering is borne by children, as indicated by the fact that genetic conditions account for one-third of all pediatric hospital cases and are responsible for 40 percent of all infant mortality. In addition, there is strong evidence that genetic factors play a causal role in many chronic diseases, such as diabetes, atherosclerosis, schizophrenia, and several forms of cancer. Viewed in this fashion, a high portion of illness, early death, and institutionalization is genetically determined.

Research activities supported by the Department of Health, Education, and Welfare concerning investigations of genetic disease are centered in the National Institutes of Health (NIH). Since there is a vast diversity of hereditary disorders and their effects, all of the various Institutes are involved in relevant research. Coordination of these efforts is essential to assure a well-balanced and effective total effort. The National Institute of General Medical Sciences (NIGMS) has the largest single formal program in genetics and this is the lead coordinating unit. For the purpose of this report, other major collaborating units are the National Institute of Child Health and Human Development (NICHD), National Heart, Lung, and Blood Institute (NHLBI), National Institute of Arthritis, Metabolism, and Digestive Diseases (NIAMDD), National Institute of Neurological and Communicative Disorders and Stroke (NINCDS), the National Institute on Aging (NIA), and the National Eye Institute (NEI).

Obligations for Programs in Genetic Diseases

	1974	1975	1976	1977 estimate	1978 estimate
National Institutes of Health:					
National Institute of General Medical Sciences.....	$6,000,000	$6,500,000	$7,000,000	$7,900,000	$8,100,000
National Institute of Child Health and Development.	10,000,000	11,000,000	11,500,000	12,400,000	12,700,000
National Heart, Lung, and Blood Institute.....	18,600,000	19,800,000	22,400,000	23,900,000	23,900,000
National Institute of Arthritis, Metabolism & Digestive Diseases.....	8,529,000	9,053,000	9,370,000	8,839,000	8,780,000
National Institute of Neurological & Communicative Diseases.....	7,896,000	7,952,000	8,064,000	8,642,000	9,942,000
National Eye Institute.....	1,216,000	1,366,000	1,527,000	1,558,000	1,558,000
National Institute on Aging.....	---	---	---	---	200,000
TOTAL.....	$52,241,000	$55,671,000	$59,861,000	$63,239,000	$65,180,000

GENETIC DISEASES

National Institutes of Health

The recognition of genetic disease as an important and costly public health problem and the growing promise for prevention are directly related to basic research in such fields as biochemical genetics and cellular and molecular biology which in the short span of two decades have shown that all of the information necessary to direct human growth and development is contained in the ordered sequence of nucleotides that form deoxyribonucleic acid (DNA) of which genes are constituted. An understanding of how the genetic information is translated into the formation of proteins and of how errors may occur in the process and be propagated in offspring has followed rapidly. More recently scientists have succeeded in identifying the underlying genetic defects in numerous specific diseases, and substantive knowledge and technology have evolved through which control of certain devastating disorders is now foreseen.

There are now the following capabilities:

- Methods for the diagnosis prenatally of as many as 100 severe single gene defects.
- Methods for the identification of asymptomatic persons who carry traits for genetic disease that could become manifest in their progeny.
- Therapies to moderate damaging disease symptoms, including dietary modifications for some metabolic disorders.
- Administration of drugs to enhance and restore the activity of genetically deficient enzyme systems.
- Cellular and tissue transplantation approaches, such as the transfer of immune-competent cells to children with inherited immune deficiencies.

While such measures have come rapidly on the heels of basic scientific advances, a great deal remains to be done. These factors, however, have led to the perception by many clinical geneticists and voluntary organizations, such as the National Genetics Foundation, that sufficient information had been collected through basic research to warrant a "national strategy" for genetic diseases. This national strategy was perceived to utilize the genetic nature of certain diseases in order to prevent disabilities. The principles of such a strategy were considered to be: (1) Screening asymptomatic individuals for the presence of genetically determined abnormalities or susceptibilities. (Treatment and/or counseling about hazards ensues.) (2) Screening healthy subjects to detect those who carry genes for harmful diseases but will not themselves be affected. (Counseling about risks of having affected offspring ensues.) (3) Counseling families in whom conditions, including chromosome abnormalities and multigene problems, recur on a genetic basis.

(4) Prenatal diagnosis of genetic and chromosome conditions because of (a) previous affected offspring; (b) identification of parents as carriers; or (c) other high risk situations (e.g., maternal age). Pregnancies, in which affected fetuses are discovered, could be terminated.

Legislation

The National Sickle Cell Anemia, Cooley's Anemia, Tay-Sachs, and Genetic Diseases Act was passed in 1976, authorizing establishment of a national program to provide for basic and applied research, research training, testing, counseling, and information and education programs with respect to genetic diseases, including sickle cell anemia, Cooley's anemia, Tay-Sachs disease, cystic fibrosis, dysautonomia, hemophilia, retinitis pigmentosis, Huntington's disease, and muscular dystrophy.

Consistent with its mission and long experience in fostering the development of genetic sciences, the NIH responsibilities for implementing provisions of the Act are considered to be primarily in the areas of research and research training. As is consistent with their missions and expertise, other agencies of the Public Health Service, notably the Health Services Administration (HSA), Health Resources Administration (HRA), and Center for Disease Control (CDC), are responsible for, and have established programs supporting diagnosis, screening, education, and counseling activities relative to genetic diseases and their introduction and availability as medical services within the health care delivery system.

Since provisions of the legislation do not clearly separate research activities and services, direct collaboration has been established between the staffs of the NIH, HSA, HRA, and CDC, to assess and recommend measures to implement effectively and administer each of the provisions mandated by the Act. It is intended that these recommendations will be forthcoming in the Genetic Disease report required by the legislation to be transmitted by the Department to the Congress on or before April 1, 1977.

Also in 1976, the Commission for the Control of Huntington's Disease and Its Consequences was established by law to make a comprehensive study of that disease and to develop a national plan for its control, including recommendations for appropriations and legislation to be transmitted to the President and Congress. The NIH, through its National Institute of Neurological and Communicative Disorders and Stroke, has provided office facilities for the Commission's staff.

The NIH Program

Because the expression of genetic diseases usually affects several of the body's organs and systems, each Institute and Division of the NIH has responsibilities in this area. As previously noted, organized and directed programs which together address a broad spectrum of individual hereditary disorders are conducted by the NIGMS, NICHD, NHLBI, NIAMDD, NINCDS, NIA, and NEI. The scope and purposes of these programs are described briefly as follows:

NIGMS -- This Institute has the largest program in support of basic genetic research and the only formal program so designated. This specific program, in support of research in genetics, was established in NIGMS in 1972. It includes support of basic studies in viral, bacterial, insect, and mammalian genetics, and research in ten genetic centers which seek to bring basic and clinical scientists closer together. In 1972 NIGMS established a Human Genetic Mutant Cell Repository, through a research contract with the Institute for Medical Research, Camden, New Jersey. The facility develops, grows, stores, and ships to qualified users, cell lines representative of the many varieties of human genetic disease amenable to study and diagnosis in cell culture. This service has facilitated research, modern clinical practice, and the teaching of human genetics.

Ten genetic centers receive research support from NIGMS, each of which involves a community of both basic and clinical scientists who have developed collaborative efforts between these two ends of a continuing spectrum of research. The centers, by virtue of the types of scientists they support and their physical setting, are involved in associated community genetic services, including counseling and amniocentesis. At the centers, such service activities provide abundant material for investigation and a setting in which the newest research findings can best be clinically evaluated.

NICHD -- Genetics research contributes to this Institute's work to elucidate problems of human development. The principal programmatic concern is human genetics. Studies are conducted by the Center for Population Research and various branches of the Center for Research for Mothers and Children. Special programs include research into the prevention and prenatal diagnosis of genetic and genetically influenced congenital defects, and research into the dietary treatment of genetic diseases. In addition, its Mental Retardation Centers are a national resource for studies into mental retardation and related disorders, a number of which are genetically determined.

NHLBI -- Because of its responsibility for support of studies concerning blood, NHLBI has programs related to sickle cell anemia and Cooley's anemia, and, in addition, programs related to cystic fibrosis in its Division of Lung Diseases.

NIAMDD -- Has the primary responsibility for research in cystic fibrosis, and supports basic hematologic studies related to genetic diseases such as Cooley's anemia and a number of disorders involving inborn errors of metabolism, all of which have a genetic basis.

NINCDS -- Many diseases, such as Huntington's disease, dysautonomia, and muscular dystrophy, are manifest by neurologic disorders; and the NINCDS is deeply involved in the support of research in genetic diseases.

NEI -- Supports a considerable effort in retinitis pigmentosa, which includes laboratory and clinical investigations into the development, structure and function, and degeneration of retinal tissue. Research in this area is directed toward understanding the fundamental processes and interactions of the photoreceptors and pigment epithelium.

NIA -- Is deeply concerned about the genetic basis for aging of cells and tissues, and is supporting numerous studies of such phenomena, including as research models various forms of genetic diseases characterized by premature aging and senility.

Recent Accomplishments

Progress has recently been made in identifying some of the genetic factors involved in atherosclerosis, a disease which results from the interaction of many genes as well as a variety of environmental factors. Establishing a hereditary pattern for such diseases is a complex problem which is only beginning to yield to analysis.

Dr. Arno Motulsky and his collaborators at the University of Washington have identified three genes which together appear to account for a substantial fraction of heart attacks. The investigators studied all survivors of heart attacks in the Seattle area over an 11-month period. They found that about 20 percent of these people had one of three forms of hyperlipidemia or elevated blood levels of fatty substances. These three hyperlipidemias are: familial hypercholesterolemia, familial hyperglyceridemia, and familial combined hyperlipidemia. Furthermore, those persons who had one of these genetic lipid disorders had heart attacks ten years earlier on the average than did the rest of the population of heart attack survivors. By studying the relatives of the victims of heart attacks, Dr. Motulsky's group was able to show that each of these three lipid disorders was caused by a single defective gene.

These genes, which have in this way been shown to be involved in the etiology of atherosclerotic heart disease, are probably the most common disease related genes in the human population. No dramatic genetic disease, such as hemophilia or sickle cell disease, is seen and the individual carrying one of these genes is, to all appearances, normal except that he has an increased probability of having a heart attack in late middle age. Considering the high incidence of heart disease in the American population, it is important to understand better the genetic factors involved as well as the cellular mechanisms by which the genes that have been identified exert their effect.

NINCDS programs on genetic disease include research on myopathies, including the muscular dystrophies and glycogen storage diseases; the hereditary ataxias, such as Friedreich's ataxia; mucopolysaccharide storage diseases, like Hunter-Hurler disease; and hereditary torsion dystonia. Since the middle 1960's the laboratory of NINCDS scientist Dr. Roscoe Brady has been the focal point of many important discoveries concerning the enzymatic nature of a group of ten inherited metabolic lipid storage diseases. Their findings have demonstrated the underlying principle of defects in specific lysosomal hydrolases. Moreover, they have developed simple tests for diagnosis of these diseases, screening for carriers and antenatal detection of fetuses at risk (by culture of cells in amniotic fluid obtained by amniocentesis). Dr. Brady's work also has led to clinical trials of replacement of the specific deficient enzyme. Results are promising for two of these diseases--Fabry's and Gaucher's disease. Recently Dr. Brady and his associates have developed an animal model for Niemann-Pick disease which they expect will be useful for experimental studies of enzyme replacement therapy.

During the past year Dr. Andrew Gal, of Dr. Brady's laboratory, succeeded in synthesizing, in quick succession, three artificial chromogenic compounds for diagnostic tests in Gaucher's disease, Niemann-Pick disease, and Krabbe's disease. Such measurements can now be carried out with confidence by conventional clinical chemistry laboratories. Prior to these developments such diagnostic procedures required the use of radioactive compounds and specialized laboratories equipped with radioactive counting facilities.

The National Sickle Cell Disease Program, at the National Heart, Lung, and Blood Institute, supports activities to reduce the frequency, morbidity, and mortality of the disease. Coordinated programs of research, screening, education, and counseling are designed to improve the care and quality of life of sickle cell patients.

Research activities include:

- advanced techniques at the molecular and cellular level, to provide a better understanding of the nature of the sickling process. Modification of this process should be of significant benefit to the sickle cell patient.

- investigation of agents that inhibit or shorten the duration of sickling episodes. These include alternate approaches of drug administration involving extracorporeal techniques, by which the patient's blood is treated outside of the body, then reinfused. Preliminary data have suggested this technique reduces side effects often associated with infusion or oral therapy with such agents.

- increased levels of fetal hemoglobin (which does not sickle) may eliminate or ameliorate the symptoms of sickle cell disease in individuals with severe sickle cell syndromes. Current investigations center on the synthesis of fetal hemoglobin in human red cells.

- investigations into immune mechanisms underlying the increased susceptibility of sickle cell anemia patients to infections.

- development of a protocol on emergency room care highlighting symptoms related to sickle cell disease to address the problems of frequent errors in diagnosis.

- further clinical and research exploitation of the recently gained capability for accurate diagnosis of sickle cell disease (as well as other hemoglobinopathies) at birth, weeks or months before symptoms appear.

- the development of fetoscope to obtain fetal blood for the accurate diagnosis of abnormal hemoglobins early in pregnancy.

Increased information concerning the clinical aspects of sickle cell disease has been forthcoming from 15 Comprehensive Sickle Cell Centers. These include data on the damage to various organs such as the eyes, heart, kidneys, bones, and central nervous system. These investigations are also concerned with clarifying the normal course of sickle cell anemia, coping with the broad spectrums of severity observed in different patients, improving the quality of diagnostic and treatment services to those afflicted, and conducting education and non-directive counseling programs directed toward increasing the awareness and knowledge of the patient, the general public, and health professionals.

Highlights of educational activities include:

- the first National Sickle Cell Educational Symposium, held in St. Louis early in 1976, brought together physicians, paramedical personnel, and health educators to examine various aspects of public and professional education in sickle cell disease.

- regional sickle cell education workshops, held in 10 key cities in the U. S., provided training to over 600 people and resulted in the production of an 18-hour curriculum on sickle cell education.

- a self-instructional sickle cell audio-visual kit for physicians was produced and distributed to 6,000 physicians.

- establishment of a National Sickle Cell Information Center for developing and disseminating sickle cell information and educational materials.

Thus far, these educational programs have been very effective in increasing awareness and understanding about this disorder.

Outlook

It is expected that the close collaboration developed between the Public Health Service agencies during the past year will produce an optimum mixture of basic and clinical research on major problems of genetic disease and plans for services such as testing, counseling, and education related to genetic diseases. Important short- to long-range goals foreseen in medical genetics, given the practicalities of attainment, include the improvement of recognition of high-genetic-risk patients or families, the provisions of means by which to avoid the high risk, the amelioration of the severe effects of genetic diseases, and the possible correction of defects underlying inherited disease.

HEALTH SERVICES ADMINISTRATION

GENETIC DISEASES

BUREAU OF MEDICAL SERVICES

The Department of Health, Education, and Welfare has a legislative mandate to provide direct health care services to specified beneficiaries under provisions of the Public Health Service Act and the Dependents' Medical Care Act. This responsibility is discharged, in part, through the Bureau of Medical Services (BMS) of the Health Services Administration and, within the Bureau, through its Division of Hospitals and Clinics and Division of Federal Employee Health. The program authorities of the Bureau's Divisions of Emergency Medical Services and Health Maintenance Organizations do not encompass the direct delivery of health care services.

The Division of Hospitals and Clinics provides comprehensive health care services to American Seamen, active duty members of the U.S. Coast Guard, members of the National Oceanic and Atmospheric Administration, and to active duty Commissioned Officers of the U.S. Public Health Service. Services may also be provided to retired members of the uniformed services and to dependents of active duty and retired members of the uniformed services under the authority of the Dependents' Medical Care Act.

In addition, the Public Health Service Act permits the providing of limited health services to Federal employees by the Bureau's Division of Federal Employee Health.

Health care services within the Division of Hospitals and Clinics (DHC) are provided by eight general medical-surgical hospitals, one specialized treatment center (Hansen's Disease), 26 free-standing outpatient clinics, and more than 400 contract physicians and hospitals located throughout the United States. This major system constitutes a nationwide network within the Department for the delivery of comprehensive health care services, for training, and for research. In addition, the Division of Federal Employee Health operates 136 clinics in Federal installations across the country.

As compared to Fiscal Year 1975, total workload increased throughout the system, particularly with respect to ambulatory care visits which registered a 7.9% increase during Fiscal Year 1976.

Funds for clinical research studies are distributed through the Central Clinical Investigations Committee (CCIC) of the Division of Hospitals and Clinics, a formally-constituted body, that is also responsible for monitoring and evaluating research programs. During the year, approximately $300,000 of Fiscal Year 1976 funds of the

Division of Hospitals and Clinics were expended for clinical research, but no funds are presently allocated for research in Sickle Cell Anemia or Cooley's anemia. Other studies in PHS hospitals received $1,028,000 from the National Institutes of Health and $389,000 from the National Center for Health Services Research during Fiscal Year 1976 for research projects not related to Genetic Diseases.

This report includes information on the Division of Hospitals and Clinics activities related to the genetic diseases stipulated in Title IV of P.L. 94-278. These diseases are: sickle cell anemia, Cooley's anemia, Tay-Sachs disease, cystic fibrosis, dysautonomia, hemophilia, retinitis pigmentosa, Huntington's chorea, and muscular dystrophy. All of the general hospitals and outpatient clinics within the DHC system diagnose and treat persons with these illnesses. However, due to the characteristics of the diseases and the criteria for beneficiaries under the provisions of the Public Health Service Act, the number of people now treated with these diagnoses is relatively limited. In addition, precise data regarding the number and services rendered in these diagnostic categories to persons on an outpatient basis, cannot be obtained at this time. Nevertheless, of the 31,819 discharges from USPHS hospitals during F.Y. 1976, sickle cell anemia was the discharge diagnosis in 58 instances and Cooley's anemia was the discharge diagnosis in 38 instances. Patient days involved in these hospitalizations were 659 for persons with sickle cell anemia and 549 for those with Cooley's anemia at an estimated cost of $73,808 and $61,488 respectively. The estimated cost is based on an average daily rate of $112.

It is anticipated that the enactment of P.L. 94-278 will facilitate the development and operation of programs to provide voluntary testing, diagnosis, counseling and treatment of individuals at risk with respect to these diseases. This law also provides potential project support for "basic or applied research leading to the understanding, diagnosis, treatment, and control of genetic diseases..." Within the Division of Hospitals and Clinics, preliminary exploration is in process to ascertain the areas and scope of interest in developing programs concentrating on one or more of the specified diseases. Several USPHS hospitals, particularly those in Norfolk, San Francisco and Seattle are examining more closely the feasibility of developing specific projects. A newly established Branch in DHC (Program Coordination Branch) is expected to serve as the focal point to offer assistance in the development and implementation of these health delivery programs.

HEMOPHILIA

"Hemophilia" usually denotes the two most common forms of hereditary hemorrhagic disease: hemophilia A, or classic hemophilia, and hemophilia B, also known as Christmas disease. However, the term also embraces some twenty additional disease entities. All are characterized by deficiencies in the amount or activity of certain blood clotting factors that can lead to uncontrolled bleeding.

These deficiencies may be mild and of little or no clinical significance in many hemophiliacs. But moderate to severe clotting factor deficiencies in perhaps as many as 25,000 Americans pose a constant threat of hemorrhage, crippling, and premature death.

National Heart, Lung, and Blood Institute (NHLBI) research programs directed against hemophilia and other hemorrhagic disorders include studies on clotting factors in health and disease; development of improved methods of detecting, diagnosing, and evaluating the disease in therapy. It also involves research on the nature of clotting factor inhibitors and research to enhance the safety, effectiveness, and availability of blood and blood products for the prevention and treatment of bleeding episodes.

The National Institute of Arthritis, Metabolism and Digestive Diseases' Clinical Hematology Branch, and the Hematology Service of the Clinical Pathology Department, NIH Clinical Center, also conduct research on hemophilia.

Obligations for Programs in Hemophilia

	1974	1975	1976	1977 estimate	1978 estimate
National Institutes of Health:					
National Heart, Lung, and Blood Institute.....	$6,402,000	$7,740,000	$7,500,000	$8,046,000	$8,188,000
National Institute of Arthritis, Metabolism and Digestive Diseases.....	317,000	361,000	391,000	455,000	486,000
Clinical Center.....	20,000	57,000	20,000	20,000	20,000
Total, NIH.....	$6,739,000	$8,158,000	$7,911,000	$8,521,000	$8,694,000

NATIONAL INSTITUTES OF HEALTH

National Heart, Lung, and Blood Institute

Background

The coagulation of blood is a complex process involving many steps and the participation of numerous protein blood clotting factors. For a number of these clotting factors, there are hereditary deficiencies or defects that may result in bleeding tendencies ranging from mild to very severe.

Known collectively as the hemophilias, these hereditary hemorrhagic disorders include:

- classic hemophilia (hemophilia A), caused by a deficiency in functional factor VIII (antihemophilic factor, or AHF).
- hemophilia B (also called Christmas disease), caused by a deficiency of functional factor IX (Christmas factor).
- von Willebrand's disease (formerly known as "pseudohemophilia"), caused by a defect in the factor VIII molecule distinct from that in classical hemophilia A. Though perhaps the most prevalent form of hemophilia, it seldom causes severe bleeding problems.
- other, relatively rare, hereditary clotting factor deficiencies.

Their diversity, both as to type and degree of severity, foils attempts to determine the prevalence of the hemophilias in the population. In many hemophiliacs, the deficiency is mild and of no clinical significance. In others, clotting defects may become apparent only after some injury brings about severe bleeding that may prove difficult to control.

An estimated 20,000 Americans suffer from severe hemophilia. About 15,000 of these have hemophilia A; some 5,000 have hemophilia B.

Both hemophilia A and hemophilia B affect males almost exclusively. But both are nearly always transmitted by female carriers. In these sex-linked forms of hemophilia, if a male hemophiliac begets children, his sons will be normal, but his daughters will be carriers. If these daughters bear children, their sons have a 50-50 chance of being hemophiliac and their daughters a 50-50 chance of being carriers. Hemophilia can occur in women, but this is very rare because it requires a union between a hemophilic male and a female carrier. Daughters born of this union have a 50-50 chance of being hemophiliacs and those who escape the disease will be carriers. Sons born of this marriage have a 50-50 chance of being hemophiliacs.

Von Willebrand's disease can affect and be transmitted by either sex.

About 30 percent of all cases of hemophilia apparently occur among persons with no previous family history of the disease. Some of these cases probably represent errors or omissions in reconstructing the victim's family tree, but others may represent recent genetic mutations.

In victims of severe hemophilia, the chief threat to health or life is not excessive blood loss from surface cuts, abrasions, or related injuries. Bleeding from such causes can usually be staunched even if the coagulation defect of hemophilia remains uncorrected. The real threat is internal bleeding into organs, soft tissues, and joints. Such bleeding may occur with no apparent reason and is very likely to follow even seemingly minor trauma. The only effective means of control are infusions of fresh whole blood, plasma, so-called cryoprecipitates or factor VIII concentrates that correct (temporarily) the victim's coagulation abnormality.

The major causes of death among hemophiliacs are thought to be cerebral hemorrhage and severe internal bleeding due to trauma, but there are no reliable data on this. The major causes of permanent disability are orthopedic problems resulting from repeated hemorrhages into joints. These may result in progressive muscular atrophy, unstable joints, and related conditions that may eventually prove crippling.

Current NHLBI programs directed against hemophilia include basic research on antihemophilic factor and Christmas factor, their precise role in coagulation, the normal molecular structure of these factors, and genetic alterations occurring in hemophilia that cause them to perform poorly or not at all in clotting. Other research seeks possible means of stimulating the production or slowing the metabolism of normal factor VIII or IX in hemophiliacs. Still other studies seek substances with activity in the clotting process that might be modified to substitute effectively for the normal clotting factors in victims of the diseases.

Applied research is concerned with improved techniques for extracting concentrates of factor VIII and factor IX from whole blood or plasma, finding means of eliminating hepatitis virus or other dangerous agents from these concentrates, and improving techniques for detecting female carriers of hemophilia before they give proof of it by bearing hemophilic sons. A major cooperative study is seeking basic data on and effective means of dealing with "antibodies" against factor VIII that arise in some hemophiliacs, possibly as a result of repeated infusion or transfusion therapy.

Diagnosis

Severe hemophilia usually becomes clinically manifest early, and most cases are diagnosed during the first year of life. Mild or moderate hemophilia is more often diagnosed later, because the victim may have

sufficiently high clotting factor levels to prevent spontaneous bleeding episodes. Mild cases may not be detected until the patient bleeds excessively after trauma, a tooth extraction, or a surgical procedure.

Reliable coagulation tests have been developed for the routine screening of candidates for surgery. These cover the possible gamut of clotting factor defects or deficiencies. While they do not pinpoint the specific clotting-factor defect or deficiency, they clearly indicate the need (if any) for further tests that will.

These procedures are useful both for the detection of hemophilia and for assessing the severity of the disease. They are also of great value in monitoring the effects of therapy to prevent or control bleeding episodes in hemophiliacs.

Treatment

The prevention and treatment of serious bleeding episodes in hemophiliacs improved dramatically during the sixties with the introduction of clotting factor concentrates. Administered by intravenous infusion, these could temporarily restore normal coagulability to blood deficient in AHF or AHF activity, while eliminating many of the problems sometimes attending massive transfusions of fresh whole blood or fresh or freshly frozen plasma.

The first AHF concentrate to become widely available was a "cryoprecipitate" prepared by a technique developed by Dr. Judith Pool and associates at Stanford University. They found that, when fresh frozen plasma was slowly thawed in the cold, an AHF-rich precipitate formed. This precipitate contains, in concentrated form, upwards of half the AHF originally present in the plasma. The precipitate can easily be separated and stored for extended periods at very low temperatures until needed. Almost any hospital blood bank can prepare AHF concentrates by this method.

Other AHF concentrates are prepared by using physical-chemical techniques to precipitate AHF from plasma. Some of these use pooled batches of cryoprecipitate as the starter material and yield highly concentrated AHF that can be freeze-dried to a stable, powdered form that can be stored under normal conditions for prolonged periods.

Unfortunately, the use of pooled plasma or pooled cryoprecipitates also increases the risk that the resulting AHF concentrate may contain hepatitis virus. In addition, other complications observed in hemophiliacs may be the result of prolonged treatment: viz, hypertension, kidney disease, and appearance of inhibitors to AHF.

Most hemophiliacs receive episodic or "demand" treatment: that is, AHF concentrates are infused only when bleeding episodes occur or in anticipation of some dental or surgical procedure. The hemophiliac or some member of his family can usually be trained to administer such

infusions at home at the first sign of bleeding. Very early treatment frequently reduces the amount of concentrate needed to control the episode and also reduces damage to joints or other affected tissues.

For prophylactic care, AHF concentrates are infused regularly to sustain sufficiently high plasma levels to prevent most bleeding episodes. The universal adoption of this form of treatment would create a large demand on the nation's blood resource. As yet there are not sufficient data to show clearly that such prophylaxis is better than episodic therapy.

Episodic care for hemophiliacs requires the collection of the equivalent of an estimated 3 million units of whole blood each year. Prophylactic AHF therapy could increase this annual requirement to as much as 13 million whole blood equivalents (roughly 75 percent of all blood and plasma collected each year) if cryoprecipitate were used for the purpose. If powdered AHF concentrates were employed, the requirements would be considerably higher because of presently unavoidable AHF losses incurred during preparation.

Research

With the goal of increasing the availability of AHF concentrates and reducing their cost, NHLBI continues to support research concerned with improving the efficiency of present methods of extracting AHF from plasma. Other research is concerned with the development of effective substitutes for human AHF, such as animal sources, and with the quest for other substances with procoagulant activity.

Another approach involves bypassing AHF altogether by activating a subsequent step in the blood coagulation process. This approach has shown promise for controlling bleeding episodes in patients with factor VIII inhibitors.

The factor VIII molecule is so large and complex that laboratory synthesis of this clotting factor appears unlikely. However, research on the structure of factor VIII molecule indicates that it is composed of several smaller sub-units. One or more of these sub-units may be responsible for the procoagulant activity of the factor VIII molecule. The sub-units may be more amenable to precise structural determination and to synthesis in the laboratory.

The large size and complexity of the factor VIII molecule also provides a plausible explanation for the great variety of hemophilic states encountered among different families afflicted with hemophilia A. Structural defects may occur in a number of different sites within the molecule, with each defect affecting blood coagulability in a different way.

Similarly, in von Willebrand's disease, a major portion of the factor VIII molecule is missing, and this gross molecular defect

correlates with the abnormal platelet function and distinctive clotting disorder seen in patients with this disease.

Other approaches under investigation include:

- introducing minor chemical modifications in the AHF molecule that will not adversely affect its activity, but which might slow its rapid clearance from the plasma. The half-life of infused AHF is only 8-10 hours and its disappearance is still more rapid during bleeding episodes.

- using inhibitors of fibrinolysis—the mechanism by which the body dissolves clots--as an adjunct to AHF therapy. Inhibitors such as epsilon amino caproic acid (EACA) may reduce AHF requirements in certain bleeding episodes by safeguarding needed clots from attack. Used in this way, EACA is especially valuable for safeguarding hemophiliacs during dental procedures.

- transplanting AHF-producing tissues into hemophiliacs to help correct their deficiency of functional AHF: far out now, but a possibility.

Prevention

Female relatives of hemophiliacs are frequently concerned by the possibility of transmitting the disease to their own sons. The female carrier of hemophilia is usually asymptomatic. In some instances, the asymptomatic carrier can be identified by application of what is known about the mode of inheritance of hemophilia together with a close examination of the potential carrier's genetic background. But for the sex-linked forms of hemophilia, detection of the carrier state solely on the basis of family history is fraught with difficulty. In many instances, it is impossible to be sure, on historical grounds alone, whether she is normal or a carrier. The results of standard coagulation tests are often equivocal at best. Recently, however, NHLBI grantees have developed immunochemical methods that, in combination with standard coagulation tests, may identify carriers with an increased accuracy. This procedure has been studied in a collaborative study organized and sponsored by the NHLBI and the National Hemophilia Foundation. Complete results will be published shortly; the rationale for this procedure is as follows:

- Hemophiliacs synthesize both functional and nonfunctional AHF. The abnormal variant, which does not participate normally in clotting--and which does not show up in functional coagulation tests—comprises 90 percent or more of the total in moderate to severe cases. Immunochemical techniques employing antibodies against factor VIII, do not distinguish between these forms, i.e., the factor is present in normal amounts by antigenic criteria. Thus, by measuring two separate activities of factor VIII, the sensitivity of carrier detection has been increased. This has

permitted an increase in accuracy from a previous level of 50 percent to 90 percent now possible. Use of this method has been demonstrated in several clinics and laboratories.

- Carriers of hemophilia also synthesize both types of AHF, but the functional clotting factor comprises a considerably higher percentage of the total, so that functional coagulation tests may yield results within the normal range. If, however, the results of these tests are combined with those of the immunochemical tests, the presence of significantly high levels of nonfunctional AHF will identify the hemophilia carrier.

Conclusion

. The lot of the hemophiliac is much better today than it was only a few years ago. Unfortunately, it is still a difficult one, for the victim and for his family. It seems unlikely that the disease can be eradicated, nor are the expectations very bright for a cure during the near future. However, through continued research and the fullest possible application of new knowledge gained through such efforts, we can continue to reduce the physical, emotional, and financial burdens presently imposed by the disease.

HYPERTENSION (HIGH BLOOD PRESSURE)

High blood pressure (hypertension) affects at least 23 million American adults. Of these, about 14 million have hypertensive heart disease (chiefly heart enlargement) resulting from the elevated blood pressure. The prevalence rate of high blood pressure among U. S. blacks is about twice as high as among whites, and the prevalence rate of hypertensive heart disease among black males is nearly three times that of white males. Over 15 million Americans with high blood pressure are under age 65 and more than 4 million are under 45.

Probably due to the availability and widespread use of effective drugs for blood pressure control, the U.S. death rate from high blood pressure has declined more than 65 percent since 1950. But the disease still claimed over 20,000 deaths a year directly and contributes to hundreds of thousands of other deaths from heart attacks and strokes. In addition, high blood pressure places an added burden on the heart that may ultimately drive it into failure and may stress or damage arteries and the organs they supply throughout the body. The kidneys are highly vulnerable to such damage, and kidney failure is a common complication of severe hypertension.

High blood pressure alone roughly doubles the risk of heart attacks and other manifestations of coronary heart disease. The threat is amplified by the presence of other risk factors. For example, if the person with high blood pressure is a cigarette smoker, the risk from coronary heart disease is increased by a factor of 3.4. If, in addition, blood fats are elevated, the risk is more than 10 times that of persons with none of these risk factors.

Obligations for Programs in Hypertension

	1974	1975	1976	1977 estimate	1978 estimate
National Institutes of Health: National Heart, Lung, and Blood Institute...	$40,983,000	$39,254,000	$52,250,000	$56,059,000	$57,045,000

NATIONAL INSTITUTES OF HEALTH

National Heart, Lung, and Blood Institute

When the physician determines blood pressure with the familiar blood pressure cuff, two numbers are recorded. The higher of the two (expressed in millimeters of mercury) is called the systolic blood pressure. This

is the pressure developed in the major arteries by contraction of the heart (systole). The lower number represents the pressure persisting in the arteries while the heart relaxes and refills between beats (diastole) and is called the diastolic blood pressure. The upper level of normal systolic pressure in adults is considered to be around 140, the upper level of normal diastolic pressure around 90. This would be recorded as 140/90.

Most investigators consider a diastolic pressure of 90 to be the upper limit of normal and a diastolic pressure that persistently exceeds 95 as hypertension. Most experts agree that persons with blood pressure above 140 systolic and/or 90 diastolic should be referred to a physician for evaluation of their condition.

In only about 10 percent of persons with hypertension can any specific organic cause be identified to account for their elevated blood pressure. The remaining 90 percent are said to suffer from "essential" or "primary" hypertension. The cause of essential hypertension is not known.

Many victims of essential hypertension develop the disease during their thirties. During the early stages of the disease, it seldom produces any symptoms perceptible to the person who has it, and the absence of noticeable symptoms may persist until the disease is well advanced. If undetected and untreated during its early or middle stages, the disease may enter an accelerated phase, sometimes called "malignant hypertension," in which the victim's blood pressure, previously elevated but stable, climbs sharply to levels that pose an immediate threat to survival. The accelerated phase usually occurs when the disease has already produced some blood vessel damage in the kidneys.

High blood pressure is usually considered a disease of adult and middle life. But current evidence indicates that it may be possible to identify forerunners of high blood pressure in adolescence or even in childhood or infancy.

For this reason NHLBI is supporting studies to identify possible precursors of high blood pressure in defined groups of young people, and to evaluate the extent to which suspected precursors in the young can explain why certain subgroups within the population have relatively higher rates of hypertension.

- Some studies, among twins and family groups, are looking at the role of genetic, environmental and psychological factors as they relate to the development of hypertension.

- Others are concerned with "tracking" blood pressure levels in children. These studies are designed to evaluate the hypothesis that one's blood pressure level relative to other individuals of the same age is fixed early in life, so that individuals tend to remain in the same track as they grow older, unless intervention occurs.

- Still others deal with factors measured prenatally and during infancy to determine characteristics that may identify predictors of hypertension.

- Also under study are children of mothers who had toxemia during pregnancy or else were found to have high blood pressure prior to pregnancy. The studies will investigate the hypothesis that elevated blood pressure in the pregnant woman may be a potential risk factor for her offspring developing high blood pressure.

- Other potential precursors or correlates of blood pressure include diet, psychological characteristics, demographic factors, growth patterns, and a variety of hemodynamic, physiologic and biochemical factors. Aspects of all of these are included in aforementioned projects or others being funded by the Institute.

Treatment of High Blood Pressure

The specific drug or drug combination used by the physician varies with the severity of the disease and also with the patient's response to the medication prescribed. No single agent is uniformly effective in all patients or against every phase of hypertension. But where one drug fails, another drug or drug combination will usually succeed, so that only in rare instances does it prove impossible to control the patient's blood pressure.

These agents are not without side effects, especially in higher doses. With some drugs, the side effects are relatively mild and work no hardship. They neither impeded the patient in his job nor in other pursuits. However, all of the most effective antihypertensive drugs may cause undesirable side effects, including blurred vision, bladder dysfunction, constipation, anemias, liver disease, abnormal heart rhythms, and sexual impotence in males.

Fortunately, side effects can usually be minimized by using several agents in combination, each in relatively low doses. Minimizing side effects is important because even relatively mild side effects can become bothersome to patients faced with the prospect of remaining on medication indefinitely. They may be especially annoying to the patient with high blood pressure who had experienced no symptoms until treatment was initiated.

The benefits of therapy in reducing illness and mortality from stroke, heart failure, and kidney failure have been convincingly demonstrated among patients with diastolic pressure above 105. Evidence from epidemiological studies indicates that even mild hypertension increases the individual's risk of coronary heart disease, stroke, and other cardiovascular disorders, but the probable benefits of blood pressure control are more difficult to verify though probably equally valid.

High blood pressure is easily detected in the physician's office. Yet, because the disease in its early stages seldom produces symptoms that send the afflicted person to a doctor, many American adults with high

blood pressure do not know that they have it and others who know about their high blood pressure may not be taking any treatment for it.

National High Blood Pressure Education Program

In an effort to combat some of these problems, NHLBI is participating in an educational effort involving Federal and private organizations. The National High Blood Pressure Education Program (NHBPEP), which was initiated in 1972, is aimed at alerting both the medical profession and the public about the dangers of high blood pressure and the beneficial effects of therapy. NHLBI has been designated the coordinating agency, but the Program enjoys the support and cooperation of some 15 Federal agencies, as well as approximately 150 national organizations and virtually all state health departments.

The Program currently supports a variety of research efforts to determine cost-effective ways of achieving high blood pressure awareness or behavior change in the public, patients and health professionals. Particular emphasis has been placed on effective patient education to promote adherence to treatment. In addition, the Program will support this year several projects to evaluate hypertension control at the work site. Employee health programs offer a unique opportunity to identify hypertensive persons and to help them remain under the needed long term therapy. For every employee dying from an industrial accident, some fifty die from cardiovascular disease, so the effort has significant promise in helping control escalating health benefit costs.

NHBPEP activities in professional education include development and dissemination of recommendations for detection, treatment and patient education, development of professional educational materials (including patient education films), and close liaison with key professional organizations and medical standard setting groups.

A particularly important accomplishment has been the development of the first national consensus on approaches to detecting, evaluating and treating high blood pressure. Previously, the traditional authoritative sources for these recommendations varied widely enough to cause confusion among medical practitioners. Recommendations have been developed for both the adult and pediatric populations. The latter is important as it became known that sizeable numbers of children had blood pressure far above the norm for their age and sex.

Program services include the High Blood Pressure Information Center, which responds to public inquiries, develops and evaluates educational materials; distributes, free of charge, educational materials produced by the NHBPEP and other organizations; operates a Speaker's Bureau for local, state and national meetings; and manages a vigorous exhibit program which has taken the program's recommendations to 46 professional and non-professional meetings. The High Blood Pressure Information Center distributes over 1 million information pieces in response to over 25,000 requests annually. The Community Consultation Service has provided on-site need assessment and technical assistance in planning and implementing

hypertension control programs to more than 200 communities to date, and averages 25 new contacts a month with local communities.

Although it is too early to assess changes in the health status of the population as a result of NHBPEP efforts, some striking changes have been observed. After little change from 1964 to 1971, patient visits for hypertension and hypertensive heart disease have increased over 50 percent between 1971 and 1975; visits for all causes rose only 13 percent in this period. The number of patients aware of their condition may have increased from less than 50 percent to over 70 percent and the number well controlled appears to have grown from 16 percent to 29 percent. Death rates from cardiovascular disease have been dropping since 1950, but one-third of the decline has occurred since 1972. Increased interest in hypertension control must be assumed to be a major contributor to this decline.

Current Research Efforts

The National Heart, Lung, and Blood Institute (NHLBI) currently supports more than 200 research projects at universities and medical centers all over the country concerned with etiology, pathogenesis, prevention, diagnosis and treatment of high blood pressure, and with related subjects, such as kidney disorders and physiology. The Institute also conducts research in its own laboratories at Bethesda.

Principal research areas in the hypertension program include:

- The search for causes of essential hypertension, and identification of genetic and environmental factors that increase susceptibility to the disease or aggravate its clinical course. Without such knowledge, cures or effective means of prevention are unlikely.

- Evaluation of drugs and other therapeutic procedures for blood pressure control and assessment of the effects of these measures in reducing illness and death from hypertension and such complications as heart attacks, strokes, congestive heart failure, and kidney failure.

- The role of the nervous system, hormones, and other biologically-active substances in regulation of blood pressure.

- Physiology and pharmacology of vascular smooth muscle in normotensive and hypertensive conditions.

- Diagnosis and treatment of hypertension secondary to kidney disorders, endocrine disorders, and certain tumors.

- The kidney mechanisms operative in maintaining fluid and electrolyte balance, and disturbances in these mechanisms that may underlie or result from hypertension.

- Identification of innovative methods of educating professionals and the general public about all aspects of hypertension (National High Blood Pressure Education Research Program).

The Institute also supports specialized centers of research on hypertension at Cornell, Vanderbilt, Boston and Indiana Universities. These centers are conducting research on problems which include:

- interactions between the sympathetic nervous system, renin-angiotensin, aldosterone, renal function, and sodium metabolism in the etiology and maintenance of hypertension;
- studies of inheritance of hypertension and biochemical parameters;
- comparison of surgical and medical treatment of renovascular hypertension;
- isolation and characterization of pure renin;
- pharmacology of propranolol and role of kallikrein, kinins, and prostaglandins in hypertension;
- the role of new mineralocorticoids in human and experimental hypertension;
- the role of renin-angiotensin system and other humoral factors in the development of hypertensive vascular disease;
- the identification and typing of hypertensive patients using endocrine profiles related to electrolyte metabolism;
- development of treatments for hypertension based on specific physiologic alterations.

Other definitive information will be provided by the NHLBI Hypertension Detection and Follow-up Program, established in 14 clinical centers. Approximately 11,000 patients age 30 to 69 with diastolic pressure exceeding 95 at initial screening are being followed. The goal is to assess the effectiveness of anti-hypertensive therapy in controlling high blood pressure and the extent to which disability and death from its complications can be reduced. An important secondary goal is to overcome problems in motivating patients with high blood pressure to seek treatment and to adhere faithfully to the prescribed therapeutic regimens. Over 157,000 persons were screened to obtain 11,000 participants. Among those observed one year or longer, 73 percent have achieved their goal blood pressure: between 80 and 90 for the diastolic blood pressure, depending upon baseline blood pressures.

High blood pressure often co-exists with other cardiovascular disease risk factors, and such combinations can sharply escalate the threat to the life and health of affected persons. It has been estimated that 80

percent of death and disability from cardiovascular disease occurs among persons having one or more of the following: high blood pressure, elevated blood fats, and the cigarette smoking habit. Persons with two or more of these risk factors run 3 to 10 times the risk of those with none. Now getting underway is the NHLBI Multiple Risk Factor Intervention Trial, which will evaluate the effectiveness of countermeasures against these three risk factors among high-risk males age 35 to 57. Recruitment of the approximately 12,000 study participants has been completed. The clinical phase of the trial will be finished in 1981.

Another component of the National Institutes of Health, the National Institute of Neurological and Communicative Disorders and Stroke, has a strong interest in hypertension because of its well established relation to cerebrovascular disease. For example, in a carefully conducted prospective study carried out in a stable community population in Japan, hypertension as a major risk factor in stroke was clearly established. Also, there is accumulating evidence that hypertension and stroke are emerging as major problems among young adults in many African and Asian developing countries. Plans are under way to pursue this lead, not only to uncover the cause in these countries, but also for what the work might tell us about strokes among young people here.

This Institute's Perinatal Research Program has contributed essential data to studies of hypertension in children, and of relationships between hypertension in pregnant women and outcome of the pregnancies.

Conclusion

Although medical science can neither prevent essential hypertension nor cure it, research over many years has yielded a large body of information about blood pressure control mechanisms and some of the derangements that occur. It has led to the development of many drugs for controlling high blood pressure of all degrees of severity and agreement that such drugs can save and prolong lives among patients with moderate to severe high blood pressure. It has yielded effective means for identifying potentially curable secondary forms of high blood pressure and for searching out persons most likely to benefit from surgery or other definitive therapy. Continued research undoubtedly will yield safer, more effective drugs for blood pressure control, that eventually lead to cures where now only palliative measures exist, and will help eliminate high blood pressure as a major cause of illness, disability, and death in the United States and around the world. In the meantime, ongoing public and professional educational activities of the National High Blood Pressure Education Program will increase application of our current knowledge toward the control of hypertension, so that growing members of hypertensives will become aware of their disorder and motivated to adhere to prescribed treatment regimens.

CENTER FOR DISEASE CONTROL
Immunization
Obligations for Immunization

	1974	1975	1976	1977 Estimate	1978 Estimate
Grants	$10,650,000 1/	$6,200,000	$4,960,000	$13,000,000	$13,000,000
Direct Operations	1,228,000	1,339,000	1,384,000	1,494,000	1,494,000
Total	$11,878,000	$7,539,000	$6,344,000	$14,494,000	$14,494,000

Since 1963, project grants have been awarded to State and local health agencies to assist them in planning, developing, and conducting immunization programs. Initially, grants were awarded to assist health agencies in developing and implementing mass immunization programs agains poliomyelitis, measles, and rubella shortly after licensure of live vaccines against these diseases. These programs were generally oriented toward a single disease and accounted for substantial reductions in morbidity and mortality from the diseases.

As the large numbers of susceptibles for poliomyelitis, measles, and rubella were individually reduced, comprehensive immunization programs directed toward all of the major vaccine preventable diseases of childhood were supported to maintain the decline in morbidity and mortality which had begun.

During calendar year 1974, reported cases of these diseases reached all-time lows. However, in 1975, reported cases of measles began to increase and in 1976 had approximately doubled the number of cases reported in 1974. In addition, there still remain unprotected some 16.7 million children against polio, 10.5 million against diptheria, pertussis, and tetanus, 10.6 million against measles, 14.7 million against rubella, and 27.3 million against mumps. In addition, there has been a significant decline in the number of doses of vaccine distributed through public programs during the period 1972-1976.

All States and territories will continue to receive immunization project grant assistance in 1977 and 1978. With increased funding in 1977, renewed emphasis will be placed on the following immunization program components: (1) routine immunization of infants and young children, (2) capability to conduct comprehensive community immunization programs, (3) comprehensive surveillance, (4) prompt and competent outbreak control, (5) program assessment, and (6) educational/ motivational efforts.

The Center also provides technical assistance to States and localities, and is continuing to coordinate a nationwide public and professional awareness program, called Immunization Action Month, which is attempting to revive interest among parents and physicians in insuring that children receive adequate immunization.

1/ Includes $4,450,000 of 1973 funds restored in 1974.

LEAD-BASED PAINT POISONING

Obligations

	1974	1975	1976	1977 Estimate	1978 Estimate
Public Health Service: Center for Disease Control	$14,250,000	$9,885,000	$3,500,000	$8,500,000	$8,500,000
Health Services Administration	1/	1/	1/	1/	1/
Office of Human Development	1/	1/	1/	1/	1/
Total	$14,250,000	$9,885,000	$3,500,000	$8,500,000	$8,500,000

1/ Obligations not identifiable.

CENTER FOR DISEASE CONTROL

LEAD-BASED PAINT POISONING

Since 1972, grants have been made to assist communities in developing childhood lead-based paint poisoning prevention programs. These programs are designed to identify children with undue lead absorption and to provide appropriate medical and environmental followup services. In addition, they coordinate the lead screening and medical followup services provided by the other child health programs and supplement these activities by providing an active outreach effort in high risk neighborhoods where lead-based paint is accessible to children.

Lead seriously affects the body in many ways and can produce irreversible effects on the central nervous system. Studies have indicated that levels of lead absorption previously thought tolerable can result in metabolic disorders, mild neurologic disabilities, educational underachievement, and hyperactivity. The Childhood Lead-Based Paint Poisoning Prevention Programs serve as the focus within the community to provide the intensive outreach and followup necessary to identify and protect children at risk of the disease before irreversible neurologic damage or death can occur.

In fiscal year 1976, 66 grants were made to those programs which continued to document a significant problem and which had developed productive programs. These projects screened an estimated 500,000 during the five quarters and identified approximately 43,900 children requiring pediatric management.

Environmental epidemiologic services were provided and lead abatement action was carried out in 80 percent of those houses found with a lead hazard. The fiscal year 1977 appropriations will be used to continue support to approximately 55 projects which are faced with the most severe lead poisoning problem. With increased State and local support, increasing awareness of the lead poisoning problem by the medical community, and with full implementation of the erythrocyte protoporphyrin screening procedure, approximately 400,000 will be tested. It is estimated that 36,000 children with undue lead absorption will be identified. Efforts will be intensified to encourage the incorporation of lead poisoning prevention services into the other child health programs.

In addition to the administrative, technical, and consultative services, the Center for Disease Control will continue to maintain a laboratory proficiency testing program and assist local communities without a lead program to assess their needs.

The number of communities receiving project grant assistance in 1977 and 1978 will decline as State, local and other Federal resources are used to maintain child screening and followup programs.

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PUBLIC HEALTH SERVICE

Health Services Administration
Bureau of Community Health Services

Lead Poisoning

Excessive exposure to lead among children, largely from lead paint on old dwellings, but also from other environmental sources, remains a major public health problem in many areas. Maternal and Child Health Grants to States support Children and Youth projects which continue to screen their population for undue lead absorption and lead poisoning. In recent years, the number of cases of severe or overt lead poisoning among children has diminished, but undue lead absorption is still common, especially among the young. Studies in the last few years have increasingly suggested that neuropsychological impairments, including learning disorders and hyperactivity, may occur in young children unduly exposed to this toxic element who are otherwise "asymptomatic." One study suggested an association between excessive prenatal exposure to lead in drinking water and mental retardation. In view of these findings, the upper limit of normal blood lead level for young children and pregnant women has recently been revised downward from 40 ug/100ml to 30 ug/100ml.

The issue of "low" level lead toxicity in the young (born and unborn) is far from clear-cut and is a source of considerable controversy. However, it deserves considerable attention because undue lead absorption is common among children, the findings so far carry very serious implications, and the problem is preventable. Further research to clarify the toxic effects of lead in the very young is needed. In the meantime, health workers and the public should be educated and/or reminded continually about the many hazardous lead sources which include not only lead paint on houses, but also contaminated dust and dirt, and drinking water conducted through lead pipes in older homes, particularly if the water in the area is soft.

The effects of undue lead exposure in the pregnant women and their offspring have gained considerable attention recently as more women enter the labor force and take on jobs with occupational lead hazards. In addition to the study linking prenatal lead exposure to mental retardation mentioned above, some preliminary reports have suggested increased obstetrical complications in women unduly exposed to lead.

The Bureau of Community Health Services has continued its efforts in educating health workers and the general public on the problem of lead poisoning through its many publications. It has also continued to provide technical assistance and consultation upon request to various government and nongovernment agencies on the problem.

LONG TERM CARE

Obligations

	1974	1975	1976	1977 Estimate	1978 Estimate
Office of Assistant Secretary for Health					
Office of Long-Term Care	$ ---	$ 443,000	$ 687,000	$ 699,000	$ 692,000
ADAMHA					
National Institute of Mental Health	250,000	250,000	250,000	250,000	250,000
Health Resources Administration					
BHPRD, Health Facilities Construction[1/]	10,691,000	5,110,000	21,511,000	3,000,000	---
Bureau of Health Manpower	---	835,496	1,155,689	210,002	---
National Center for Health Statistics	329,000	671,000	690,000	695,000	695,000
National Center for Health Services	5,322,000	3,627,000	987,000	1,600,000	1,300,000
Emergency Medical Services Research	---	278,000	---	192,000	---
Office of the Secretary					
Regional Directors	---	---	7,587,000	6,969,000	7,051,000
Facilities Engineering and Property Management	---	---	902,000	731,000	766,000
Social and Rehabilitation Service:					
Office of Planning, Research and Evaluation	---	237,000	1,149,000	1,271,000	1,400,000

	1974	1945	1976	1977 Estimate	1978 Estimate
Medical Services Administration:					
Skilled Nursing Facilities.....	---	---	1,437,000	1,764,000	1,995,000
Intermediate Care Facilities.....	---	---	1,547,000	1,900,000	2,150,000
Social Security Administration					
Medicare Benefit Payments to Skilled Nursing Facilities.....	---	267,000,000	398,000,000	379,000,000	441,000,000
Medicare Expenditures for Certification of Skilled Nursing Facilities by State Agencies.....	---	6,494,000	8,753,000	8,275,000[2/]	8,875,000[3/]
TOTAL.....	16,592,000	284,945,496	444,655,689	406,556,002	466,174,000

1/ Included in "Funds for Programs on Aging"

2/ Based on FY 1977 Bureau of Health Insurance (SSA) Regional Office allocation for certification of Skilled Nursing Facilities.

3/ Estimate based on the FY 1977 Bureau of Health Insurance (SSA) Regional Office allocation for certification of Skilled Nursing Facilities.

OFFICE OF ASSISTANT SECRETARY FOR HEALTH

Office of Long Term Care

The Office of Long Term Care (formerly the Office of Nursing Home Affairs) was formed as the Departmental and Public Health Service focal point for nursing home affairs called for by the President's Nursing Home Directives of August 1971. On August 30, 1974, a revised Statement of Organization, Functions and Delegations of Authority was issued giving OLTC responsibility to serve as the focal point for long-term care (LTC) and for Office of Assistant Secretary for Health's (OASH) responsibilities in Departmental programs on aging. In 1975 further responsibility was delegated to OLTC for coordinating the development of a comprehensive interagency objective to expand both beneficiaries and services covered by home health care.

In addition to being broadly involved and working closely with PHS and Departmental agencies in the Headquarters area, OLTC works directly with the Regional Offices of Long Term Care Standards Enforcement (OLTCSE) in all of the Regional Offices to advise and administer the activities relating both to the approval and termination of agreements with skilled nursing facilities (SNFs) participating in Medicare and Medicaid programs.

To assure a free flow of information and communication among all of the involved agencies, an Intra-agency Long Term Care Advisory Group meets regularly to report on assigned tasks and recommends priority action area.

Currently involved in aspects of long term care and aging are: the Bureau of Health Insurance of the Social Security Administration; Medical Services Administration of Social and Rehabilitation Service; Bureau of Quality Assurance, Health Services Administration; National Center for Health Statistics; Comprehensive Health Planning Service, Health Care Facilities Service (Hill-Burton), and the Bureau of Health Services Research, all of Health Resources Administration; National Institute of Mental Health, Alcohol Drug Abuse, and Mental Health Administration; National Institutes of Health; Administration on Aging; and Office of Facilities Engineering and Property Management.

Major program areas in which the Office of Long Term Care is involved include:

A. Long Term Care Facility Improvement Campaign (LTCFIC)

On June 21, 1974, the Department of Health, Education, and Welfare announced a campaign to improve long-term patient care in nursing homes. The initial projects of this campaign was a survey of skilled nursing facilities. This survey was conducted under the lead of OLTC in coordination with the Office of the Under Secretary. The survey asked three basic questions: Who are the patients? How are nursing homes managed? How good is patient care? The survey was conducted by teams of specially trained experts. Each team consisted of

a physician, a nurse, an administrator, a nutritionist, a pharmacist, a physical therapist, a fire safety engineer, and a social worker. The initial data gathering phases of the LTCFIC was completed during November 1974. A complete report of the survey findings entitled LONG TERM CARE FACILITY IMPROVEMENT CAMPAIGN: INTRODUCTORY REPORT was published in July 1975. Several clear needs for action emerged from the survey findings. These needs include:

1) A total review of the survey/certification process.

2) Nationwide training and certification of all State surveyors.

3) Complete analysis of the entire fiscal approach to reimbursement for services provided.

4) Alternatives to institutional care, such as home health care and day care.

These findings led to an announcement by the Under Secretary of the Department of Health, Education, and Welfare of Phase II of the Long Term Care Facility Improvement Campaign in February 1976. This phase focuses on patient care rather than on the institutional framework within which care is provided.

One direct way of improving patient care is to obtain and refine a mechanism by which an individual patient's care outcome can be measured systematically at regularly scheduled intervals. This would provide a method for determining the allocation of resources in a facility and whether the services provided are those actually needed by the patient. A Patient Appraisal and Care Evaluation (PACE) instrument being tested in selected nursing homes, both SNFs and ICFs in 19 States across the Nation.

The following steps have been carried out or are planned for Phase II:

- Introduce, on a demonstration basis, a Patient Appraisal and Care Evaluation (PACE) instrument in long-term care facilities receiving Federal reimbursement who volunteer for participation.

- Test and refine the process by which patient care outcomes can be measured systematically and provide a method for determining resource allocation in the facility.

- Evaluate results of efforts of the pilot study, make the necessary modifications in PACE, and develop a national study of nursing homes.

- Assess all standards in the present Medicare and Medicaid programs to identify those standards that relate to facility improvement and those which are essential to provide an evaluation of patient care.

- Assess the Medicare and Medicaid reimbursement mechanism with a view toward developing reimbursement procedures with incentives linked to performance.

B. Development of Standards for Long Term Care

In January 1974, the regulations governing intermediate care facilities (ICFs) were published, creating in response to Congressional legislation, a new level of care to be provided under the Medicaid program.

Guidelines and survey forms were developed for ICFs including special forms for needs of intermediate care facilities for the mentally retarded (ICF-MR) and developmentally disabled. Bureau of Quality Assurance, which has a lead role in interagency work groups developing guidelines and forms, projects training needs which new regulations will require and plans expanded activities to sensitize and alert surveyors to special needs of MR patients and facilities and upgrade technical assistance to providers.

Operations manuals for Regional and State officials were developed and distributed for SNF, ICF and ICF-MR programs and are being reviewed and revised as necessary to reflect programmatic policy and regulation changes on a continuing basis.

The regulations governing ICF-MRs provide that by March 1977, ICF-MRs must meet certain standards for the care of the mentally retarded. Modified regulations were published as Notice of Proposed Rule Making in December 1976 to assist the States through the ROL/TCSEs in fulfilling their plans of correction so that they will meet the ICF-MR standards.

C. Standards Enforcement

Efforts to improve the enforcement of Life Safety Code requirements in SNFs and ICFs have been continued. This was done by providing additional training to State surveyors at the Regional Office level and by increased surveillance and review of State survey agency activities.

D. Long-Term Care - Management Information System

Demands for instant information on surveys, certification, status of individual homes, Life Safety Code inspections, termination of

Federal funding, and other matters of current nursing home concern have now mounted to the point where it is imperative to produce up-to-the-minute answers without delay.

Several of the data programs developed or being developed within the Department contain information about long-term care facilities and needs. These include the National Center for Health Statistics' Nursing Home Survey, the Bureau of Health Insurance of the Social Security Administration's Health Insurance data and the Medical Services Administration of the Social and Rehabilitation Service's Management data. These data are being consolidated to develop a more consistent data base at both Headquarters and Regional levels. The Long-Term Care Management Information System (LTC-MIS) will be fully operational in FY 1977 and will provide a comprehensive data base for use by both headquarters and regional office staff.

E. Non-Institutional Care

There are many indications that home health and related programs are a cost-effective and humane ingredient in the continum of care, providing alternative and appropriate care and, at the same time, releasing valuable institutional resources to treat patients with more complex health care requirements. A two-pronged approach has addressed (a) the development and support of program activities related to the organization, management, and expansion of quality home health services; and (b) the promotion of greater utilization of home health services by resolution of problems of reimbursement in regard to Medicare and Medicaid recipients. In addition, OLTC was a major participant in conducting and evaluating the Home Health hearings which were conducted across the Nation in FY 1976.

F. Consumer/Provider Interest in Nursing Home Conditions and Federal Standards

The Office of Long Term Care program of consumer/provider activities has included local, State, area-wide, regional and national levels of participation. The consumer comprised three major groups: (1) providers of services within the nursing home industry (i.e., industrial representatives and professional and non-professional personnel); (2) clients as consumers of services who seek or use these health care services (i.e., patients, families and additional community membership); and (3) other interested individual and group citizenry. The consumer groups were represented in terms of individual institutions and through national organizations or associations.

A series of Provider/Consumer meetings have been held which were designed to bring to approximately 100 key national organizations, and they to their constituency, an interpretation of Federal regulations or policy issues.

ALCOHOL, DRUG ABUSE, AND MENTAL HEALTH ADMINISTRATION

National Institute of Mental Health

Long Term Care

Since 1964, the resident population of state and county mental hospitals has dropped from about 500,000 to less than 220,000 today. Several factors contribute to the steep decline, including rising costs of hospitalization; influence of court decisions; availability of psychoactive drugs; increasing availability of community alternatives; and the opportunity for state mental health agencies to save money by transferring costs of long-term mental health care to Federally subsidized programs.

Nursing homes have been replacing state hospitals as the primary locus of long-term care for elderly, mentally impaired persons. In 1974, the total number of elderly nursing home residents with mental disorders or senility was 847,000, almost 3 times the number in 1964. This trend is continuing. At the same time, the number of aged in State mental hospitals decreased 40 percent between 1969 and 1973. There is strong evidence to indicate that 55 percent or more of the patients in nursing homes are mentally impaired.

Nursing home care is now the largest single locus of care for the elderly mentally ill, representing 29.3 percent or $4.2 billion of the total estimated direct costs of mental illness in 1974. State and other public mental hospitals accounted for only 22.8 percent of the total direct care costs of that year. There are now 1.2 million nursing home beds in the United States, more than twice the number of surgical hospital beds.

Most nursing and boarding facilities have little or no staff trained to work with mentally disabled persons. Many instances of exclusion, neglect, and abuse of rights have been reported and documented in such community facilities. There has been a backlash in some communities, reacting against the placement of large numbers of mentally disabled persons for whom few appropriate services are available. At the same time, scattered programs in various communities have continued to demonstrate that a carefully planned network of small community-based facilities and services is preferable to the large, remote facilities of a public hospital.

NIMH Efforts

In 1974 the NIMH Division of Mental Health Service Programs began a concerted effort to develop policies and programs relative to services to the chronically ill. While long-term care is to be avoided wherever possible, the practice of unrestricted deinstitutionalization without regard to the availability of appropriate alternative facilities is at least equally undesirable.

NIMH sponsored a series of working conferences to obtain and synthesize advice from a broad range of leaders from state and local agencies, universities, citizen and consumer advocate groups, other Federal agencies, and national organizations concerning both policy and program development strategies in the area of deinstitutionalization. Through this conference series, a consensus has emerged to shape NIMH policy along the following lines. First, deinstitutionalization is no longer seen as a goal in itself, but rather a complex phenomenon which happens for a combination of reasons. This phenomenon calls for better coordinated efforts among agencies at all levels of government if it is to be a viable alternative to long-term care, and benefit the individuals involved. Second, NIMH is now focusing attention on development of comprehensive community support systems for persons with mental disabilities. Components and guiding principles for such systems have been conceptualized, defined, and validated in the conference series. Third, a consensus has emerged on the necessity for mental health agencies at Federal, state and local levels to play a leadership role in working with human service agencies such as housing, social services, vocational rehabilitation and others to assure that mentally disabled clients returned to the community have access to, and receive, services appropriate to their needs.

Opportunities for collaboration between NIMH and other Federal agencies which share responsibility for community support systems have been explored. A formal interagency agreement is being developed between NIMH and the Rehabilitation Services Administration.

Clarification has been obtained from the Department of Housing and Urban Development on the eligibility of mentally ill for a wide range of types of Federal housing assistance. A manual is being prepared to help state and local mental health agencies work with housing programs to develop community living arrangements for deinstitutionalized clients.

In other areas, a monograph series on effective models of community-based service to the chronically disabled adult psychiatric client is in preparation. Individuals have been designated in each Regional Office, either formally or informally, to work on community support issues.

Nursing Home Improvement Program

For several years, the NIMH has addressed the problems of the quality of long-term care through its Nursing Home Improvement Program.

Following a statement of Presidential support on nursing homes in August 1971, NIMH staff began development of approaches to the creation of short-term training programs in mental health for staff of the Nations nursing homes. The program was developed through the mechanism of contracts with appropriate educational institutions, professional organizations, and service agencies. This represented the first time that nursing homes per se were made the focus of a specific mental health training program. Because of limited resources, the immediate concern was to develop a program that could have maximum impact in a relatively short period of time, and on as large a segment of the population as possible. At the same time, the program was intended to assure a sound basis on which long-term planning could be built. It was decided that the concern should not be as much with development of training materials or curricula, as with the development of mechanisms for transmitting knowledge of principles and methods of practice which would promote the mental health of patients (and personnel) in nursing homes, and minimize impairment of function caused by mental disorder. For maximum efficiency and impact, it was necessary to call upon existing resources rather than attempt to develop new ones. As a result, the program drew on existing organizations and established "models" of collaboration which could be tested, modified, and then put into operation around the country.

During the past year, the Nursing Home Improvement Program awarded a contract to develop a model continuing education and consultation program to assist mental health, aging and long-term care personnel to establish community mental health services for the elderly in urban and rural settings. An existing contract was extended to further refine an innovative model of a continuing education program in gerontology for mental health professional personnel.

During the current year the Nursing Home Improvement Program plans to provide technical assistance and consultation in order to strengthen linkages between and among personnel of nursing homes, community mental health centers, state institutions and the educational centers in the area of continuing education for personnel working in long-term care. Joint funding of programs will be undertaken between NIMH and the Division of Long-term Care, Health Resources Administration.

HEALTH RESOURCES ADMINISTRATION

Bureau of Health Planning and Resources Development
Division of Facilities Development
Long-term Care Planning and Construction

Long-term care facilities have been an important element since the early years of the Hill-Burton program. From the mid - 1950's until the signing of P.L. 93-641 in January 1975, long-term care facilities were assisted under separate "chronic disease hospitals" and "skilled nursing homes" appropriation categories or a combined "long-term care" category. Long-term care units of hospitals were included in these categories. As of June 30, 1976, 1,868 long-term care projects had been assisted with $581 million of grant funds. State agencies have reported that 354,000 long-term care beds need to be modernized or added.

P.L. 93-641, signed on January 4, 1975, extended and extensively revised the Hill-Burton program. Nursing homes are no longer being aided under a separate long-term care formula grant category. However, they are eligible under two types of formula grant assistance: (1) modernization of health facilities, and (2) construction of new inpatient medical facilities in areas which have experienced recent rapid population growth. The same facilities are also eligible for loans or loan guarantees with interest subsidy. A third type of grant assistance is project grants for construction and modernization projects designed to prevent or eliminate safety hazards in publicly owned medical facilities or to avoid noncompliance by such facilities with licensure or accreditation standards. Grant or loan assistance from FY 1976 and 1977 appropriations (except Sec. 1625 grants) are awaiting the publication of regulations for Title XVI. At that time, $40.1 million in formula grants and $250 million in loan guarantee authority will be available for the priority projects in each State. Section 1625 public facility project grants have already been opened for initial applications for the $11.4 million.

HEALTH RESOURCES ADMINISTRATION

Bureau of Health Manpower

Long-term Care

Over one-hundred projects were awarded in 1976 to up-grade the quality of patient care in long-term care facilities. This educational program prepares long-term care faculty and state agency personnel with the basic knowledge necessary to improve services to the elderly and to understand the intent of Federal and State regulations pertaining to long-term care.

A geriatric nurse practitioner program for nurses in long-term care facilities is currently being conducted at the University of Colorado. This program is conducted by working in concert with faculty, State Health departments, Nursing Home Associations and Gerontological Conference Groups.

National Center for Health Statistics

Long-Term Care

The National Center for Health Statistics (NCHS) has the responsibility of operating the National Nursing Home Survey (NNHS) Data Collection System as a segment of the U.S. National Health Survey. The System, inaugurated in 1973, is a continuing series of national sample surveys of nursing homes, their residents, and staff. The surveys are conducted every 2-3 years with the interval depending on whether extensive pretesting is required due to the addition of questions in new subject areas or to major changes in methodology and procedures.

The initial survey in the Data Collection System was conducted in 1973-74. Reports in the Vital and Health Statistics series which have been completed are: Series 13, Number 22, "Financial and Operating Characteristics of Nursing Homes"; Series 13, Number 27, "Characteristics and Social Contacts and Activities of Nursing Home Residents"; Series 13, Number 28, "Utilization of Nursing Homes"; and Series 14, Number 17, "Nursing Homes in Profile." Other reports on residents' health status, charges for care, medical services received, and staff characteristics are being prepared, as is an indepth analysis of financial characteristics.

In response to the needs of health professionals in the field of long-term care a pilot study and a pretest were conducted to test the feasibility of incorporating additional questions and new methodology in the second national study. The pilot study was conducted from September through November 1975. The pretest was conducted from April through June 1976. Results from these studies were examined in terms of item availability, special analyses, interviewer evaluations, and the NCHS staff observations of actual interviews.

The national survey is scheduled for the summer and fall of 1977. It will be broadened to collect data on discharge residents; discharge planning by the facility; communication of needs by residents; measures of social activity; amount of monthly charge paid by the primary source of payment; facility revenues; and flu shots received by residents. Provisional data will be released in the winter of 1977. Review and analysis will begin at that time and continue until the fall of 1979.

Once survey analysis is completed, data tapes will be made available for general release to the public. National data on costs and characteristics of nursing homes, their residents and staff are needed on a continuing basis by a variety of data users for research and planning, providing and assessing long-term care services and facilities at State and local levels. It is expected that data from the nursing home surveys will influence legislation on standards for nursing homes, on reimbursement mechanisms, and on areas of coverage for national health insurance.

HEALTH RESOURCES ADMINISTRATION

Division of Long-Term Care

Each of the program components in the Health Resources Administration is involved directly or indirectly in efforts which address the health concerns of the aged.

The focal point for such activities within the Health Resources Administration continues to be located in the Division of Long-Term Care. This organizational component carries the dual responsibility for research and development in long-term care and aging and provider improvement activities designed to improve the quality of care in institutions by upgrading the performance of long-term care personnel through short-term training programs. Since 1973, this Division had been located in the National Center for Health Services Research (NCHSR). However, because Public Law 93-353, authorizing creation of the National Center for Health Services Research, did not provide legislative authority for short-term training, an organizational shift was required to maintain the organizational integrity of the Division. Thus in February 1976, the Division of Long-Term Care was transferred from the NCHSR to the Office of the Administrator, Health Resources Administration. The Division works in concert with all other program components within and outside of HRA that are concerned with matters relating to long-term care and health of the elderly.

Research and Development

Program activities of the Division of Long-Term Care include extramural research experiments, demonstrations and technical assistance directed toward the development and evaluation of innovative approaches to the improvement in the care and the quality of life for the elderly and disabled. Funding for the research projects is provided by the National Center for Health Services Research under its legislative authority.

Continued emphasis was placed in 1976 on: (1) Measuring the quality of care, including the development of instruments to insure that the most appropriate level of care is being provided; (2) increasing the options of patients for receiving needed care in the appropriate setting through a balanced array of institutional, ambulatory, and home health services and (3) support of studies to develop management information systems and in the general area of economics.

Provider Improvement Activities

Responsibility for directing Federal resources toward short-term training of personnel employed in long-term care facilities continues in the Division's Provider Improvement Branch. In fiscal years 1975 and

1976, funding for provider training projects came from the Bureau of Health Manpower, HRA, and its legislative authorities.

The activities of this program have expanded since its inception in 1971. By September 1976, training opportunities had been provided to approximately 146,000 nursing home employees at all levels. In 1976, 17 new and 10 continuation contracts with national implications were awarded by the Division to expand the effort toward upgrading the quality of care in the Nation's long-term care facilities by improving the knowledge and skills of those providing care. In addition, more than 150 short-term training projects were supported through small contracts and purchase orders awarded by the several regional offices for State and area-based training programs.

The primary objective of the Provider Improvement program is to establish a comprehensive, integrated training network. Such a plan will, through coordination, cooperation and competition, attempt to fill the varying educational needs of providers nationwide.

During 1977, a strengthening of the capability of providers, associations and appropriate State agencies to permit a continuation of training efforts on a more sustained basis is anticipated. Within the framework of a continuing education concept, efforts will be directed at creating closer linkages between service-delivery agencies and facilities with the established educational institutions in States and localities.

National Center for Health Services Research

The National Center for Health Services Research, which has as its mission the development of research efforts to improve the health status of the total population, has included as an integral part of its program, health services research issues relating to both acute and long-term care for the aged. The National Center defines long-term care to include all forms of service required by people with chronic health conditions. Such conditions may be experienced at any age as recurrent or persistent symptoms, illnesses, disabilities or impairments which are either incurable or which last for prolonged periods (e.g. 3 months or more).

Clinical management of chronic health problems is clearly an essential element of long-term care. NCHSR has, therefore, concentrated a pool of resources on developing more efficient means of delivering health services to chronic care patients. For example, NCHSR sponsored the development of diagnostic and treatment protocols used by briefly-trained health assistants in caring for patients in a diabetes and hypertension clinic. Compared to the previous system utilizing only physicians and nurses, the health assistants were more thorough in patient data collection and identified more previously undetected pathology in the patients they saw. Although on average the health assistants ordered more laboratory tests than did physicians functioning under

the older system, the over-all costs generated by the health assistants were offset by an average saving of 20% in physician time per patient visit.

The National Center is also supporting research to learn more about the efficacy of various clinical treatment regimens for selected chronic health conditions. One of these projects involves implementing the National Chronic Disease Data Bank System in seven institutions that serve large patient populations. This data system is designed to process longitudinal treatment and outcome information on patients with chronic health problems. One application of the system is to give providers prognostic feedback on other patients most like a patient in question, including comparative treatment information.

By definition, chronic health conditions include all of the debilitating diseases and impairments which modern medical technology is least able to combat. It is not surprising then that the social, economic and physical functioning problems which arise from such conditions are as important in planning long-term care as health service concerns. Yet, until recently, there has been no standard set of objective patient descriptors which would permit the collection of comparable data on patient functional problems over time. The lack of such information has seriously hampered our ability to evaluate the efficacy of different long-term care programs.

As one response to this problem, the National Center sponsored the collaboration of four well-known research groups to design an objective, multi-dimensional patient assessment instrument including descriptors of patient condition and levels of functioning known to be relevant to patient outcomes over time. This instrument, described in the Patient Classification for Long-Term Care: Users' Manual, is now being used for a variety of patient placement, program monitoring, and research purposes.

Given the existing set of available service options, "patient placement" now refers primarily to the determination by professionals of whether a patient is eligible to receive care in a skilled nursing home or extended care facility. These two types of institutions are by far the major providers of long-term care in this country and their costs are borne largely by taxpayers, through Medicare and Medicaid.

The National Center has supported a number of projects to describe the structure and behavior of the nursing home industry, particularly in response to the introduction of Medicare and Medicaid. In a populous region of California, one response to the legislation was the entry of non-nursing home investors who built large facilities and were seeking high returns. The level of capital formation was clearly related to facility size, with start-up costs found to be lower for facilities of more than 50 beds. These findings may explain in part the national trend toward more and larger nursing homes during 1965 to 1970.

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In Massachusetts, changes in reimbursement formulas for nursing homes during the same period has a demonstrable effect on operating costs. In particular, the introduction of cost-plus reimbursement led nursing home operators to increase the level and quantity of services and staff as a means of increasing their rates of return. Proprietary institutions became quite competitive with voluntary facilities in services and staffing as a result.

While increasing the number of highly skilled nursing personnel in nursing homes may have positive implications for the content of care, this relationship is not entirely clear. A study of Pennsylvania nursing home personnel in 1968 revealed a great degree of overlapping in the tasks regularly performed by RNs, LPNs and nurse aides. Furthermore, although LPNs were paid on a higher wage scale than nurse aides, 75% of LPNs had received their status by "waiver" of examination which is allowed in Pennsylvania on recommendation of a physician. Without such waivers, these LPNs would have been classified as nurse aides, and presumably paid substantially less.

The predominance of nursing homes as suppliers of long-term care in this country stems largely from the structure of existing long-term care financing mechanisms. Their position is not a function of proven superiority in clinical efficacy, efficiency, or attractiveness. The National Center has therefore devoted substantial resources to the exploration of additional strategies for non-institutional long-term care programs. Particular emphasis has been given to home care not only because it represents a potentially useful alternative to institutionalization, but also because home health services after hospitalization may have substantial rehabilitative impact in some types of cases.

This contention is supported partially by the findings of one carefully controlled study which examined the effect of visiting nurse services on patient functioning and health services utilization among elderly patients discharged from a rehabilitative hospital. The study revealed that continued nursing had statistically significant beneficial effects on physical or mental functioning for patients who had a principal diagnosis of arthritis, or a muscular or skeletal condition without co-existing major chronic condition. Ironically, the study revealed that professional services were heavily concentrated on the patients with greatest functional limitations, who were least likely to show beneficial effects from such skilled attention. These findings suggest a serious misallocation of professional resources in current patterns of health services delivery.

Another important form of home care is general homemaker/home aide services. One study found that intensive daily assistance by home aides seemed to be an acceptable alternative to institutionalization for all clients other than stroke patients. The service was associated with significantly reduced institutionalization for study patients who had

a friend or family member in the household capable of providing evening or overnight care.

The National Center,working with the Division of Long-Term Care, is continuing to study the effectiveness of diverse long-term care strategies particularly as alternatives to institutionalization. One important set of current projects is a set of service demonstrations and an evaluation of homemaker, adult day care and day hospital services for Medicare and Medicaid beneficiaries. These studies were mandated by Section 222 of P.L. 93-603. They involve the cooperation of the Social Security Administration in reimbursing providers for the experimental benefits and processing related claims. Findings from a preliminary descriptive study of some existing adult day care programs suggest that one of the most important outcomes will be a detailed description of the great variations in services and staffing patterns which characterize these similarly labeled service programs. The National Center is also conducting experiments in the use of home alarm systems and medically oriented housing as substitutes to institutionalization for elderly and disabled persons who do not require intensive levels of care.

Early in 1976, the National Center published a program solicitation on long-term care which describes research issues in long-term care that merit special attention. The research areas emphasized are planning, health insurance, quality of care and health care of the disadvantaged. Studies that result from this solicitation will be funded in 1977. The research program in 1978 will emphasize the same issues proposed in the solicitation.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
DEPARTMENTAL MANAGEMENT

Long-Term Care

Regional Directors

The Office of Long-Term Care Standards operates under the line authority of the Regional Director. The function was organized in 1975 to consolidate survey and certification functions which had been separately administered by the Social Security Administration, Social and Rehabilitation Service, and Public Health Service. The objective of the Long-Term Care office is to insure that recipients of long-term care, whose costs are reimbursed by Medicare or Medicaid, receive quality care in a safe environment according to standards established by Federal laws and regulations. This objective is achieved in three ways: review and evaluation of state surveys of skilled nursing and intermediate care facilities; conduct of direct Federal validation surveys; technical assistance and training for State personnel, nursing home operators and employees and public interest groups.

Facilities Engineering and Property Management

The Long-Term Care Standards Enforcement Engineers located in the regional offices enforce life-safety code regulations in Skilled Nursing Facilities, Intermediate Care Facilities and hospitals receiving payments under Medicare and/or Medicaid. These offices determine compliance with the provisions of the Life-Safety code of the National Fire Protection Association or other suitable State standards.

SOCIAL AND REHABILITATION SERVICE

Research and Evaluation

Long Term Care

During Fiscal Years 1975 and 1976, one evaluation project was funded jointly with the Administration on Aging and the Health Resources Administration. This project focuses on de-institutionalization and the question of what is appropriate care for impaired persons. Emphasis is on the testing of a methodology to classify functionally the impairment of adult persons requiring long-term care. A major field test of the functional classification system and survey instrument has been initiated in four States.

Another evaluation effort initiated in Fiscal 1975 is examining Federal and State standards for nursing home care and their associated costs to the homes. An additional project is analyzing existing accounting systems in the long-term care industry as a guide to States considering the adoption of a uniform chart-of-accounts for long-term care. Uniformity of accounting systems could assist States in comparing facilitites to encourage the most effective spending of the Medicaid dollar on long-term care patients.

The Office of Research and Demonstrations within SRS has created a separate identifiable unit in the Health Services Division to focus on long-term care. Analysis of long-term care financing, developing alternatives to institutionalization, and studying the impact upon health delivery systems of a series of alternatives, including non-medical services, is being emphasized.

The long-term care R&D program is primarily concerned with the delivery of health care and other appropriate services to the chronically ill and disabled of all age groups; the elderly comprise the highest proportion of the population in need of these services. Promoting community care alternatives to institutionalization for the chronically ill and disabled who want and are able to function outside of institutions can have an important effect upon the lives of the elderly and that of their families.

During Fiscal 1975, two demonstrations and analyses of community-wide coordinated health and social service delivery programs were initiated. The major thrust of this effort is to determine whether integrating services on a community-wide basis can improve the quality of care and reduce costs for delivering long-term care to the chronically ill and disabled. The projects are in the operational stage. One, in the State of New York, entitled "Demonstration of Community-Wide Alternative Long-Term Care Models," is testing the feasibility of developing community-wide, population-based models for the organization, delivery, and financing of care within Monroe County, New York. The

second project, in the State of Washington, "Community-Based Care Systems for the Functionally Disabled - A Project in Independent Living," is an effort to examine the effects of focusing State social services on coordinating health and social service delivery in order to prevent unnecessary institutionalization and improve the quality of care for high-risk populations. Each of these projects is an attempt to provide care plans for the population-at-risk which contribute to the maintenance of integrity and self-sufficiency through appropriate services and placements fitting the functional capacity of the individuals concerned. Each will attempt to develop a link to the continuum of care important for this population as well as links with service providers for care delivery. In each of the projects, costs will be tracked and evaluation of effectiveness undertaken through comparison with a control community. In Fiscal 1976 two additional projects were approved, one in Georgia "Cost-Effective Alternatives to Nursing Home Institutionalization," and Vermont "Long-Term Care Proposal."

A research project primarily concerned with exploring the feasibility and cost-effectiveness of delivering services to the chronically ill and disabled in settings other than day care centers, nursing homes, and long-term care hospitals is expected to have several additional products. The project, "The Feasibility and Cost-Effectiveness of Alternative Long-Term Care Settings," is nearing completion at the Stanford Research Institute. Its products, when completed, should provide a number of case studies on non-federally supported long-term care programs outside of nursing homes and long-term care hospitals. In addition, a bibliography on studies of long-term care providing systematic information on developments in this field and a report on the effects of legislative, regulatory and/or administrative programs on the feasibility of establishing alternative long-term care programs has been prepared. (A companion investigation of day care centers has been undertaken by the Health Resources Administration.) Another project will provide a comparison of costs for participants of similar functional capacity in nursing homes and the alternative settings within the same geographic area. It will provide insights into the relative costs for similar service packages in these diverse settings.

The Utah Long-Term Care Payments System project is a statewide experiment designed to link reasonable cost reimbursement with the quality of care within skilled nursing facilities. It is not only designed to respond to the requirements of Section 249 of P.L. 92-603 but to add to the system a structure which will increase nursing home accountability for appropriate services to the patients as well as to provide an opportunity for the type and level of care extended to individual patients to be a component in the cost-reimbursement system.

In California, Texas, and Wisconsin, projects are demonstrating the effect of social services, including day care and homemaker services, in keeping the elderly in their own homes instead of in intermediate care facilities and nursing homes. A project in New

York City, "Project Monitor in Day Hospital in Rehabilitation Medicine," is testing the efficacy and cost of day hospital care in lieu of 24 hour hospitalization.

One other study, conducted by the State of Texas, is investigating whether severely disabled adults, aged 21 to 64 can be cared for in community settings by adapting housing to provide barrier-free living and by providing a minimal package of social services to enable these severly handicapped adults to function in such settings as independently as possible.

Current plans for research and evaluation projects for Fiscal 1977 include a project to develop a method for comparing long-term care costs and services, a demonstration of incentive reimbursement system for long-term care, a project in effectiveness of SNF/ICF standards, and another demonstration, in the State of Colorado, in the area of community-wide, coordinated health and social service delivery systems.

SOCIAL SECURITY ADMINISTRATION

For House Appropriations Subcommittee Use
In Connection with the 1978 Congressional Hearings

Purpose

The basic purpose of the social insurance programs (Old-Age, Survivors, Disability, and Medicare) is to provide cash benefits to replace, in part, earnings that are lost to individuals and families when earnings stop or are reduced because the worker retires, dies, or becomes disabled, and to provide health insurance protection to persons 65 and over and to the disabled under certain conditions. This part of the program is contributory and self-supporting. Benefits are wage-related and entitlement to benefits is an earned right. In January 1974, the Supplemental Security Income Program was added to those SSA administers. It provides payments to the needy aged, blind, and disabled, is non-contributory and is financed entirely out of general Federal revenues.

Historical Development

In 1935, when the original social security law was passed, the program was to have provided only retirement benefits to aged workers. In 1939, benefits for dependents and survivors were added and benefits became payable in 1940. Protection against long-term total disability--not only for disabled workers, but also for adult sons or daughters (who became disabled before age 18) of disabled, retired, or deceased workers--was provided by the 1956 amendments. In 1965, health insurance benefits for the aged were added. The 1967 amendments provided benefits for disabled widows and widowers age 50 and over. Since 1958, there have been seven general benefit increases in recognition of the fact that prices and wages have gone up. In 1972, a section of P.L. 92-336 provided for an automatic benefit increase when the cost-of-living rises by 3 percent or more. Effective January 1974, payments under the Supplemental Security Income Program began to qualified aged, disabled, and blind persons, including the mentally retarded.

Economic Impact

Under Title II Programs (Old-Age, Survivors, and Disability)
Mental deficiency is a major factor in about 70 percent of cases involving dependents or survivors who have been continuously disabled since childhood. In fiscal year 1976, an estimated 253,000 mentally retarded adults disabled in childhood and retarded workers received $393 million in benefits.

The regulations contain guides as to the level of severity required in disability cases involving mental retardation. These regulations (published in 1968) have the effect of law and are available to the public and the medical community.

The number of mentally retarded children under age 18 who receive social security insurance payments as dependents of retired, disabled, or deceased workers is unknown, since their benefits are payable regardless of disability. Under social security's "Childhood Disability" provisions, lifetime monthly payments can be made to a person age 18 or over who has been disabled by mental retardation--or other impairments--since childhood. In many cases, the monthly benefits enable the retarded childhood disability beneficiary to be cared for at home instead of in an institution. Furthermore, as more and more retarded people outlive their parents, the program offers reassurance to

fathers and mothers who know that financial help for their disabled child will be forthcoming even after their death. About 57 percent of the childhood disability beneficiaries are age 35 and over and 32 percent of them are age 45 and over.

If the parents are dead, a relative who has demonstrated a continuing interest in the beneficiary's welfare, a welfare agency, or a legal guardian may be chosen as representative payee to handle the benefit funds and plan for using them in behalf of the beneficiary. A representative payee receives social security benefits in trust for the beneficiary and, as a trustee, is held accountable for the way in which he uses the benefits.

Under Title XVIII

Medicare benefits are available to any individual, including a mentally retarded individual, who is 65 or over and who meets certain necessary conditions. Therefore, a mentally retarded individual 65 years of age or over who has contracted an illness or suffered an injury is, like any other person in this age group, protected under the Medicare program. (However, the Medicare program does not provide coverage of non-medical care such as personal care, vocational training, etc.) Beginning July 1, 1973, Medicare benefits were also extended to social security disability beneficiaries, under 65 years of age, who have been receiving disability benefits for 24 consecutive months.

Under Title XVI

An estimated 370,000 retarded individuals who are not entitled to benefits under the Title II Disability Insurance Program were receiving payment under the Supplemental Security Income Program by the end of calendar year 1976.

Activities and Achievements

Since 1970, the Social Security Administration has conducted biennial on-site reviews in State mental hospitals and schools for the retarded. The program focus is an in-depth examination of the way in which these institutions are managing social security benefits on behalf of patients who receive their checks through an institutional official serving as "representative payee."

The observations and conclusions resulting from a State review are, after analysis, communicated to the State Commissioner for his use in the development of improved practices in the State's system. Findings also serve as a basis for SSA program and policy evaluation. The on-site approach is expected to strengthen relationships with the States, improve their understanding of their responsibility for optimum use of benefits when serving as representative payee, and open new channels for the discussion of problems and practices affecting the well-being of all beneficiary-patients in State mental institutions.

SSA has participated in the program to employ the mentally retarded since its inception in 1964. It has also tried to generate interest in the program by private employers and other Federal agencies. In SSA retardates are successfully performing in such positions as mail and file clerks, messengers, operators of printing, xerox, card reader machines, and key punch machines. The SSA experiment with the color coding of file cabinets and cartridges of microfilm has proven highly successful in broadening the employment opportunities for retardates to an area of work which requires a very high degree of accuracy. The retardates have performed their duties in an excellent manner.

The Social Security Administration has published a leaflet entitled If You Become Disabled. A number of others are in stages of preparation or revision.

In cooperation with the Bureau of the Census, the Social Security Administration conducted surveys in 1971 and 1972 of noninstitutionalized adults who had been reported as disabled in the 1970 Census or had become disabled since the 1970 Census. The data collected included demographic characteristics; employment history and present work situation; disabling conditions; job limitations and adjustment; functional limitations and mental health ratings; use of medical care and rehabilitation services; family participation and relationships; and economic resources. Mentally retarded persons age 18 and over who were not institutionalized at the time of the survey are included in these studies. Reports summarizing the data are available.

MATERNAL AND CHILD HEALTH

Obligations

	1974	1975	1976	1977 Estimate	1978 Estimate
Public Health Service:					
National Institutes of Health: National Institute of Child Health and Human Development 1/	$ 80,215,000 2/	$ 82,787,000	$ 91,001,000	$ 98,252,000	$101,932,000
Center for Disease Control	3/	3/	3/	3/	3/
Health Resources Admin: Bureau of Health Manpower	913,134	5,946,159 4/	2,448,451	1,642,125	2,950,000
Alcohol, Drug Abuse, and Mental Health Admin: National Institute of Mental Health	67,754,000	78,601,000	71,864,000	66,460,000	64,584,000
Health Services Admin: Bureau of Community Health	5/	5/	5/	5/	5/
TOTAL, PHS	$148,882,134	$167,334,159	$165,313,451	$166,354,125	169,466,000

1/ Included in the total amounts are funds for the Population Program that relate to MCHR as follows: 1974-$11,870,000; 1975-$11,338,000; 1976-$11,340,000: 1977-$12,190,000; 1978-$12,615,000.
2/ Includes restoration of 1973 impounded funds in the amount of $8,386,000.
3/ Funds are reported under the categories of lead-based paint poisoning and immunization.
4/ Includes cumulative Nurse Practitioner funding through 1975.
5/ Obligations not identifiable.

NATIONAL INSTITUTES OF HEALTH

Maternal and Child Health Research

The National Institute of Child Health and Human Development (NICHD) is the Federal Government's major research arm concerned with the health and well-being of mothers and children. The mission of the NICHD is to seek out opportunities for early prevention of disease and disability, using the tools of the boimedical and behavioral sciences, together with demographic, biometric and statistical techniques. It fosters a steady expansion of knowledge on child and maternal health, human development, fertility regulation, and the many factors determining the adaptation of individuals and populations to various economic and environmental conditions. In addition, the NICHD serves as the scientific focal point for a number of federal agencies concerned with improved health for mothers and children and with family planning.

Several problem areas have been singled out for special attention by the NICHD in FY 1978:

Adolescent pregnancy: The rising rate of adolescent pregnancy is a major concern not only because of the burden which pregnancy imposes on the very young mother, but also because the age of the mother is a critical factor in determining an infant's chances of survival. Both of the extramural research centers of the NICHD -- the Center for Population Research (CPR) and the Center for Research for Mothers and Children (CRMC) -- are supporting studies aimed at reducing the incidence of teenage pregnancy and the biomedical risks associated with it.

Diabetes in pregnancy: The diabetic pregnancy represents a formidable challenge to medical science, because the interaction between the diabetic mother and her fetus is relatively inaccessible to study. Both the CRMC and the Intramural Program are planning increased efforts to improve the control of diabetes in pregnant women and to reduce their infants' vulnerability to respiratory distress syndrome and other disorders which now kill about 18 percent of the infants of diabetic mothers.

Developmental dyslexia and other learning disorders: When an intelligent, seemingly well-instructed child is unable to master reading or some other fundamental skill, the result may be ego-damaging frustration for both child and parent. The NICHD is planning a major initiative to clear up the confusion which currently surround the diagnosis of developmental dyslexia and other learning disorders.

Nutrition: In FY 1978, the NICHD intends to shift funds from studies of malnutrition and brain development to studies of nutritional problems which are now known to occur with greatest frequency in the U.S. population. Particularly, the Institute is interested in clarifying the relationship between nutrition and reproductive processes, and the relationship between early nutrition, obesity and diabetes mellitus.

Fertility and infertility: When couples lack adequate and acceptable means of controlling their own fertility, the result may be unwanted pregnancy or inabilitiy to conceive a wanted child. The NICHD will intensify its support for studies of reproductive processes in order to alleviate infertility and to provide couples with better contraceptive measures.

In addition to increasing its investment in these problem areas, the NICHD will continue its support of research into the causes, prevention and/or amelioration of birth defects, mental retardation, sudden infant death syndrome, respiratory distress syndrome, prematurity, intrauterine growth retardation, and other disorders which originate in the earliest phases of the human life span. As the Institute fosters a greater understanding of the genetic and/or environmental factors underlying aberrations of development, it will be helping to develop a healthier adult population for the nation.

To address the critical health needs of mothers and infants, the Institute is beginning the establishment of about twelve Major Research Program Centers. Each Center is to mount a comprehensive research effort directed toward the solution of a major health problem affecting women and/or children. The first applications for Major Research Program grants (MRP's) have been received and are in the process of review. These first applications focus on health problems associated with the premature initiation of labor, diabetes in pregnancy, and the sudden infant death syndrome.

In 1978, continued emphasis will be given to increasing our knowledge about why babies are born prematurely and to identifying environmental and genetic factors which contribute to the birth of babies who are small for their gestational age.

Advances in understanding the phonomena associated with fetal growth retardation are encouraging. It is well documented that a woman who smokes is nearly twice as likely to deliver a low birth weight infant as a nonsmoking mother. New evidence indicates that decreased oxygen carrying capacity of fetal blood may be a factor in the lower birth weights in infants born to women who smoke or who are exposed to severe air pollution, particularly when the pregnant woman is subjected to other stressful situations, such as socioeconomic depression. Diabetes mellitus is a serious complication of pregnancy. A six-fold increased risk for respiratory distress syndrome exists for babies born to diabetic mothers. Current studies are exploring the possibility that these fetal and newborn problems are caused by an early and excessive secretion of fetal insulin that occurs in response to elevated glucose in the maternal circulation. If this hypothesis is correct, a possible practical solution to an important health problem could evolve with the utilization of a variety of methods aimed at maintaining a normal glucose level in diabetic women throughout pregnancy. Emphasis will be given to identifying both the optimum diabetic control during pregnancy and the most appropriate gestational age for delivery; and early detection of intrauterine fetal distress.

A recent study has found an increased risk of breast cancer among certain women on the pill, which needs to be confirmed or refuted. Cancer of the breast and of the reproductive organs, or of other organ sites, is the most important unresolved hazard among women on contraceptive steroids. Most previous studies have revealed no risk. It is known, however, that cancer usually does not occur until a decade or more after exposure to a hazardous compound. With the widespread use of oral contraceptive steroids commencing in this country around 1965, it is timely now to research extensively the relationship between oral contraceptives and cancer. A case control study is planned of cancer of the breast and of the reproductive organs. Studies of cancer of other sites, particularly of the skin, will also be started.

CENTER FOR DISEASE CONTROL
Maternal and Child Health

The center for Disease Control has provided project grant and technical assistance to State and local health agencies in support of their childhood immunization programs since 1963. Initially, support for immunization programs against polio, diphtheria, pertussis, and tetanus was funded. Later, as new vaccines became available, support was focused toward the control of measles, and then rubella. As backlogs of unprotected children were reduced for these diseases, support for more comprehensive immunization programs were funded.

These efforts have had a beneficial impact on children's health. Reported measles cases declined from 261,904 in 1965 to a record low of 22,094 in 1974, and reported rubella cases declined from 57,686 in 1969 to 11,917, also a record low, in 1974. However, morbidity for each of these diseases increased slightly in 1975. Preliminary data for 1976 indicate that 39,585 cases of measles occurred, almost double the number of cases in 1974, while only 12,090 cases of rubella were reported. Reported cases of polio (9) and diphtheria (146) in 1976 continue to remain very low.

While reported cases of vaccine preventable diseases remain far below their levels prior to project grant support, concentrated immunization efforts must be continued. In addition to the large increase in reported measles cases in 1976, more than 16.7 million children are susceptible to polio, 10.6 million to measles, 27.3 million to mumps, 14.7 million to rubella, and 10.5 million to diphtheria, pertussis, and tetanus.

It has been estimated that 600,000 children each year suffer from undue lead absorption. Of these, 6,000 may suffer permanent neurological damage and as many as 200 deaths may result.

The children most at risk of lead poisoning are generally from lower socio-economic urban areas where deteriorating older housing contains many layers of lead-based paint. During fiscal year 1976, 66 communities received federal grant support under the Lead-Based Paint Poisoning Prevention Act to conduct lead poisoning prevention programs designed to identify children with undue lead absorption and to provide appropriate medical and environmental followup services. Through these programs approximately 500,000 children were screened and 43,900 children were identified as requiring pediatric management for undue lead absorption. The intensive outreach activities of the Childhood Lead-Based Paint Poisoning Prevention Program have been instrumental in increasing the participation of children in the ongoing child health care delivery system.

Childhood Lead Poisoning Prevention Program activities are coordinated with, and have generally become an integrated part of the Maternal and Child Health Services provided by health departments and Neighborhood Health Centers.

HEALTH RESOURCES ADMINISTRATION

Bureau of Health Manpower

Maternal and Child Health

One of the primary goals of the health manpower programs is in expanding the role of the health professional. In the area of maternal and child health, educational programs for experienced registered nurses to be trained as nurse practitioners or nurse-midwives has been a major focus of the health manpower nursing program. Grants have been awarded to institutions to provide specialized educational training of nurses in Pediatrics, Obstetrics and Gynecology. These nurses are able to deliver specialized care to women and children in hospitals, nurseries, newborn intensive care centers, community health settings, and rural areas where there is a shortage of physicians.

Additionally, a study is currently being performed to determine the impact and feasibility of hiring Child Health Associates, health care extenders, for use in private practice settings.

Cumulative thru 1974	1975 Actual	1976 Actual	1977 Estimate	1978 Estimate
$913,134	$5,946,159	$2,448,451	$1,642,125	$2,950,000

ALCOHOL, DRUG ABUSE, AND MENTAL HEALTH ADMINISTRATION

National Institute of Mental Health
MATERNAL AND CHILD HEALTH

The number of individuals under the age of 18 needing the attention of mental health professionals is estimated at 7 million. Analyses of case utilization data indicate that 85 to 90 percent of these young people will not receive the services needed.

Total utilization figures for all the Federally funded community mental health centers in the United States for 1975 show that 325,000 people under the age of 18 received services. The total figures for those receiving services in the State, county and general and private psychiatric hospitals shows that only 70,000 under the age of 18 received such services. These figures refer to individuals who are identified through the mental health system. They do not include a large number of individuals who have problems that might be helped to some degree by mental health professionals but are dealt with in the general health care system because of physical and physiological stigmata or are dealt with in the criminal justice and alternative services systems because of different forms of social deviance. The NIMH finds that psychological dysfunction is, to varying degrees, related to detrimental conditions. Such conditions are: disturbed parents; disturbed parenting; institutional parenting; poor nutrition; overcrowding and poverty; racism. The classical problems dealt with by the mental health system include: psychopathology related to mental retardation; organic brain syndromes; schizophrenia; depressive disorders; other psychiatric disorders; transient situational disturbances; behavior disorders; and social maladjustment without manifest psychiatric disorder. Only 21.4 percent of the identified patient care epidsodes in the mental health system as traced by NIMH fall within the category of the classic psychopathologies. The remainder seem to fall in a category which is more derivative of developmental, socioeconomic, and family disturbances.

Research

Several child mental health research initiatives are currently being pursued by the NIMH intramural research program. In the Institutes Laboratory of Developmental Psychology, researchers completed a follow-up study of infants which showed that there is a differential perceptual response at four to six months of age related to the different kinds of obstetrical medication administered to the mother at delivery. The laboratory is currently pursuing a study of premature infants, assessing their sensory and perceptual abilities, in an attempt to identify in the neonatal period origins of later intellectual deficits. Two further projects include (1) a study which found

that children's learning through observation was less in those two-year-old children whose mothers behaved in an affectless, lacklustre manner--a very concrete demonstration of an environmental depressor of learning; and (2) an assessment of the coping patterns and vulnerabilities of seriously ill children, focusing on delineating the children's understanding of illness and healing processes. Intramural research in the field of adult psychiatry involves two major areas of study. The first involves an investigation of children of parents who have been hospitalized at the National Institute of Mental Health's inpatient service for major affective disorders. A second study involves an elaborate investigation of hyperactive children. The purpose of the study is to extend the knowledge of possible biochemical aspects of hyperactivity as well as the relationship between the child's behavior and the pharmacology of medications used to treat these children.

In the extramural research area, several significant findings have been reported by NIMH grantees. New data continues to be generated challenging assumptions of various developmental theories concerning egocentricity of young children's thought processes and indicating that under particular circumstances they are capable of rational or abstract problem solving efforts. Study of infants and two-year olds has suggested that from an early age, there are individual differences in the confidence with which babies engage in exploratory activity. Some appear biased to emphasize (or remember) the transient negative aspects of their social experience and become reluctant to persevere in new social encounters whereas others seemingly ignore or override mildly discomforting new experiences. Ambivalence for some infants regarding exploration of their environment can be viewed as a mild form of acquired fear. Emerging expectations and feeling tones for young children are significant motivational factors which probably are critical for the process of development or failure to develop initiative and perseverance.

The possibility of using chemical and physiological criteria for distinguishing between infants who vary in emotionality was supported by recent findings of a grantee. For presumably normal 9 month infants, those who are not anxious when separated from their mothers have higher levels of excreted cortisol than infants who become distressed. This may imply that individual differences in neuroendocrine activity levels related to the arousal of anxiety and defense against it may be determined or established early in life. If this proves replicable and reliable, it may be possible to identify, predict, and eventually prevent or ameliorate maladaptive responses to early stress experiences.

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Studies of the infant's information processing and learning capacities can have significant fall-out for the solving of specific biomedical or mental health problems. In this context, one grantee studying the psychophysics of the startle reflex in infants has been able to develop a simple, sensitive and reliable test to diagnose hearing loss in infants only a few days or weeks old. This permits early diagnosis and can prevent the erroneous classification of an intelligent infant or child as mentally retarded when the child is actually only deaf or hard of hearing.

Maternal attitudes and care-taking styles have been found to be important determiners of infant development and early familial relationships. A recent finding by an Institute grantee has assuaged concerns that non-traditional parental life styles would have adverse consequences on the attachment behaviors of infants and mothers, and on bonding generally. The grantee found that mothers with non-mainstream family styles actually conformed to mainstream prenatal practices, especially for medical considerations, nutrition, and drug use. In general, a wide range of early infant caretaking patterns were found across mothers in all life styles and there were no extreme or unusual practices relating to feeding, parental health or caretaking patterns for any of the mothers, fathers, or babies studied. Parental reports indicated that normal developmental patterns prevail with respect to sleep and feeding during the first six months of life. Traditional and alternative life style parents also were very similar in expressiveness and types of affect shown their infants at six months. Nor were there any discernible differences between infants in affect, activity levels, and play behavior as a function of family style.

In another area, the Institute has been involved in supporting efforts to develop a method for monitoring televised violence. This has now been accomplished through the refinement of an earlier methodology and the publication of data on the 1975-76 programming of network prime time and children's dramatic fare. That young children's habituation to or acceptance of a higher level of aggressive or violent behavior than would otherwise occur has been reported by a grantee who related this to the continued viewing of televised violence. Another grantee has demonstrated that young pre-school children understood television portrayals involving violence, motivational aspects and behavioral effects less well than older children since they cannot cope with the amount of information needed to understand causal sequences in the plot. Presumably then, these young viewers are more vulnerable to being influenced by their television viewing.

Because dyslexia or significant reading retardations loom large as stressful factors which produce major reactive emotional and behavioral disturbances in many young children, the Institute is devoting attention to research on detection and prevention or amelioration of dyslexia. Based on a longitudinal study one grantee continues to find a special battery of tests to be highly predictive

of risks for subsequent reading disabilities in white boys. Other data suggests that the same battery may possess sufficient predictive precision for girls and young black children so as to have utility for early detection of dyslexia in these populations. Because of ambiguities and various issues relating to dyslexia, the Institute has commissioned integrative and evaluative state-of-the-art papers on various aspects of the problem area. A conference will follow (in 1977) which will be based on these critical evaluations will serve to summarize the state of knowledge and needed developments for both researchers and practitioners.

Training

The NIMH sponsors programs for training in clinical services and research. Clinical training activities include child psychiatry, psychiatry, behavioral pediatrics, psychiatric nursing, psychology, social work, continuing education programs, paraprofessional programs, and experimental and special programs. These efforts include the training of pediatricians as primary care physicians in the understanding and management of manifest and potential psychiatric problems in childhood; an interdisciplinary endeavor "to train child mental health personnel for assessment and service roles in small towns and rural areas with limited professional resources". Research training activities are in the biological, psychological and social sciences. Research training highlights include a program to train Ph.D.'s and Ed.D's as early childhood development research specialists; and another program which combines training in anthropology with developmental psychology and human development.

Services

A wide range of projects relating to the delivery of mental health service for children is being supported by NIMH. These include projects focused on a variety of preventive activities and on identification of incipient problems, as well as programs for children and families where problems already exist. One prototype project is exploring methods for increasing systemization in research and development programming for children.

During the past year major service-related research activity has focused on preventive services for children and their families. Work has proceeded on the development of a screening instrument that can be utilized by those without extensive training and on program activity with parents and teachers aimed at enhancing communication to facilitate the development of children. The child's admission to a hospital for an operation or physical illness can have significant implications for the child's emotional well being. With this in mind, work is being directed to this important area. The coexistence of minority and

poverty status can increase vulnerability to mental health problems. Therefore, a project of this nature has considerable preventive implications.

Deinstitutionalization, an issue for children directly, and through their parents, provides an example of another area of service-related research activity. A newly awarded grant will test a program that involves simultaneous interventions to rehabilitate recently institutionalized mothers and aid the development of their children. A recently completed study demonstrated that a community care program has the potential for reducing state hospital admissions for children.

Some of the other major child-related activities of the Institute concern the financing of children's services. These have included an analysis of voluntary health insurance coverage for children's services and study of financing of children's services in residential treatment centers under the CHAMPUS program.

The NIMH Mental Health Study Center is currently proceeding with work on establishing a national infant mental health center. This is aimed at forming the nucleus for a communications and information network among outstanding clinical programs focused on vulnerable infants and their families. In addition, Study Center staff continue their work on a broad spectrum of studies relating to children; these range from projects concerned with infants and daycare programs to studies relating to adolescent mental health needs. Specific examples of programs underway include the following:

1. Clinical Infant Development Program: The Clinical Infant Development Program at the Mental Health Study Center, in establishing a substantiative clinical research study, will provide a range of services for families and infants where, for a variety of reasons, there are interferences in the infant's development. The clinical research staff will provide for the observation, evaluation, developmental facilitation, treatment, and follow-up of the children, and appropriate evaluation, guidance, and treatment for parents and families in a center-based and outreach program. The results of our studies are expected to have major implications for infant health and mental health programs on a national and international level.

2. Cognitive and Educational Development: Cognitive and educational development studies at the Mental Health Study Center have resulted in an important paper detailing the relationship between two types of predictive equations, including the prediction of whether a student will be a dropout or graduate from high school; and the prediction of the grade level in which dropouts leave school. The theoretical implications suggest a reconceptualization of the dropout phenomenon. Evidence of this and other studies show that prediction of high school dropouts is similar to, and on the continuum with, pre-

diction of whether or not an individual will attend college. There is also a correlation with prediction of the eventual level of education a person will attain.

3. Social Structure and Human Service Systems: Mental Health Study Center research on social structure and human service systems has produced an evaluation of the impact of legislation phasing out institutional care for homeless and dependent children on the data through legislative inquiry in order to round out the evaluation. A study of the system of response to abuse and neglect of children in the city under study has been completed and is being disseminated to local government agencies and to citizen groups throughout the community.

Related Efforts

The Institute's Division of Biometry and Epidemiology is responsible for much of the existing data on mental illness and utilization of mental health treatment facilities. The extent of child mental health problems is suggested by three studies supported by this Division. The first was an investigation into how mental health problems are identified by pediatricians in their practice, how they label such problems, and how they deal with them. The second study assessed mental disorders in children between the ages of 6 and 18 years old living in an urban environment. The third study is trying to identify childhood factors predicting occupational success, criminality, and psychiatric disorder as well as the role of the extended family in school achievement and delinquency patterns.

The NIMH Division of Scientific and Public Information answers inquiries on mental health issues from the general public and press. The Division also handles general literature and information requests made by professionals. Very recent activities of note include the production for general audiences of a booklet entitled The Detection and Prevention of Learning Disorders, training materials (developed under a contract) for professionals and paraprofessionals on child abuse, a film, "Now I Am a Parent", to be released in 1977 and evaluated for its ability to facilitate the development of new mothers and fathers as parents.

The NIMH Division of Special Mental Health Programs, which has always been comprised of centers and sections whose activities are of particular social interest, is now the location for the National Center for the Prevention and Control of Rape. That Center is supporting the development of a consultation model for professionals who deal with the sexual abuse of children. The Center for Minority Group Mental Health Programs is funding a

number of studies involving the development of minority children. The Mental Health Disaster Assistance Section is supporting three projects which have helped to identify the behavioral problems, school disturbances and child/parent disorders secondary to natural disasters. The Division's Center for the Study of Metropolitan Problems and Center for Studies of Crime and Delinquency both have child and youth activities familiar to many of you. The Center for Studies of Child and Family Mental Health has recently taken on a leadership role in facilitating the development of research in the area of mood and related affective behaviors in children, particularly childhood depression.

Finally, the Institute has a contract with the Department of Defense to evaluate and work towards the improvement of the quality of inpatient services for children and adolescents served by the CHAMPUS program.

PUBLIC HEALTH SERVICE

Health Services Administration
Bureau of Community Health Services

Maternal and Child Health

The Maternal and Child Health Program authorized and supported under Title V of the Social Security Act has traditionally emphasized preventive health care. In fiscal year 1975, this program provided maternity nursing services to 554,000 mothers and nursing services to 2,792,000 children. In addition, 9,846,000 children were screened for visual deficiencies, 6,564,000 for hearing loss, and 3,282,000 for dental defects. The program also immunized over 3,000,000 children for polio, 2,071,000 for rubella, 2,933,000 for diphtheria, and 2,371,000 for pertussis. In fiscal year 1974, the Crippled Children's Program provided physician services to 525,000 children with handicapping or potentially handicapping conditions. Of these children, 72.1 percent were seen in Crippled Children's clinics and 15 percent received inpatient hospital care. There were over 183,000 new patients added to the program, of which 83,000 were under 5 years of age. Of the total patient load, 121,000 or 23 percent were children with multiple handicapping conditions. Over 706,000 conditions were treated.

The three largest categories of care were (1) diseases of the nervous system and sense organs (24.8%); (2) diseases of bones and organs of movement (21.5%); and (3) congenital malformations (19.4%).

A major initiative is being supported in 1977 to improve the availability, accessibility, quality and effectiveness of family oriented health care provided to mothers and children, particularly those at high risk. This will be accomplished through the development of organized/integrated child health care systems which focus leadership and emphasize linkage of State and local efforts/resources; preventive health services/primary care; and quality improvement. These activities should be focused on improving health status and outcome-specifically decreasing morbidity, disability and mortality. The major services to be concentrated on are family planning, prenatal care, perinatal care, child health care, and adolescent health.

The Maternal and Child Health training support is directed toward specialized training of the health professions in areas that serve to enhance delivery of services to mothers and children. Within the overall training program, there are several broad areas of specialization within which training is focused: on a particular problem are (mental retardation); a segment of the population (adolescence); or organization for delivery of health services (schools of public health). Though each varies in the degree of clinical application or administrative

skills which is offered, each is clearly related to the BCHS themes of child health; capacity building (training personnel who are well qualified to provide primary care, plan, develop, supervise programs for delivery of services); quality (comprehensive care, minimum standards, appropriate referral, followup, etc., are stressed); and prevention (genetics programs, prenatal care, early intervention), themes basic to the whole MCH program.

Some of the Title V research projects focus on children with multiple handicaps including children with myelodysplasia. One recent study, "Indexing and Analysis of Handicaps," conducted by Dr. David MacFarlane, Crippled Children's Division, University of Oregon, includes an analysis of the costs of care to the families of children with multiple handicaps including epilepsy, cerebral palsy, mental retardation, and other defects.

MENTAL RETARDATION

Obligations

	1974	1975	1976	1977 Estimate	1978 Estimate
Public Health Service:					
National Institutes of Health:					
National Institute of Child Health and Human Development.....	$21,731,000	$22,034,000	$ 23,946,000	$ 24,387,000	$ 24,867,000
Alcohol, Drug Abuse and Mental Health Administration:					
National Institute of Mental Health.....	751,000	1,966,000	2,157,000	2,355,000	2,185,000
Health Resources Administration:					
Bureau of Health Planning and Resources Development.....	74,000	---	---	200,000	---
Total, PHS.....	22,556,000	24,000,000	26,103,000	26,942,000	27,052,000
Social Security Administration.....	---	---	1,197,715	1,175,529	1,319,381

MENTAL RETARDATION
(Continued)

Obligations

	1974	1975	1976	1977 Estimate	1978 Estimate
Office of Human Development:					
Rehabilitation Services Administration:					
Services					
Rehabilitation Services Grants to States, VR Act, Sec. 110	$ ---	$ ---	$87,878,000	$90,318,000	$92,780,000
Facility Improvement Grants, VR Act, Sec. 302(b)(c)	---	---	300,000	292,800	292,800
Total, Services	---	---	88,178,000	90,610,800	93,072,800
Research					
Research and Training Centers VR Act, Sec 202 (b)	---	---	669,000	1,500,000	1,500,000
Rehabilitation Activities Overseas (Special Foreign Currency Program)	---	---	100,000	100,000	---
Total, Research	---	---	769,000	1,600,000	1,500,000
Training					
Rehabilitation Training, VR Act, Sec. 201 (a)(2) and 203	---	---	70,000	135,000	100,000
Total, Training	---	---	70,000	135,000	100,000
TOTAL, RSA	$ ---	$ ---	$89,017,000	$92,345,800	$94,672,800

MENTAL RETARDATION
(Continued)

Obligations

	1974	1975	1976	1977 Estimate	1978 Estimate
Office of Human Development: (Continued)					
Developmental Disabilities Office:					
State Grants	---	---	$31,558,000	$33,058,000	$41,608,000
Special Projects	---	---	18,432,000	19,617,000	11,017,000
University Affiliated Facilities	---	---	4,250,000	5,250,000	5,500,000
TOTAL, DDO	---	---	$54,240,000	$57,925,000	$58,125,000
Social and Rehabilitation Service:					
Services					
Social Services, SS Act	202,600	249,247	295,800	304,000	310,000
Medical Assistance, Title XIX, SS Act	360,600	195,000	339,000	417,000	472,000
Total, Services	562,600	444,247	634,800	721,000	782,000
Income Maintenance					
Maintenance Assistant, Title XVI, SS Act 1/	127,248	255	274	293	296
Total, Income maintenance	127,248	255	274	293	296
Total, Social and Rehabilitation Service	689,848	444,502	635,074	721,293	782,296

1/ Guam, Puerto Rico, and Virgin Islands only for FY 1975 - FY 1978.

Office of Education

	1975 Actual	1976 Actual	1977 Estimate	1978 Estimate
Services				
School Library Services (ESEA, Title II).....	170	85	---	---
Supplementary Centers (ESEA, Title III).....	5,800	2,900 1/	---	---
Libraries and Learning Resources (ESEA, Title IV-B).....	---	168	336	336
Innovation and Support (ESEA, Title IV-C).....	----	1,555	6,165	6,610
Education for the Handicapped Act, Part B.....	15,000	15,000	66,000	76,000
Education for the Handicapped Act, Part C, Section 623.....	1,000	1,000	1,000	1,000
Education for the Handicapped Act, Part F.....	3,000	3,000	3,000	3,000
Vocational Education Act, Part Part B.....	2/	2/	2/	2/
Total, Services.....	24,970	23,708	76,501	86,946
Training				
Education for the Handicapped Act, Part D.....	6,100	6,100	6,100	6,100
Research				
Education for the Handicapped Act, Part E.....	2,707	3,000	3,000	3,000
Other				
Library Services and Construction Act (LSCA, Title I).....	3/	3/	3/	3/
Total, Office of Education	33,777	32,808	85,601	96,046

1/ Included in consolidated grants programs in FY 1976 which specifies that 50% of total funds must be used for activities funded in the previous year. In FY 1977, total consolidation was achieved and no estimates are available.

2/ Amounts expended for mental retardation activities cannot be separately broken out from other funds going to the States for regular vocational education activities.

3/ Amounts expended for mental retardation activities cannot be separately broken out from funds used to support LSCA services to the handicapped and to residents of State-supported institutions.

MENTAL RETARDATION

Mental retardation ranks among the nations most pressing social and health problems. Persisting from infancy through maturity, it ranks foremost among conditions of chronic disability. Well in excess of 200 causes of mental retardation have been identified and additional causes are being discovered regularly through research investigations. The greatest hope for mastery of the problem lies in its prevention, and, when this is not possible, in the promotion of the individual's maximum skills through a wide-range of habilitative and restorative procedures. Within the National Institutes of Health, these efforts are major concerns of the National Institute of Child Health and Human Development and the National Institute of Neurological and Communicative Disorders and Stroke.

National Institutes of Health

National Institute of Child Health and Human Development

The NICHD, within the NIH, has primary responsibility for research on mental retardation. This interest is expressed categorically through the Institute's Mental Retardation and Developmental Disabilities Branch (MRDD) of its Center for Research for Mothers and Children (CRMC). The MRDD Branch supports research into the biological, behavioral and social processes which contribute to or influence the development of retarding disorders. Of primary concern are studies concerned with finding causes and means for preventing mental retardation. The Institute employs research grant support, creates and supports special research facilities and resources, disseminates scientific and public information, and provides contract support of research to accomplish its goals. The Institute's research programs and resources provide research knowledge and understanding applicable not only to mental retardation but to other closely related developmental disabilities as well.

Research into the causes, means of prevention, and methods of amelioration of mental retardation serve many of the research requirements of the developmental disabilities including autism, epilepsy, cerebral palsy and special learning disabilities. With the exception of special learning disabilities, mental retardation is frequently associated with the other disabilities.

These conditions are a frequent consequence of reproductive casualty resulting from genetic defects, disorders of pregnancy, complications of birth, and maternal ill health. The Institute, because of its assigned responsibility for research in maternal and child health, has a major research concern for these disorders. All of the Institute's programs, both Extramural and Intramural, make significant contributions relating to these issues.

Research Activities

Contract supported and directed research, complemented by grant supported research, has been employed by the Institute to facilitate the movement of fundamental research developments into useful service products. In the Mental Retardation and Developmental Disabilities Branch, these efforts have concentrated on developments in the areas of (1) genetics, and (2) the early identification and intervention for high risk infants. Concerted efforts in these important areas of research hold promise for feasible service applications leading to progress toward the primary and secondary prevention of mental retardation and developmental disabilities.

Antenatal diagnosis of genetic defects employing amniocentesis and chromosome and biochemical analysis have been shown, through Institute supported research, to be safe and effective. Because of the high incidence of genetically determined mental retardation and the presence of genetic defects in approximately five to six percent of all live births, it is imperative that efforts be made to develop programs of genetic counseling and rapid and efficient diagnosis of genetic defects. A major obstacle to these developments rests with the costly and time consuming procedures involved in chromosome analysis. This problem has been attacked through Institute supported contract research.

Utilizing technology developed by the National Aeronautics and Space Administration (NASA), researchers at the Jet Propulsion Laboratory, using Institute contract support, have developed a system for rapid chromosome analysis. The system employs a computer-controlled microscope which automatically scans miscroscopic slides or photomicrographs for chromosome spreads that are suitable for analysis. Once a suitable spread is located, the computer measures and classifies the individual chromosomes and then arranges their images into a format of a conventional karyotype. Another contract award to investigators at the City of Hope, National Medical Center, Duarte, California, has resulted in an automated system which prepares chromosomes for analysis. Linkage of these two developments has been accomplished and provides a fully automated system for chromosome analyses which will permit mass screening for genetic defects. It is anticipated that the full system will be ready for field testing in 1978.

Uniform procedures for the cytogenetic identification and classification of genetic disorders have been effected through the establishment of a cytogenetics registry. Supported by a contract with the University of Oregon, Portland, and involving collaboration with other cytogenetic laboratories in different regions of the U.S., the registry meets major needs for the development of research and service involving genetics. The establishment, by the registry, of reliable and uniform methods for cytogenetic classification permits these procedures to be adopted by all cytogenetic laboratories. In addition, the registry serves other needs including: (1) the identification and aggregation of rare cases of

genetic disorders with their natural history; (2) definition and description of clinical phenotypes and their variations; and (3) it lends itself to collaborative research including treatment and genetic counseling.

The Institute's research efforts concerned with the early identification and intervention for high risk infants and young children are of signficant importance to major national social action programs in this area. They are particularly relevant to State plans for Child Find mandated by Part B., P.L. 93-380; Early Periodic Screening, Diagnosis and Treatment for Medicaid eligible children, to programs callings for integration of handicapped children in Head Start; and for day care and preschool programs. The objective of these research efforts is the development of procedures to assure accurate early identification of young children at risk for faulty development due to both environmental and biological risk conditions and their early entry into appropriate programs of preventive and corrective services.

The diagnosis and identification of early developmental delay is complicated by variations in constitutional endowment and family environments. Increasingly, however, research evidence points to the importance of early experience in shaping patterns of development and later adjustment in young children. Accumulated research evidence indicates that the best single predictor of developmental outcome, especially in neurologically intact infants, is the mother's level of education. Thus, cirlteria which take into account mother-child interaction patterns as well as other infant experiences are likely to be more valid and reliable predictors of later development than those limited solely to biological events.

The Infant Studies Project, supported by Institute contract funds at the University of California at Los Angeles, is a major research undertaking aimed at establishing criteria for definitive risk in the population of low birthweight and premature infants. The approach employs a cumulative risk score based upon both biological and experiential events to arrive at a determination of risk. Infants thus identified as high risk are entered into an educational intervention program centered on improving parent-child interactions and parent teaching skills. Data collection for this project is now complete and, in the next year, the data will be subjected to analysis. It is anticipated that the results of this study will effect substantial progress toward development of programs for early identification and intervention for risk infants.

Institute supported investigators at Brown University and at the University of Kansas, Mental Retardation Research Center, have shown that the infant, whether biologically vulnerable, deprived, or normal is an active learner who, if given opportunity, explores and learns from effective learning environments. The task of early intervention

research is to learn more of the nature of effective learning environment for infants at risk for mental retardation and to translate this knowledge into readily applicable techniques for use by parents and caregivers.

Institute supported investigators at the University of Washington Mental Retardation Research Center and elsewhere have shown that early intervention programs stressing the active participation and involvement of parents appear most likely to effect significant and enduring gains when they are initiated early and are sustained. These developments point to a needed shift in research emphasis from child focused to maily centered intervention efforts. They also call for careful evaluation of the impact of alternative patterns to parent care and training of infants as these may act to displace and diminish the effective involvement and participation of parents in facilitating the development of their risk infants.

The need for expanded research on early identification and intervention is acute. It is essential that we refine, evaluate, and make more effective the broad, new but untested social action programs serving damaged and deprived infants and young children. The incidence of infants at biological risk is increasing as improved obstetrical and perinatal care technologies salvage increasing numbers of biologically vulnerable infants. The vast majority of the retarded are a result of deprivation accompanying the destructive effects of poverty with its correlates of parental inadequacy and family pathology. For these children, identification and effective intervention, even as late as adolescence, offers promise for the primary prevention of mental retardation.

The Mental Retardation Research Centers, authorized by Public Law 88-164 and administered by the Institute, lead the research attack on mental retardation. These Centers have, in this year, made significant advances in the problem areas of neurological and genetic disorders, prematurity, malnutrition, and psychosocial deprivation among others. Over 50 percent of the research grant activity supported by the MRDD Branch is accomplished in the Centers. The Centers also serve as the Institute's primary base for training research scientists for work on mental retardation.

Research Training

Institutional training grant awards are the major means for research training of behavioral scientists for work on the problems of mental retardation and developmental disabilities. Review of these awards administered by the Mental Retardation and Developmental Disabilities Branch provides evidence for the past success of these awards and

supports their continuation. The review shows that trainees graduating from these research programs finds a ready labor market for their skills. A very high percentage of graduate trainees (90 percent) are in full time teaching and/or research positions. Students who do their dissertations directly on mental retardation problems continue their work in the field.

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National Institutes of Health

National Institute of Neurological and Communicative Disorders and Stroke

Data collected in the Collaborative Perinatal Project of the National Institute of Neurological and Communicative Disorders and Stroke are being analysed to determine the primary and contributing roles of biological and environmental factors in mental retardation in a population of 40,000 white, black and Puerto Rican children followed from the prenatal period to age seven. The identification of early signs of mental retardation will facilitate prevention, diagnosis and treatment, and will add substantially to knowledge in this area that has been derived largely from small retrospective studies of institutionalized retardates.

Mental retardation was defined as an IQ of 70 or less on the Wechsler Intelligence Scale for Children, or, for the relatively few children who could not be tested according to study protocol, equivalent IQs from other tests or reliable clinical judgements of retardation. Since children with IQs under 70 form a heterogeneous group, they were subdivided into four major categories consisting of those with severe retardation (IQ under 50) with and without signs of central nervous system damage, and those with mild retardation (IQ between 50 and 69) with and without such signs. Specific neurological diagnoses were obtained from the neurological examination given at age seven. The four groups were further subdivided by ethnic group and sex. Comparison groups are composed of children with IQs in the borderline, average and superior ranges.

Selected findings to date indicate that:

1. The incidence of severe mental retardation was approximately one-half of one percent in each of the ethnic groups studied (a total of more than 17,000 White, 19,000 Black and 1,000 Puerto Rican children).

2. The incidence of mild retardation was one percent among White children and almost five percent among Black and Puerto Rican children.

3. From one-half to three-quarters of the severely retarded children in each of the ethnic groups had major neurological problems.

4. Seven to 15 percent of the mildly retarded childre had major neurological problems.

5. Signs of perinatal anoxia were associated with mental retardation at age seven as well as at early ages.

6. Infant psychomotor test scores at eight months of age were good predictors of mental retardation, especially the severe category, at age seven.

7. IQ scores at age four were also good predictors of mental retardation as well as normal and superior intellectual performance at age seven.

8. Retardation, especially the mild category, was associated with low economic status.

ALCOHOL, DRUG ABUSE, AND MENTAL HEALTH ADMINISTRATION

National Institute of Mental Health
MENTAL RETARDATION

The National Institute of Mental Health has been involved in the field of mental retardation for approximately 25 years. In 1962, the National Institute of Child Health and Human Development (NICHD) was established as part of the National Institutes of Health, and assumed responsibility for the major mental retardation research actvities. At that time, funding for some of the developmental research previously supported by NIMH was transferred to NICHD. In 1967, leadership for retardation programs was turned over to the Social and Rehabilitation Service (SRS), and funding for NIMH-supported mental retardation and relevant hospital improvement grants were shifted to SRS. For several years, the unified effort headed by SRS absorbed many of the NIMH mental retardation programs. This was particularly true with respect to demonstration projects, in-service training, and basic research in child development.

Research

One research project concerns the development of skills for solving logico-conceptual problems. The aim is to identify and to chart the age-based progress of behavioral processes involved in forming and using class-type concepts for the normal child; then to contrast this developmental sequence with similar assessments of performance in both disadvantaged and mentally-retarded children. Another project centers on the utilization of known facts and skills, combining to form what are commonly called strategies, in complex conceptual tasks. The emphasis is on studying the efficiency of information processing by adult subjects. Another study is being conducted of developmental learning and cognition aimed at determining the processes whereby children (especially normal but also including familially retarded) with mental ages 4 to 14, solve problems. Children with learning disabilities will also be studied at a later stage.

Research on socioaffective development in infancy involving normal and mentally retarded children which previously concentrated on the first year of life is being extended to cover the first two years of development. In the context of general studies on early parental attachment, an ongoing study of interrelationships of parental grief, attachment, and early infant affect expressions will continue at the clinical-descriptive level. A new investigation will involve study of Down's syndrome infants. A total of 20 infants with Trisomy 21 will be studied longitudinally over the course of their first two years of life. Children are

to be observed and filmed during the first three months of life and mother-infant interactions are to be observed at regular intervals through age 24 months. Bayley Scale and EEG data will be obtained periodically as will be photographs and films of facial expressions and behavior on a "visual cliff". Special attention is being paid to the processes of parental attachment and their relations to the development of affective expressions in the Down's syndrome infant.

Another project deals with discrimination; remembering and forgetting; attention; learning perception and transfer processes in mentally retarded children.

The NIMH is funding a project to develop laboratory procedures to supplement clinical techniques for describing, predicting and modifying the behavior of severely mentally retarded persons, especially children. Subjects are mentally retarded children under 16.

Also being supported is a study of autistic schizophrenic children, including retardates, and treatment employing social reinforcement of verbal behavior which imitates that of adults.

Two projects underway involve studies of biological factors. In the first, the principal investigator focuses on an understanding of the effects of brain injury in infancy through the use of psychophysiological methods and theory. The problems under study are: (1) whether two generalized arousal systems, differentially affecting stimulus processing, can be distinguished; (2) whether one of the systems, the "orienting reflex", is relatively difficult to elicit when higher brain centers are not functioning optimally; (3) whether manipulation of early stimulation can affect development of this system. Subjects of study are undergraduate college students, normal and premature infants, and mental retardates.

Temporal distribution is being studied, as well as the behavioral and subjectively experienced correlates of telemetered, continuously recorded intermittent electroencephalograph (EEG) abnormalities. Adult and child subjects with Epilepsy, mental retardation, schizophrenia or childhood behavior disorders whose EEG's are distinguished by paroxysmal slow or spike transients, but who do not have overt seizures, are hospitalized and investigated over periods of 24 hours.

Training

Several NIMH training programs relate, either directly or indirectly, to mental retardation. The NIMH supports a training program for predoctoral interns in a hospital which has both adult and child patients. The trainees gain experience in dealing with child mental illness, with their families, and with the health needs of the community. Training in diagnosis, treatment, counselling, mental retardation, research and group therapy is given.

In another developing program, training in mental retardation is being offered as a supplement to the training of the general psychiatric resident as well as to child psychiatrists. Trainees receive instruction in biochemistry, genetics, neurology, and communicative disorders, and in problems relating to retardation. Each trainee also treats two retardates and their families.

One NIMH training project is designed to provide intensive one year field training for psychologists in the schools. Assignment to 3 Long Island school systems provide diversified population, preschool to adult in the study of emotionally disturbed, retarded, gifted, culturally disadvantaged, handicapped children. Opportunity is given for group dynamics with student, leaders, and administration.

An NIMH-supported grant involves the development of a series of four institutes to provide a broad orientation in mental retardation for psychiatric and pediatric residents. Each of the institutes consists of a two-week period of 100 instructional hours and trains 25 participants. Lectures, seminars, and individual assessment of assigned cases constitute the basic teaching methods. Demonstrations focus on retardates with inborn errors of metabolism and on encephalopathies. Seminars cover a wide range of topics, and field trips give special emphasis to management of retardates in the community. Lectures on prevention, genetic counseling, and treatment also are included in the curriculum.

Another grant has, as one of its objectives, the teaching of adolescent psychiatry to medical students through student partici-

pation in the Adolescent Service of the Neuropsychiatric Institute. The training program also offers training experience in mental retardation, child psychoanalysis, and forensic psychiatry.

Services

In the services area, two projects relate, in a significant portion, to mental retardation.

South Carolina State Hospital is establishing a treatment program to serve 300 emotionally disturbed, psychotic, retarded, delinquent, or hyperactive patients under 18 years of age. Most of the children and adolescents were previously placed in adult units and treatment programs. Staff is being trained in the use of behavior modification techniques. Close liaison is maintained with community mental health centers and community clinics, since they refer patients to the hospital and provide care after release. An outside consultant aids in evaluation of the program, which involves pre-test and post-test data on a broad-based behavioral measure, the Devereux Child Behavior Rating Scale, as well as other measures such as school attendance, grades, behavioral ratings by parents, and arrest records.

Through its affiliations with multiple neighborhood child care agencies and educational facilities, the Hahnemann Community Mental Health/Mental Retardation Center (HCMHMRC) is developing an early detection, intervention, and facilitator network of services to reach the young, high-risk children in this ghetto catchment area. The new staff positions funded by this grant are created for home agency facilitators and school facilitators. The Home Agency Facilitator staff includes a pediatrician with a psychiatric background, a child development specialist, and a social worker, all of whom train and supervise the nine outreach paraprofessional workers. The professional school facilitator staff includes psychoeducational specialists, a social worker and a mental health technologist. The target area is not only the poorest section of Philadelphia but has the highest state poverty rating. The population of 130,000, of whom 56 percent are black, has a multiple array of mental health and economic problems including unemployment, broken homes, low educational level, and alcoholism and drug abuse. Two-thirds of the homes are headed by a single parent, and over one-third of the residents are under 19 years of age. Because only one percent of the 1,300 children treated by HCMHMRC last year were under six years of age, the new focus on early detection and intervention is considered essential if later childhood and adolescent pathology is to be decreased.

The linkage network is a coordinating council, consisting of representatives from day care centers, law enforcement agencies, child health and mental health centers, preschools, the public

school system, and foster home placement services. This council, through the home agency and school facilitator staff, seeks out children under seven years of age who are physically, emotionally, and/or culturally vulnerable, handicapped, or abused. The home agency workers act as counselors to families in their homes, as facilitators of appropriate educational, health, and/or social welfare referrals, and as representatives of the community to the linkage network council. The school facilitators are diagnosticians and consultants to teachers. They also coordinate teams who assess a child's disabilities and secure appropriate remedial services. A data bank collects information, monitors the overall project, and assures continuity of care without duplication. Evaluation is based on parental reactions to quality and availability of services, and a comparison of behavior patterns of children who have received help with those who have not.

HEALTH RESOURCES ADMINISTRATION

Mental Retardation Construction and Consultation Activities in the Division of Facilities Development (Hill-Burton Program), Bureau of Health Planning and Resources Development

Mental retardation facilities have been eligible for and have received construction assistance from the Hill-Burton program since its inception 30 years ago. Up until the passage of the "Mental Retardation Facilities Construction Act" (1963) - P.L. 88-164, Title 1, the Hill-Burton program was the primary source of Federal assistance for retardation construction, and administered the Act after enactment until August 1967. Since the advent of the specific construction programs for retardation facilities, the Hill-Burton program has been acting primarily as a back-up resource for construction aid. As of September 30, 1976, a total of 109 retardation projects have been assisted with $56.7 million in Federal funds since the Hill-Burton program began. Hill-Burton personnel in both the HEW Regional Offices and in the State Hill-Burton agencies have provided expert consultation to the retardation facility programs and to many retardation project sponsors or potential sponsors. Hill-Burton consultation is especially valuable where retardation services are to be provided in a comprehensive health care facility or in any combination with other health services.

Public Law 93-641, signed on January 4, 1975, extended and extensively revised the Hill-Burton program. MR facilities are eligible under two types of formula grant assistance: (1) modernization of health facilities, and (2) construction of new inpatient medical facilities in areas which have experienced recent rapid population growth. The same facilities are also eligible for loans and loan guarantees with interest subsidy. A third type of grant assistance (Sec. 1625) is project grants for construction and modernization projects designed to prevent or eliminate safety hazards in publicly owned medical facilities or to avoid noncompliance by such facilities and licensure or accreditation standards. Grant or loan assistance from FY 1976 and 1977 appropriations (except Sec. 1625 grants) are awaiting the publication of regulations for Title XVI. At that time, $40.1 million in formula grants and $250 million in loan or loan guarantee authority will be available for the priority projects in each State. Section 1625 public facility project grants have already been opened for initial applications for the $11.4 million.

SOCIAL SECURITY ADMINISTRATION

Estimated Benefit Payments to the Mentally Retarded
(In thousands of dollars)

Activity	1976	TQ	1977 Revised Budget Estimate	1978 Budget Estimate
Income Maintenance:				
Estimated Benefit Payments from RSI-DI Trust Funds.....	$393,000	$107,000	$448,000	$494,000
Trust Fund Obligations Incurred to Adjudicate Claims of Beneficiaries.	5,345	1,336	5,686	5,778
Health Insurance:				
Estimated Payments from HI Trust Fund.....	25,000	7,000	33,000	38,000
Estimated Payments from SMI Trust Fund.....	14,000	4,000	20,000	27,000
Trust Fund Obligations Incurred to Process Health Insurance and Supplementary Medical Insurance Claims.....	1,443	401	1,876	2,335
Sub-total, Trust Funds....	438,788	119,737	508,562	567,113
General Fund Payments For Supplementary Security Income 1/.....	455,000	135,000	615,000	695,000
General Fund Obligations Incurred to Adjudicate Claims for Supplementary Security Income.....	37,810	11,380	51,967	57,268
Sub-total, General Funds..	492,810	146,380	666,967	752,268
Total Social Security Administration.....	$931,598	$266,117	$1,175,529	$1,319,381

1/ Includes Federal contributions toward State supplementation (hold harmless).

OFFICE OF HUMAN DEVELOPMENT

Office of Child Development

Mental Retardation

In July 1969, the Office of Child Development (OCD) was established in the Office of the Secretary of HEW to serve as a point of coordination for Federal programs for children and their families and to act as a national advocate of services for children. On April 1, 1973, OCD became a part of a new Office of Human Development at HEW which focuses on groups of Americans with special needs.

OCD's concerns extend to all children from conception through early adolescence, with emphasis on the formative five years of life and on children who are "at risk" because they have special problems. There are two bureaus in OCD: The Children's Bureau, which provides a wide range of technical assistance services relating to programs for children and families, and the Head Start Bureau, which operates Head Start and other innovative early childhood programs.

While OCD does not directly operate any programs specifically for the mentally retarded, the agency has an overall advocacy and leadership responsibility for all children, including children with mental retardation. In line with this responsibility, the Office of Child Development may help plan and recommend programs to deal with mental retardation; develop standards and guidelines for such programs; and provide technical assistance to States and public and private agencies in efforts to help mentally retarded children and youth. OCD works ccoperatively with the President's Committee on Mental Retardation, the Office for Handicapped Individuals, the Division of Developmental Disabilities, and other HEW agencies.

A. Children's Bureau

The Children's Bureau of the Office of Child Development provides leadership, advice, and technical assistance to States, agencies, organizations, and individuals delivering services to children and their families and to the Department in two areas: the welfare of children at risk and children who are abused or neglected.

Through the National Center of Child Advocacy, the Children's Bureau conducts research and demonstrations, collects, analyzes and disseminates information, and provides technical assistance, under the Children's Bureau Act of 1912 and section 426 of the Social Security Act. These activities are directed toward helping States, localities and private agencies and organizations strengthen their service systems in order to meet the developmental needs of children and their families through preventive or supportive resources or (where necessary) substitute nurturing environments for the children.

Through the National Center of Abuse and Neglect, the Children's Bureau gathers, develops, analyzes, and disseminates information and new knowledge, conducts research and demonstrations, provides training and technical assistance to States and other public and private nonprofit agencies and organizations, and provides financial assistance to eligible States. These activities, which are conducted under the Child Abuse Prevention and Treatment Act, are aimed at assisting service providers in preventing, identifying, and treating child abuse and neglect.

B. Head Start

Head Start enrollment has always been open to handicapped children, but greater emphasis is now being placed on their needs. For FY 1978 Head Start will continue to assure that 10 percent of the enrollment opportunities in each State are available to handicapped children. This is in accordance with the legislative mandate contained in P.L. 93-644, the Community Services Act of 1974. Prior to FY 1976, Head Start had implemented a policy of making 10 percent of the enrollment opportunities nationwide available to handicapped children. Head Start staff members are now receiving special training in working with handicapped children. The handicapped receive the full range of Head Start services as well as special health and education services provided by appropriate agencies in the community.

In addition, there are fourteen Regional Access Programs which are assisting local Head Start programs to: (1) analyze needs assessment data to determine needed resources to better serve handicapped children; (2) coordinate the use of existing resources; (3) match existing resources with the stated needs of local Head Start programs; (4) determine and assess the types of resources that are provided to local programs; and (5) evaluate the impact and type of assistance to local programs.

OFFICE OF HUMAN DEVELOPMENT

Rehabilitation Services Administration

MENTAL RETARDATION

Under the public rehabilitation program, grants are made to State vocational rehabilitation agencies to assist them in providing rehabilitation services to mentally and physically disabled individuals who have substantial employment handicaps and who can reasonably be expected to be rehabilitated into gainful employment. Among the services provided by State vocational rehabilitation agencies are comprehensive medical, psychosocial and vocational evaluation; physical restoration; counseling; personal adjustment, prevocational and vocational training; maintenance and transportation during the rehabilitation process; placement in suitable employment; services to families of handicapped people when such services contribute substantially to the rehabilitation of the handicapped client; and follow-up services to assist handicapped individuals in maintaining employment.

In relatively-recent years, there have been dramatic advances in the provision of vocational rehabilitation services to mentally retarded individuals. Approximately 12% of all the handicapped people rehabilitated by the State agencies have mental retardation as their primary disability. In 1976, about 35,200 mentally retarded individuals were rehabilitated, and in 1977 this figure is expected to be nearly 36,000.

Basic to the vocational rehabilitation effort has been the growing reliance on counselors and other vocational rehabilitation staff who work exclusively with mentally retarded clients. This specialized staff may be assigned to local vocational rehabilitation offices, schools, institutions, sheltered workshops, or other facilities serving the mentally retarded. By concentrating their attention on the mentally retarded clients, these counselors are successfully developing rehabilitation plans based on the special problems of the retarded, and are able to be broadly responsive to the needs of both the client and his/her family.

The specialized vocational rehabilitation staff working with the mentally retarded has been particularly effective in the development of cooperative vocational rehabilitation-special education programs designed to assist the retarded young person make a satisfying transition from school to work. These cooperative programs are found in many communities throughout the country and have greatly strengthened both special education and vocational rehabilitation efforts with the mentally retarded. The cooperative program structure varies from State to State, and the variety of approaches is

extraordinary. In some States, program administration is Statewide and in others there are separate agreements with individual school districts. Some programs function only to serve the mentally retarded, while others include youth with all kinds of disabilities. In some States, only vocational rehabilitation and special education are administratively involved, while in others representation includes vocational education.

Most cooperative arrangements have brought about the development of vocationally-oriented curricula within the schools. All of them, however, provide comprehensive evaluation of the retarded young person's vocational rehabilitation potential, personal adjustment and pre-vocational training, counseling, on-the-job training and work experience, job placement, follow-up and related vocational rehabilitation case services. These cooperative programs have proven themselves effective in reducing the school dropout rate of retarded youngsters and have provided a technique for continuous service to youngsters during the school years when they are best able to benefit from them.

Another emphasis of State vocational rehabilitation agencies has been the establishment of rehabilitation facilities, such as comprehensive rehabilitation centers, evaluation centers, occupational training centers, workshops, half-way houses, and other specialized facilities serving the mentally retarded. Such a rehabilitation facility may be established by State rehabilitation agencies, or by the State agency in cooperation with other public or private agencies. These facilities are an especially useful resource in the Program's deinstitutionalization efforts.

Under the Rehabilitation Training program, graduate training is supported in the field of rehabilitation counseling and other professional fields contributing to the vocational rehabilitation of the severely mentally retarded. Curriculum content on mental retardation is included within the course of study of all of these programs, and clinical fieldwork experience is carried out in facilities and agencies serving the mentally retarded. In addition, training is provided to employed rehabilitation agency personnel within State vocational rehabilitation agency in-service training programs and Rehabilitation Continuing Education Programs, in order to improve professional skills in rehabilitating mentally retarded persons.

Rehabilitation Research

Under the public rehabilitation program, grants are made to States and public and non-profit agencies and organizations, including institutions of higher learning, to pay part of the costs of projects for the purpose of planning and conducting research,

demonstrations and related activities which aid in the provision of vocational rehabilitation services to handicapped individuals, including the mentally retarded. Research in the office of Rehabilitation Research and Evaluation continues to focus on rehabilitation services for mentally retarded individuals that enhance the development of human qualities and capabilities which bridge the gap between attained competency and what is required for normal social and vocational independence and those which protect a mentally retarded person from exploitation and other threatening conditions beyond his control.

The differences in need for each kind of rehabilitation services between a mentally retarded person and a so-called normal one is not really a difference in kind, but one of degree. Obviously the more severe the degree of mental retardation the greater the need for rehabilitation services and the greater the gap that is likely to remain between attainable services and those required for independence. The goals of rehabilitation research are to lessen the dependence on special forms of supportive services, yet still maintain a person's social and vocational adjustment to the point that he can meet the demands placed upon him and reduce the likelihood that he needs to be institutionalized.

Research and Training Centers

Grants are made to three Rehabilitation Research and Training Centers in Mental Retardation, which were established by Congress in 1965, to conduct multidisciplinary programs of research on the major psychosocial, vocational, and personal adjustments in the lives of the mentally retarded persons. The training activities in which each Center is involved are geared toward wide dissemination and utilization of new knowledge resulting from research findings.

In response to HEW's increased recognition of the need to develop adequate alternatives to long-term institutional care, research projects conducted by the three Research and Training Centers are directed toward facilitating the integration of the mentally retarded persons into independent or semi-dependent community life with productive employment as the ultimate objective. The three Centers are located at the Universities of Wisconsin, Texas Tech and Oregon.

Research and Training Center Training Activities

A Research and Training Center's primary training responsibility is dissemination of research results through consultations and technical assistance, seminars, workshops, courses of study, conferences and demonstrations which will enhance the skills of students,

professionals, paraprofessionals, consumers and all other personnel involved in the rehabilitation process. Inasmuch as solutions to rehabilitation problems, in most instances, require the coordination of bio-medical, psychosocial, engineering, education, and vocational rehabilitation disciplines, the Research and Training Center Training programs encompass training into all these components of rehabilitation that will lead to employment.

Mental Retardation Projects in Special Foreign Currency Countries

There are five Research and Demonstration Projects in the field of mental retardation currently being supported through the Special Foreign Currency Program. These are located in Israel, Poland, Tunisia and Egypt. It is expected that three new projects in mental retardation will be initiated under this Program in 1978.

Number of Rehabilitations with Mental Retardation

	Persons Rehabilitated	
Fiscal Year	Total	Mental Retardation
1974	361,138	41,935
1975	324,039	38,338
1976	303,328*	35,200*
1977	295,000*	35,990*
1978	286,000*	34,892*

*Estimated

OFFICE OF HUMAN DEVELOPMENT

Developmental Disabilities Office

The Developmental Disabilities Office is responsible for a broad range of programs designed to meet the problems of the developmentally disabled including the mentally retarded. The Developmentally Disabled Assistance and Bill of Rights Act, P.L. 94-103, which became law in October 1975, amended P.L. 88-164, the Mental Retardation Act of 1963 and its successor P.L. 91-517, the Developmental Disabilities Act of 1970. P.L. 94-103 authorizes appropriations for formula grants to States, protection and advocacy grants, grants for special projects, and grants to university affiliated facilities. These activities are unified by the common goal of assisting developmentally disabled persons, including the mentally retarded to achieve and maintain the maximum personal, social and economic independence of which they are capable. Underlying this support is the continuing concern for expanding opportunities and resources available to the substantially handicapped among the developmentally disabled.

Mentally retarded individuals comprise the largest group of developmentally disabled. It is estimated that about 3 percent of the general population fall into this category. About 87 percent of the retarded are mildly retarded and therefore able to benefit from education and training, hold a job, and participate in community affairs. The focus now is on the more severely retarded who may also be multiple handicapped and over the years have been most often found in public institutions.

It was shortly over a decade ago when attention was called to the plight of the mentally retarded in institutions. A study was made by the President's Panel on Mental Retardation and out of the Panel's recommendations evolved the Mental Retardation Facilities and Community Mental Health Centers Construction Act (P.L. 88-164) which authorized appropriations for construction of new facilities or remodeling of others to make the public institutions housing mentally retarded persons more livable. At the same time construction of university affiliated facilities was authorized to house the training programs to provide skilled services to the retarded.

The 1970 amendments to the law (P.L. 91-517) reached out to embrace a larger group of individuals with disabilities (mental retardation, cerebral palsy, and epilepsy) which occurred before the age of 18, would be expected to continue indefinitely, and constituted a substantial handicap.

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This law gave strength to the States through a formula grant program. Federal funds were awarded to States to be disbursed by the State through a Federally-approved State comprehensive plan. States could set their own priorities for funding State and local programs and co-mingle funds with those of other State programs to provide a wide range of diversified services through the combination and integration of specialized and generic services such as health, welfare, education, and rehabilitation without imposing a set pattern of services on any one State. A higher Federal share was allowed for poverty areas.

The comprehensive State plan, revised annually, must include a description of how other State/Federal programs provide for services to the developmentally disabled and how funds under P.L. 91-517 would be used to augment, but not duplicate, these programs. At least nine programs must be taken into account: vocational rehabilitation, public assistance, social services, crippled children's services, education for the handicapped, medical assistance, maternal and child health, comprehensive health planning, and mental health.

Responsibility is placed at the State level for developing strategies for the successful implementation of the program. Use of Federal funds must not result in a decrease in the level of effort at State and local levels in providing services to persons with developmental disabilities. To the extent feasible, this program should stimulate an increase in effort.

The new Act, P.L. 94-103, adds autism to the definition of developmental disabilities as well as dyslexia resulting from mental retardation, cerebral palsy, epilepsy, or autism. It continues the formula grant program but places greater emphasis on such goals as deinstitutionalization of developmentally disabled persons with respect to those persons who are inappropriately placed in institutions; the development of community alternatives; early intervention for infants and preschool age children; programs for adults; and the improvement of institutions that are still needed.

P.L. 94-103 also mandates the establishment of systems for the protection and advocacy of the rights of persons with developmental disabilities. These systems must be in place in the States by October 1, 1977. The advocacy agency so established can not be a service provider and must be free from conflict of interest with service providing agencies. If the protection and advocacy system is not operative by October 1, 1977, the States concerned would not be eligible to receive formula grant funds under P.L. 94-103.

Another new section of the Act authorizes special project grants. Of the amount available for special projects, not less than 25 percent must be used for projects of national significance.

Special project grants are made to public and nonprofit organizations for the purposes of: providing technical assistance; training of specialized personnel; demonstrating established programs which hold promise of improving services; eliminating attitudinal and environmental barriers through public awareness and public education; coordinating available community resources; demonstrating services to persons with developmental disabilities who are economically disadvantaged; improving techniques in the development of services; improving the quality of such services; and gathering and disseminating information.

Many special project grants have been awarded in 1976 and a major number continued in 1977 devoted specifically to the mentally retarded. These projects concern special living arrangements as an alternative to institutionalization; sheltered workshops to develop any potential skills for employment; evaluation of effects on the placement of the mentally retarded in community programs; and training projects to enable the mentally retarded to achieve independent living.

Several specific examples include a project in Massachusetts, the Effects of Living Environment on the Mentally Retarded. This projects uses a multiple-baseline quasi-experimental design where State school residents and attendants are observed before, during, and after their present living quarters (large sleeping wards and day halls) are converted into smaller homelike spaces. The major aspect of the program is the use of citizen advocates who work with these retarded persons on a one-to-one basis in the community. A project in Wisconsin, Transitional Group Homes for Mentally Retarded Children and Adults, is preparing residents for community placement by developing independent living skills in a self-help atmosphere with interface to appropriate community resources. One other project in Mississippi, Comprehensive Training for Severely Retarded Adults, serves 117 mentally retarded men who are twenty years of age or older, who have severe handicaps and behavior problems. This project provides a structured program five days per week, six to eight hours per day. Individual plans are written and the men receive instruction in daily living skills, special education, motor development, and arts and crafts.

The university affiliated facilities activity covers the training of personnel needed to provide the broad spectrum of services to the developmentally disabled; demonstrating exemplary services and service delivery systems; conducting research projects which will provide additional knowledge and application of materials, strategies, and techniques for the mentally retarded; and assisting various service agencies in the areas they serve in expanding and improving the quality of service they provide to the mentally retarded.

There are currently 37 university affiliated facilities receiving support under this program.

The following specific goals for this activity have been established: (1) the integration of services, training, and research; (2) interdisciplinary education and training; (3) community-based delivery systems; and (4) the application of a demonstration model in meeting the needs of handicapped individuals.

Most of the existing university affiliated facilities are oriented toward training and services concerned with maternal/child health since those Federal and State programs are the chief continuing sponsors. The current goals seek to broaden the scope and mission to ensure that the facilities become more supportive of and responsive to those who are developmentally disabled, regardless of age groups.

The facilities activities also include provision of consultation, technical assistance, short-term training, and other forms of assistance to agencies serving the developmentally disabled.

MENTAL RETARDATION

Center for Disease Control

Immunization

In 1970, the Center for Disease Control provided project grants and technical assistance to State and local health agencies to support an intensive rubella immunization program. This massive effort was initiated because of the following: (1) a rubella epidemic occurred in the United States in 1964-65 and resulted in an estimated 30,000 cases of congenital rubella syndrome (severe birth defects) and left nearly 15,000 babies mentally retarded, deaf, or blind; (2) a new live-virus rubella vaccine had just been licensed for use in the United States; and (3) based upon past epidemiologic data, an epidemic of rubella, similar to the one in 1964-65, was predicted for the early 1970's. By the end of 1972 over 30 million doses of rubella vaccine had been administered in public programs. Through the end of 1976, approximately 75 million doses of rubella vaccine had been distributed and protection levels against rubella had reached those of measles.

Reported cases of rubella have decreased from 56,552 in 1970 to 12,090 in 1976 and the predicted epidemic has not yet occurred. This decrease has been rather steady, reaching a record low of 11,917 in 1974. However, an estimated 14.7 million children still remain unprotected against rubella.

Lead-based paint poisoning prevention

Hyperactivity, mental retardation, and neurological damage have been attributed to the ingestion and absorption of lead. Approximately 6,000 children per year suffer some neurological damage from undue lead absorption. The ubiquity of lead in the child's living environment, particularly under conditions of housing deterioration and flaking and peeling of lead-based paint, accounts for the increasing problem of lead absorption among children.

Project grants and technical assistance are provided by the Center for Disease Control for detection, treatment, and hazard reduction activities in local communities throughout the United States which have demonstrated the existence of a lead poisoning problem.

During fiscal year 1976, 66 community programs tested approximately 500,000 children and identified 43,900 with evidence of undue lead absorption. Medical and environmental services were provided to protect these children from the effects from overt lead poisoning.

PUBLIC HEALTH SERVICE

Health Services Administration
Bureau of Community Health Services

Mental Retardation

There are several activities within the Bureau of Community Health Services which are designed to meet the needs of children with mental retardation or developmental disabilities. These activities focus upon three major areas: (1) preventive services; (2) basic health and supportive services; and (3) training of personnel to deliver services.

Through a program emphasis on mental retardation, initially mandated by Congressional earmarkings of funds for the Maternal and Child Health and Crippled Children's programs under Title V of the Social Security Act, specific balanced and coordinated models of prevention and services for retarded and handicapped children and their families are being evolved.

The activity is dependent on the use of a combination of basic formula grants, special project grants to States and Institutions of Higher Learning, and a major interdisciplinary training effort and programmatic research grants to achieve this program emphasis. The coordinated program linking State health agencies, medical centers, and universities is helping achieve movement toward the realization of our two national goals in mental retardation - prevention and deinstitutionalization.

I. Preventive Services

Maternity and Infant Care Projects

Section 508, Title V, Social Security Act, authorized grants for projects to help reduce the incidence of mental retardation and other handicapping conditions caused by complications associated with childbearing and to help reduce infant and maternal mortality by providing necessary health care to high-risk mothers and their infants.

Starting in FY 1973, each State was required to incorporate such projects in its State plan and provide the services either directly or through grants and contracts. The percentage of women seeking care in the first trimester of pregnancy in these programs increased from 14.5 percent in 1967 to 32 percent in 1975. The ultimate long range impact on prematurity and the presumed decrease in the number of damaged infants produced by these women will be studied.

Screening of Newborn Infants

Phenylketonuria (PKU), an inborn error of metabolism, has in the past been responsible for one percent of the severely retarded population in State Institutions. By detecting families with the condition and by

screening newborn infants (43 States have enacted mandatory requirements for such screening), the damage can usually be prevented by placing the infants on a special diet.

Approximately 94 percent of the live newborn infants in this country are screened for PKU and other conditions. State Health Departments, working closely with medical centers, have developed the necessary laboratory and clinical facilities to screen, diagnose, and manage these infants on the special diets.

As a means of monitoring the outcome and effectiveness of newborn infants detected and treated for PKU, some 16 clinics have been participating in a MCH supported collaborative follow-up of their patients. Preliminary findings thus far indicated that:

> Children in the study sample appear to be developing normally on the diet in terms of physical and neurological examinations performed at diagnosis, one, two, three, four, and six years of age.
>
> The age of dietary inception appeared to be a significant factor influencing future cognitive ability, beginning in the second month of life. Children treated after 31 days of life appear to have a slightly lower mean IQ score than those treated prior to one month of age.

A second phase of this collaborative effort is beginning to explore the point in time at which the special dietary treatment might be discontinued, with a third phase focusing on management of potential pregnancies occurring in females with PKU who were treated as infants.

PKU is only one of a number of metabolic conditions which can result in progressive damage or death of an infant after birth and which can be detected through a newborn screening program. The same newborn blood sample being collected for PKU screening can be used to test for an increasing number of these conditions. Two State Health Departments (Oregon and Massachusetts) have set up Regional Centers designed to screen for multiple conditions from all of the States in the region. Better quality control is maintained on a regional basis and the samples are screened for six conditions at a lower cost than what the individual States had paid to screen for PKU alone.

Lead Poisoning

The State Health Departments through their Children and Youth Projects are continuing to screen their populations for lead poisoning which is still considered as a major public health problem.

Reports of "subclinical" effects of lead on children without overt evidence of lead poisoning, but with psychological and other functional impairments, continue to appear. It has also been suggested that the interaction of lead with other metals and pollutants is further complicating the problem.

While the issue of low lead toxicity in children is far from clear-cut, the implications of many of the positive findings are grave. Systematic joint efforts with local units of the National Association for Retarded Citizens and Cerebral Palsey Groups, at the education of risk populations in preventive measures, are being carried out.

Rh Hemolytic Disease

The use of MCH formula funds by State Health Departments to provide Rh immunoglobulin in their maternity services for Rh negative women at risk, has increased the utilization rate of this preventive procedure and contributed to the general decline of Rh Hemolytic Disease in the past.

The liberalization of State abortion laws and the recent dramatic increase in the early termination of pregnancies, however, may well be negating some of this progress. An Rh negative woman can become immunized by the spontaneous or induced abortion of her Rh positive fetus if she is not protected by the administration of Rh immunoglobulin. Utilization rates of RhIG after abortion have been far from ideal. This is an area of prevention which will require particular attention.

Rubella

The number of children with suspected and confirmed Congenital Rubella Syndrome being cared for by the MCH supported Special Clinics for Mentally Retarded Children and by the Crippled Children's Program has shown a considerable decrease. The general decline in immunization levels in our population, however, again creates the potential for the recurrance of significant numbers of infants with Congenital Rubella Syndrome.

II. Basic and Supportive Services

Maternal and Child Health Services

Section 501, Title V, Social Security Act, authorizes annual formula grants to the States to extend and improve health services for mothers and children, especially in rural areas. Basic to this mandate has been the effort by the States to reduce infant mortality. In the final 1974 data, this nation recorded 16.7 infant deaths per 1000 live births and

was ranked 15th among all nations reporting. Provisional 1975 data indicated 16.1 deaths per 1000 live births.

These State Maternal and Child Health Programs continued to provide a number of basic and supportive services which contribute directly to the national effort to combat mental retardation. These include:

- Prenatal and post partum care to some 600,000 women.
- 10 million vision screenings for children.
- Audiometer testing for 6 1/2 million children.
- Dental screening for over 3 million children.
- Immunizations for over 3 million children.
- Well child care of just under 2 million children.

Many of these services screened out at-risk and suspect children showing some developmental lags. For these, early intervention and preventive programs were instituted.

Support services for the at-risk population were likewise provided through the remaining four components of the program of projects carried out by each State:

- Children and Youth Projects - Comprehensive care to children at high-risk in poverty areas was provided for 166,000 children.
- Dental Care Projects - over 984,000 children received dental treatment, including a large number of retarded handicapped children.
- Intensive Infant Care Projects - over 150,000 infants were admitted and served in special intensive care units.

Special Clinical Services for Mentally Retarded Children

Clinical services for mentally retarded children operating in all but two States provided diagnosis, evaluation of a child's capacity for growth,

the development of a treatment and management plan, interpretation of findings and counseling of parents, and follow-up care. Mental retardation clinic services were provided for over 75,000 children, through 360,000 visits made to 166 clinics supported by MCH funds.

Children are being seen at these special clinics at an earlier age as a result of multiple screening procedures carried out by the State Maternal and Child Health Programs. 40 percent of the new patients seen in these clinical programs were under 5 years of age; 39 percent were 5-9 years old; and 15 percent were ages 10-14.

These clinical programs fulfill a major function of "unlabeling" children referred as presumably mentally retarded. Among new patients classified, 1/3 were found not to be retarded and were referred to other appropriate treatment resources.

The programs likewise played a significant role in preventing institutionalization by providing parents with alternatives in terms of management help, treatment, and access to community resources.

Crippled Children's Services

Section 501, Title V, Social Security Act, authorizes annual formula grants to the States to find children who are crippled or who are suffering from conditions leading to crippling, and to provide them with medical, surgical, corrective, and other services.

A total of 525,000 children received physician's services and 79,000 received hospital inpatient services under State Crippled Children's Programs for FY 1974.

Congenital malformations accounted for 19.4 percent of all conditions noted, and about 25 percent of the children served were reported to have multiple conditions, including mental retardation.

Genetic Services

Twenty projects supported with CC funds, and located at major medical centers, provided cytogenetic and biochemical laboratory services for related clinical programs and jointly with the staff of these clinics provided genetic counseling to families served in these centers. Over 1500 amniotic fluid samples were analyzed in addition to several thousand other samples for tissue cultures, enzyme assays, or biochemical determinations.

III. Training

The training of personnel essential to the advancement of basic Maternal and Child Health and Crippled Children's Services are carried out and supported under authority of Sections 503 and 504, Title V, of the Social Security Act. The development of professional leadership personnel for services for the retarded and handicapped is primarily carried out through 21 University Affiliated Centers with support from Section 571, Title V, Social Security Act. These University Affiliated Centers are designed to provide comprehensive multidisciplinary training of specialists who will work with the handicapped and retarded. The programs are based on a concept of multiagency funding and multidepartmental and university participation. Each utilizes a complete range of preventive, treatment and rehabilitation services as a base for the training offered. A core faculty usually representing some 20 professional disciplines demonstrate the continuum of care and the range of roles and contributions each has to offer. While basic objectives are similar, each center is shaped by its staff, location, physical plant and the specific disciplines, and university departments that are involved in its operation.

In the period from 1967-1976, MCH has invested approximately $148 million in these centers for faculty and student support and for some of the patient services necessary to carry out the training mission. While the program has had some major impacts on a wide range of university departments and undergraduate curriculums, its major training focus has produced several thousand specialists in various disciplines. During the past year, 408 long term trainees were supported by MCH stipends in the following disciplinary specialists:

clinical psychology	75
speech & audiology	61
medicine	60
social work	114
pedodontics	17
public health nursing	17
occupational therapy	30
physical therapy	19
nutrition	7
biochemists	1
others	7

In addition, these UAF programs with existing faculty, State, local, and university funds provided undergraduate, in service, and short term training in the care of the retarded and handicapped to some 50,000 individuals.

IV. Research

The Office for Maternal and Child Health, Bureau of Community Health Services, supports applied research studies that show promise of improving health services for mothers and children and handicapped children. Approved studies must have regional and/or national significance, and the research findings must be applicable and/or generalizable to programs delivering health services to mothers and children and handicapped children. High priority is given to research relating to mental retardation, especially in the prevention area (prenatal care), intervention (particularly in the early childhood years), and in improving the functioning of the handicapped child in the family environment.

OFFICE OF EDUCATION
Report on Mental Retardation

Programs dealing with handicapped children in the Office of Education have been placed under the administrative direction of the Bureau of Education for the Handicapped. This is consistent with the efforts of the Office of Education to provide maximum educational programming for all children. The Bureau of Education for the Handicapped (BEH) is responsible for supervising and implemeting current and new legislative authorities to provide funds for projects and programs relating to the education and training of and research on handicapped children and youth. These children include those who are mentally retarded as well as those who are hard of hearing, deaf, speech impaired, visually handicapped, seriously emotionally disturbed, crippled, or other health impaired and require special education.

The overarching goal for Federal efforts in the area of education for the handicapped is to equalize educational opportunities for handicapped children. Only a bit more than 55 percent of the Nation's more than eight million schoolaged handicapped children receive needed special education services.

The main issues surrounding the Federal role in education for the handicapped are:

1. How can the limited available Federal resources be used in a catalytic and stimulative manner to bring quality educational services to the greatest proportion possible of the unserved 45 percent of the target group?

2. What is the best use of Federal resources in preventing identifiable handicaps from becoming serious disabilities in school and adult life?

3. What educational techniques and methods can be developed, introduced and adopted to insure handicapped children job skills to enter adulthood with a high probability of participation in society in a meaningful manner?

Six objectives have been adopted for the Federal programs for education of the handicapped:

I. National Commitment

To insure that every handicapped child aged 5 to 18 is receiving an appropriately designed education by 1978, and that all handicapped children aged 3 to 21 will receive an appropriate education.

II. Increased Services

To assist the States in providing the appropriate educational services to the handicapped by 1980.

III. Career Education

To assure that by the year 1978, every handicapped child who leaves school has had career educational training that is relevant to the job market, meaningful to his career aspiration, and capble, of bringing him up to his fullest potential.

IV. Manpower Development

To assure that all handicapped children served in the schools have a trained teacher competent in the skills required to aid the child in reaching his full potentials.

V. Early Childhood Education

To secure the enrollment of 750, preschool aged handicapped children in Federal, State, and local educational and day care programs.

VI. Severely Handicapped

To encourage additional educational programming for severely handicapped children to enable them to become as independent as possible, including reducing their requirements for institutional care, and providing opportunities for self-development.

In order to efficiently implement the program and carry out the Federal mandate, the Bureau is administratively organized into four major divisions under the Office of the Deputy Commissioner. Each of the major Divisions -- Personnel Preparation, Assistance to States, Media Services and Innovation and Development -- functions as an integral element in the total Bureau program for handicapped children. The following pages describe the functioning of each division as it relates specifically to mentally retarded children.

Services

Division of Assistance to States

Under this Division, there are two branches. One administers the Aid to States programs and the second operates the severely

handicapped programs, which includes the Deaf-Blind program.

Aid to States Branch Programs

A. Branch Purpose

The Aid to States Branch is responsible for administering and monitoring programs of assistance and also providing technical and developmental assistance to States in the design, development, implementation and review of State plans for the education of the handicapped. The Branch also serves as a clearinghouse of information concerning novel and/or effective approaches to special education in other States.

B. Historical Development

The purpose of Title VI, Part B Education of the Handicapped Amendments of 1974, P.L. 93-380 was to provide funds to the States for the initiation, expansion and improvement of special education and related services for handicapped children at the preschool, elementary and secondary school levels; and may be used for the early identification and assessment of handicapping conditions in children under three years of age. Beginning in FY 1975, the State plan must include a goal of providing full educational opportunities to all handicapped children and provide for a procedure to assure the accomplishment of this goal, with priority for expenditure to funds going to serve children who are not receiving an education. The State plan must also provide for procedural safeguards concerning the identification, evaluation and educational placement of the children. With the passage of P.L. 94-142, "The Education for All Handicapped Children Act", the focus of this program changes from being primarily a catalytic or technical assistance effort to one of stringent implementation. The new law mandates that the Federal government administer all of these programs under the requirement that the States set in motion plans and procedures to provide a free appropriate education to all school aged handicapped children by 1978. The responsibilities of the Federal government to enforce this law requires that the compliance of the States and local agencies must be monitored to determine that the States adapt extensive child identification, due process, confidentiality, least restrictive placement and individual child planning procedures in support of their timetable to provide a free appropriate education for every handicapped child.

C. Impact on Mentally Retarded

During fiscal year 1973, about #37.5 million was obligated for the Part B program. Of this amount about $12 million was expended in the area of mental retardation, providing direct services to 64,000 mentally retarded children. In 1974 the Part B appropriation increased to $47.5 million; $15 million of which provided direct services to 80,000 mentally retarded children. During 1975 we are estimating that we shall be serving the same numbers of mentally retarded children. During 1976 $67 million will be allocated to the mentally retarded resulting in 350,000 children being served. Approximately $105 million will be allocated to the mentally retarded during 1977 and 1978 resulting in 558 thousand children being served.

The purpose of the P.L. 89-313 Amendment to Title I of the Elementary and Secondary Education Act is to provide assistance to the States for the education of handicapped children in State-operated and State-supported schools. A new provision, beginning in fiscal year 1975, requires that if a child is transferred from a State-operated or supported school to one operated or supported by a local school system that the P.L. 89-313 funds follow him there.

During recent years, as local facilities for the handicapped have increased, State schools have found the composition of their resident populations changing from the midly handicapped to large percentages of children who are severely mentally retarded, and those who have serious handicaps in addition to mental retardation.

Model and pilot programs for these types of children have been conducted under P.L. 89-313 in many States.

These funds have enabled institutions and agencies to develop programs for children who have not previously been considered capable of responding to educational or rehabilitative services. The results in many instances have been encouraging and special educators and staff in residential institutions and day classes have raised their levels of expectations for such children. While this program originally had a relatively limited funding, significant results have been realized, especially in terms of planning for comprehensive services.

During fiscal year 1973, of $75.9 million expended, about $46.9 million was in the area of mental retardation, serving

about 98,760 children. During fiscal year 1974 about $85.8 million was appropriated for this program. Of this amount, about $52.5 million went to mental retardation, serving about 103,000 mentally retarded children. In fiscal year 1975 $87.8 million was appropriated for this program to supplement the special educational services of approximately 179,000 handicapped children with $54,828,432 being used for 111,600 mentally retarded children. During fiscal year 1976, almost $96 million was allocated for this program to serve 188,078 handicapped children with 18,030 of such children being served in local educational agencies. Of the amount allocated for fiscal year 1976, $57,633,060 was used to serve 113,000 mentally retarded children.

In fiscal year 1977, we estimate that we will be serving 118,000 mentally retarded children in institutional programs and in programs operated and supported by local educational agencies. Our estimation for fiscal year 1978 is that approximately 136,000 mentally retarded children will receive services.

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Special Services Branch - Programs for the Severely Handicapped

A. Purpose

The Special Services Branch of the Division of Assistance to States monitors two special programs directing attention to severely handicapped children and youth. "Telecommunications for Severely Handicapped Children and Youth Who are Homebound," was designed to explore the effectiveness of modern telecommunications technology in the provision of educational/training services to those severely handicapped children and youth who are homebound due to restricted mobility or other aspects of social performance of physical involvement. Programs for Severely Handicapped Children and Youth provides for the funding of projects which would provide in conjunction with relevant public and private agencies and organizations within a State, (a) plan for comprehensive services designed to meet identified, developmental needs of severely handicapped children and youth; (b) a model, demonstration program providing direct educational and/or training services for these children and youth which can ultimately be replicated State-wide and throughout the Nation; and (c) dissemination strategy whereby information about exemplary program activities or elements will be made with or interested in the education/training of severely handicapped children and youth.

B. Assessment Needs

It is estimated that nearly one million severely handicapped children and youth are totally excluded from the educational system of our Nation. At least 300,000 others are not receiving adequate services.

The principal problems delimiting the delivery of effective educational/training services to severely handicapped children and youth; in those areas where such services are mandated or supported, include: (1) extensive deficiencies in personnel with expertise and experience; (2) lack of adequate, functional facilities; (3) general void of appropriate curricula, methodologies, and education/training programs; (4) scarcity of specialized materials and equipment; (5) limited child and youth identification; diagnostic, prescriptive and placement services; and (6) a general apathy or lack of concern for the needs of such persons, as well as the near nonexistence of advocate groups organized and functioning on their behalf.

The extreme shortage of adequate facilities, staff, and programs, has in many instances limited placement options for severely handicapped children and youth to already overpopulated institutions where, with a lack of funds, facilities, and staff, it has been impossible to provide little more than custodial care. Under more fortunate circumstances there may be more

appropriate programs as institutions, and a variety of education/ training service capabilities in home communities through mental health clinics, group home, halfway houses, and interim care placement centers. The States of Washington and York are among those implementing some of these techniques. The "Rosenberg Report", a study in New York State in 1969, found that almost one-third of the retarded children and adults institutionalized by the State could be placed in the communityif there were appropriate mental health and day-school facilities for them. At the present time, adequate facilities for such placements are very limited.

Among the most isolated of all severely handicapped children are those who reside in the Nation's "training schools for the retarded and mental hospitals for the emotionally disturbed." Many of these institutions are located far away from any developed community; often those in larger cities are in relatively isolated or inconvenient locations. Children in these institutions rarely leave the grounds of the facility and are almost never given the opportunity to participate in the educational programs of the local school district.

Despite programs administered under legislation such as P.L. 89-313, amendment to Title I, ESEA, which helps to serve nearly 175,000 children in State-operated and State-supported educational programs, tens of thousands of children are left on their own to pass their days without constructive educational programs or social therapy. Such critical personnel shortages exist, that often when services are provided, these services constitute little more than routine custodial care.

The failure to educate or train is still commonplace despite mandatory education laws and United States District Court statements. Pennslyvania et al states that every retarded child is capable of receiving some form of education and that the commonwealth . must provide a free public education in accordance with every child's abilities.

C. Current Activities

The Special Services Branch funded for continuation ten (10) programs and five (5) telecommunication activities for severely handicapped in fiscal year 1975. Seven new programs totaling $795,573, were funded, each directing attention to specific areas of the severely handicapped such as auditorial, visual, and orthopedic impairment, severely emotional disturbance and severely/profoundly retarded. The seventeen programs, totaling $2,826.00, will serve as model demonstration programs to be replicated throughout the States. The five telecommunication efforts, totaling $1,328,779, deal with Telecommunications for Severely Handicapped Children and Youth Who Are Homebound. Telecommunications can be a link between severely

handicapped children and the improvement of their social skills and enrichment of their general life situation.

D. Historical Overview and Future Goals

The Bureau of Education for the Handicapped has been particularly interested in launching a concerted effort on behalf of the severely handicapped because of the demand and apparent need for services to this population, the difficult financial position of local and state governments, and the extent of successful activities conducted in the programs for deaf-blind children, funded by the Bureau over the past severaly years.

Through the BEH objective and activities addressed to the needs of severely handicapped, we will undertake cooperative planning with related Federal agencies and with State departments of special education to target resources at this population. There will be a program of technical assistance to State education agencies to improve both their management and planning techniques so as to make maximum use of all Federal resources that can be dedicated to the needs of the severely handicapped.

The specific strategy proposed for implementation by BEH during fiscal year 1976 as a sustained thrust toward meeting the educational/training needs of severely handicapped children and youth is: to develop and refine a national compact between BEH and selected States on the education and training for the severely handicapped. A tentative plan for such an agreement has been drafted to incorporate the major service delivery problems that will have to be considered, resolved and funded from State and Federal resources. The current intent is to discuss this plan in whole and in the broad spectrum encompassed by its several parts, with selected States. The objective of this year's activity is to engage in a dialog with these States to determine the feasibility and possible deficiencies of the task required to launch the implementation stage of such a national plan. In furtherance of the intent of this year's activity, it is visualized that we would pursue this effort along two lines; (a) a technical assistance colloquy with the several States to explore various areas of mutual concern, and (b) the development of bench-mark data to be used tentatively in a preliminary assessment of the scope, quality and breadth of the plan.

E. Impact on the Mentally Retarded

As it is reflected in current data 41% of the children served in this program were considered to be severely mentally retarded. In terms of money expended the data reflects approximately: 1,807,465 to be expended on behalf of severely mentally retarded.

Centers and Services for Deaf-Blind Children

A. Program Purpose

The purpose of this program is to "provide through a limited number of model centers for deaf-blind children, a program designed to develop and bring to bear upon such children, beginning as early as feasible in life, those specialized, intensive professional and allied services, methods, and aids that are found to be most effective to enable them to achieve their full potential for communication with and adjustment to, the world around them, for useful and meaningful participation in society and for self-fulfillment."

These centers will develop and provide services to children who are deaf-blind and have been deprived of their major avenue of learning and contact with the every-day experiences of life.

B. Historical Background, Legislation and Funding

Public Law 90-247 was signed on January 2, 1968. This legislation was in response to the rubella epidemic (German Measles) that swept the nation and left many children with auditory and visual impairments, as well as other handicapping conditions including mental retardation. Approximately 5064 children were left deaf and blind. There were no programs in existence for such children at that time. In 1969, the first eight regional deaf-blind centers were started. In 1975, there was a total of 10 Regional Deaf-Blind Centers serving deaf-blind children in all 50 States and U.S. Territories.

Total funding approved for Centers and Services for Deaf-Blind Children is as follows:

1970	2,000,000.00
1971	4,500,000.00
1972	7,500,000.00
1973	10,000,000.00
1974	14,055,000.00
1975	12,000,000.00
1976	16,000,000.00
1977/78	16,000,000.00

4516 deaf-blind children are in various types of educational

programs located in public and private institutions and state hospitals for the mentally retarded. Some of the types of services offered by the Deaf-Blind Program are as follows:

1. Full and part-time education services (both residential and day.)

2. Diagnosis and Evaluation

3. Parent Counseling

4. In-Service Training

5. Short-term program (summer school, respite care)

6. Pre-vocational programs

C. Impact on Mental Retardation

Children born with rubella have many handicapping conditions; many of the children are mentally retarded or show evidence of mental retardation. 800 of our deaf-blind population are receiving services in state hospitals for the retarded. Many more of these children who are deaf-blind and mentally retarded are in programs at public and private institutions. Between 50-85% of children in deaf-blind programs have also been diagnosed at having some degree of mental retardation.

Division of Media Services

Under the Division of Media Services there are three major activities: Media Services and Captioned Films, Recruitment and Information, and Regional Resource Centers.

Recruitment and Information

The recruitment and information program comes directly under the purview of the Deputy Commissioner.

A. Program Purpose

(1) to link parents of handicapped children and youth with needed and appropriate educational and related support services through information and referral to state and local resources; by reaching through mass media, parents of handicapped children who have failed to find appropriate services for these children, to respond to public inquiries generated by media and by assisting local groups in their efforts to meet information and referral needs of parents; (2) to assist States and local planners in providing adequate and appropriate services to handicapped children by supplying valuable consumer feedback to the service delivery system;

and (3) to encourage regular education teachers to pursue careers to become teachers of the handicapped.

B. Historical Development

The National Special Education Information Center is now almost six years old. In the past it has directed its greatest efforts to making direct responses to parents by answering telephone inquiries and responding to mail inquiries. It has advertised its services on radio and television and in newspapers. It has also sponsored talk shows by special educators on radio and television.

Currently it is continuing these major efforts, but expanding on them through surveys of existing services, support of local parent groups and provision of feedback to the State and local delivery systems.

C. Impact on Mental Retardation

The Center provides comprehensive information on needs, rights and services for handicapped children. It has answered a quarter of a million letters and more phone calls from concerned parents and provided information to hundreds of parent organizations, and to Federal, State and local agencies, which have passed along the information to individual parents. While its efforts have not targeted on any individual handicapping condition, the Center has had a great impact on the provision of services to the mentally retarded.

Media Services and Captioned Films

A. Program Purpose

This program, authorized under Part F of the EHA provides the handicapped learner with specific educational materials directed at his (her) educational needs. This purpose is being advanced through the operation of Centers for Educational Media and Materials for the Handicapped and a network of Area Learning Resource Centers which focus on the development and dissemination of materials and media for the education of the handicapped. Another major purpose is the captioning and distributing of motion picture films and other media to the deaf and hearing impaired population.

B. Historical Development

During 1974 and 1975 more than 4363 groups of hearing impaired persons, representing an audience of 3.0 million people, were reached through the Media Services and Captioned Film program. Of these 1541 were schools or classes for the deaf. The total audience for theatrical films numbered over 1.6 million with a monthly average of 4,000 showings.

The program circulated more than 700 different captioned educational films through its 60 film depositories.

In 1976 the number of groups of hearing impaired persons reached will exceed 4,800 (1,600 schools and classes for the deaf). The captioned theatrical and cultural films will reach a total audience of 1.8 million persons with a monthly average of 5,000 showings.

800 captioned educational film titles will reach an audience of 1.7 million hearing impaired children, with classroom showings averaging over 4,000 per month.

Support of the National Theatre for the Deaf is continuing, and a daily captioned evening news broadcast over the national PBS network was continued. The development of an electronic coding system to provide captioned television programming to a potential audience of more than 13 million hearing impaired Americans is expected to be operational in two years.

The National Center on Educational Media and Materials for the Handicapped is conducting a needs assessment of specific requirements and standards for media and materials for handicapped children. The network of 13 Area Learning Resource Centers and 4 special category centers is providing a national delivery system of educational media to handicapped children.

C. Impact on Mentally Retarded

The National Center on Educational Media and Materials for the Handicapped and one of the specialty centers associated with the National Center are actively working with the States in the development of media and materials for the mentally retarded and other handicapped learners.

Regional Resource Centers (RRC's)

A. Program Purpose

The Regional Resource Centers (RRC's) were established under Part C of EHA. Presently, there are thirteen (13) RRC's serving their respective regions by supporting assistance to States in developing an intrastate capacity in regard to the following educational services and to provide said services to the states' service-clients within service rules which are clearly reinforcing of local and state capacity; appraisal of handicapped children, diagnosis of learning disorders and prescription of educational programs of handicapped children. The RRC's are concerntrating their efforts on development of resources and services for the unserved, underserved and difficult to serve segments of the handicapped population, i.e., poor inner city and rural populations including a high percentage of the ethnic minorities.

B. Historical Development

In fiscal year 1973, in conjunction with State and local education agencies, the program procided specific diagnostic, evaluative, prescriptive remedial or supportive services. Program strategies were designed to achieve the catalytic effect of influencing practices to enable more children to be palced in regular school programs.

In 1974, the major concern of the centers was to improve the effectiveness of on-going practices and of developing and implementing the use of new techniques where none existed. The major objective was to assure that all geographical areas covered by RRC programs had access to services directly or through cooperative efforts. Coordination of planning activities with the National Media and Materials Center is to bring about a dynamic, interrelated resource system.

In 1974, approximately 40,000 handicapped children received comprehensive services from six Regional Resource Centers. Approximately 200 State education agencies and 6,000 local education agency personnel received training through workshops, special institutes, and technical assistance activities. Also, 2,000 severely and multiple handicapped children received services in addition to the

40,000 children mentioned above.

In 1975, considerable emphasis was being placed by the RRC's serving their 57 client states on developing the SEA's "Master Plan" for special education services to handicapped children as the plan relates to appraisal and programming.

C. Impact on the Mentally Retarded

By the end of 1974, the RRC's had provided services to approximately 80,000 children, of which 30,000 were mentally retarded. By the end of 1975, the RRC's provided services to 104,000 children of which 39,000 are mentally retarded. In addition, support will be provided to 400 State educational service agencies and 16,000 local education agencies who provide services to the Nation's handicapped children.

By the end of 1978 it is estimated that 74,000 mentally retarded children will receive services as a result of this program.

Title II of the Elementary and Secondary Education Act

Title II of the Elementary and Secondary Education Act (ESEA Title II) granted funds to the States for the provision of school library resources, textbooks, and other instructional materials for the use of children and teachers in public and private elementary and secondary schools. Certain target groups of children who had greater need for materials had more made available to them under the States' relative need formulas. One such group was the educable mentally retarded.

In FY 1976, one-half of the FY 1973 appropriation for ESEA Title II was granted under ESEA Title IV, Part B (Libraries and learning resources) and was administered categorically as Title II. The other half of the funds was combined with one-half the appropriation for Equipment and minor remodeling for strengthening instruction in the academic subjects (NDEA Title III), and the Testing, counseling, and guidance portion of ESEA Title III. ESEA Title IV, Part B provides funds for school library resources, textbooks, other instructional materials; instructional equipment and services for elementary and secondary schools. Children, teachers, and other school staff in public and nonprofit private elementary and secondary schools may benefit. ESEA Title IV annual program plans prepared by the States require a formula for the distribution of Part B funds to local educational agencies. The formula for the based on enrollment, high tax effort, and large numbers of percentages of children whose education imposes a higher than average cost. Children identified as high cost receive additional benefits. Eighteen States selected handicapped children as high cost. Estimates are based on the proportion of handicapped children nationwide who are educable mentally retarded. In FY 1977 and FY 1978, no separate funds were appropriated from ESEA Title II. All funds for Title II purposes were consolidated in ESEA Title IV, Part B appropriations.

Title IV of the Elementary and Secondary Education Act

As part of the comprehensive effort to demonstrate innovative approaches to solve the needs of handicapped children, Title IV of the Elementary and Secondary Education Act mandated that 15 percent of its Part C funds (not including Title V funds) be set aside for special education programs for the handicapped and children with learning disabilities.

Title IV projects, administered and by State educational agencies in accordance with plans affroned by the Bureau of Elementary and Secondary Education signed "to meet the needs of handicapped children" but rather to demonstrate the solutions to critical problems in American education as they relate to the handicapped. It is recognized that the needs of these children will be met when appropriate programs are designed and implemented but this should not be the major thrust of Title IV funds for the handicapped.

In many respects the intent of the legislation has been met. In other respects it has not. As more sophisticated procedures for identifying handicapped children are developed, as projects to serve these children are conceived, as the innovativeness and creativity of the project designs are improved, Title IV personnel, working jointly with special education personnel and other local, State and Federal agencies will be in a better position to meet the mandate of the legislation.

Vocational Education Act

Under the Vocational Education Amendments of 1968 which were funded in fiscal year 1970, a number of programs were developed by vocational education agencies in fiscal year 1970, a number of programs were developed by vocational educational education agencies in which 115,300 handicapped persons were enrolled. Although vocational education reports do not give data by category of handicapping conditions, deaf,blind crippled, emotionally disturbed, and mentally retarded educable and trainable were all listed among the categories being served. Unvalidated information indicates that the largest single category is still the Mentally Retarded with more than half of the enrollments being so diagnosed.

	1974	1975	1976 EST.	1977 EST.	1978 EST.
Total handicapped enrolled in Vocational education: (in thousands).....	234	266	290	310	340
Secondary.....	182	196	210	220	235
Postsecondary.....	31	40	45	50	60
Adult.....	21	30	35	40	45

A project entitled An Assessment of Vocational Education Programs for the Handicapped Under Part B of the Vocational Education Amendments of 1968 was performed by Olympus Research Corporation and the final report was submitted to the Office of Education, Planning, Budgeting, and Evaluation. This report indicates that in a representative sample of vocational education programs for the handicapped in 19 States, 84% of students diagnosed as handicapped were categorized as mentally handicapped: 66% were educable mentally retarded; 12% were trainable mentally retarded; 4% were learning disabled; 1% were emotionally disturbed, and 1% were educationally handicapped; 15% were physically handicapped and 1% were multi-handicapped.

Mentally retarded are being served in special classes in State schools, in local educational agencies, and in regular vocational education programs in vocational schools. In most programs the objective is to provide those services and program modifications which will assist the mentally retarded person to become employable at the highest level of which he/she is capable. We are finding that we have underestimated the potential of many and are modifying our approaches to provide more individually prescribed instruction and better assessment of potential through use of Vocational Rehabilitation/Vocational Assessment programs and through other assessment tools.

Inservice training of vocational education instructors to enable them to better serve the handicapped has been supported at the National level and is being offered in all States under State Department of Education, Vocational Education Division. Teacher Training Institutions for Vocational Education Leadership are becoming increasingly active in providing preservice and postgraduate education for vocational education instructors concerned with handicapped students.

In most local programs, any mentally retarded adults that are served are included in the regular groups. As the Adult Education Program is expanded to serve more adequately groups with special needs, mentally retarded adults will be provided specialized programs, with increased cooperation between the Adult Education Program and Local programs and services designed to serve the mentally retarded.

Training

Division of Personnel Preparation

A. Purpose

The Division of Personnel Preparation of the Bureau of Education for the Handicapped initiates, maintains and improves programs for the preparation of professional leadership and teaching personnel so that the States can reach the goal of properly servicing handicapped children and youth by 1980. Divisional programs which are designed to respond to this goal are four-fold in their attack in that they must provide: (1) classroom, supervisory, consultative, and administrative personnel for State and local special education programs; (2) personnel for higher education institutions responsible for preparing administrative and classroom personnel; (3) paraprofessionals for special education programs; and (4) training for regular educators to work with handicapped children.

B. History

In 1958, Public Law 85-926 was passed by Congress authorizing an appropriation of $1 million per year for the preparation of professional personnel in the education of the mentally retarded. This initial piece of legislation was directed at preparing college and university personnel to staff the then existing programs, and much needed new programs for preparing personnel to work with the handicapped in State and local school systems. Between academic years 1959-60 and 1963-64, 692 graduate traineeships were granted to 484 individuals who became college and university professors while 208 others became State and local special education leadership personnel.

On October 31, 1963, P.L. 88-164 was signed into law. Section 301 of this Act amended P.L. 85-926 to: (1) expand the program to include not just the area of mental retardation, but also the areas of the visually handicapped, deaf, crippled and other health impaired, speech and hearing impaired, and the emotionally disturbed; (2) allow for the preparation of teachers and other specialists in addition to leadership personnel at the graduate level; (3) extension downward into the senior year undergraduate levels; and (4) increase the monies authorized for these purposes.

Public Law 85-926 was further amended with the passage of Public Law 89-105 and 90-170. These amendments expanded and extended the program through fiscal year 1970, authorizing appropriations at 29.5 million for fiscal year 1967; $34 million for fiscal year 1968; $37.5 million for fiscal year 1969; and $55 million for fiscal year 1970.

These appropriated funds have been used as stipends for students as well as to support colleges, universities, and State education agencies. Since P.L. 85-926 was passed in 1958, approximately 109,000 traineeships have been awarded to individuals preparing to work with mentally handicapped children. This included both short-term and full academic year awards.

State Education Agencies have received approximately 6,000,000 in recent years to provide short term training in their respective states. This money has been largely used to provide for inservice training of special educators.

Training Awards in the Area of Mental Retardation Fiscal Years 1960 - 1976

Fiscal Year	Number of Traineeships	Number of Higher Ed. Institutions Participating	Number of State Ed. Agencies Participating	Total Amount Obligated
1960	177	16	23	$ 985,222
1961	164	18	41	993,433
1962	160	20	46	997,000
1963	163	19	48	996,433
1964	2,357	108	50	6,419,332
1965	2,506	153	50	6,569,815
1966	3,110	162	52	7,658,002
1967	3,816	177	53	8,891,072
1968	4,521	177	53	8,493,668
1969	6,366	193	53	9,382,084
1970	6,171	200	55	10,391,341
1971	4,909	207	55	8,955,355
1972	5,100	210	56	8,955,355
1973	4,830	215	56	8,476,181
1974	5,835	225	56	10,240,450
1975	2,050	225	55	6,100,000
1976	2,050	225	55	6,100,000

This program has enabled a great number of colleges and universities to develop and/or expand their teacher training programs in mental retardation. A current analysis of the more than 300 institutions requesting funds in the area of mental retardation indicates that more than 170 of them have on their faculties former trainees of the program.

Under current awards policy, which give more authority to universities to administer their own program according to local needs and requirements it is difficult to report discrete number of teachers being trained for mental retardation. However, it is our best judgment from review of proposals received that the number of teachers being trained for mental retardation has not diminished. Although only 2050 students enrolled in training programs in the area of mental retardation and funds allocated have not been reduced, emphasis is now being placed on training teachers to serve the more severely retarded child. Institutions are changing training programs to fit this demand.

C. Cooperative Activities

The Division of Personnel Preparation in an effort to utilize all resources in the provision of quality educational programs for all retarded children has entered into cooperative funding or working arrangements with other personnel training programs in the Office of Education and the Social and Rehabilitation Service. The following are three examples of the Division's cooperative efforts:

University Affiliated Facility Program

The Division of Personnel Preparation in cooperation with the Division of Developmental Disabilities, Rehabilitation Services Administration (SRS) provided support monies to special education components in university-affiliated facility programs for fiscal year 1976. The extent of the Division's support ranged from approximately $20,000 to $30,000 with a total expenditure of $396,000.

The Division supports a special educator on the university affiliated facility core faculty. The special educator is responsible for instructing medical students, psychologists, social workers, and other related medical personnel as well as students majoring in special education. He serves to effectively integrate special education concepts into the overall interdisciplinary training program of the university affiliated facility.

The institutions receiving support through this program for recent years were: Georgetown University; University of California at Los Angeles; Johns Hopkins University; Indiana University; University of Miami (Florida); Ohio State University; University of Cincinnati; University of Tennessee (Memphis); Children's Hospital (Harvard); University of Oregon; University of Alabama (Birmingham); Utah State

University; University of Wisconsin; Georgia Retardation Center (Georgia Department of Public Health); University of Kansas; the University of Michigan; University of North Carolina.

D. Special Projects

The special Projects program in the Division of Personnel Preparation, Bureau of Education for the Handicapped, is designed to provide an opportunity for conceptualizing and implementing on a trial basis, approaches to personnel preparation for the education of the handicapped children which are basically new or which are significant major modifications of existing personnel preparation programs. Special Projects are designed to encourage and facilitate innovative approaches to the solution of major training problems.

Currently there are approximately 40 operational Special Projects funded by the Division of Personnel Preparation. Approximately one-fourth of these projects are concerned with the preparation of personnel to educate retarded children. Most of these projects are primarily concerned with the most severely handicapped. During fiscal year 1976 approximately one-fourth of the 3.7 million dollars invested in these projects was specifically targeted for the mentally retarded.

E. Future Goals

The goals of the Division of Personnel Preparation are to:

1. Increase the number and quality of personnel for education of the handicapped with special attention to early childhood education, vocational education, the urban and rural poor, paraprofessionals and to train regular classroom teachers to teach the handicapped.

2. Increase the amount and quality of technical assistance to agencies and institutions training professional personnel.

3. With State departments of education and institutions of higher education effect cooperative planning for the training of personnel in special education.

4. Develop a systematic data collection program upon which to monitor current efforts and to base future efforts.

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Research

Division of Innovation and Development

A. Purpose

The Research Program of the Bureau of Education for the Handicapped promotes and supports research and related activities which show promise of leading to improvement in educational programs for handicapped children. Support is available for research, dissemination, demonstration, curriculum, and media activities.

B. History

This program, now administered by the Research Projects Branch, was initiated during fiscal year 1964 with appropriation of one million dollars authorized under Title III, Section 302 of Public Law 88-164. This authorization has been continued, through the ensuing years and the scope and flexibility of the program have been expanded. In April 1970, the various acts of legislation that pertained to research were incorporated into P.L. 91-230, Education of the Handicapped Act. The latest Act, P.L. 93-380, provided for authorization through fiscal year 1977. An increasing proportion of research funds have been allocated to projects which impact more generally on the education of handicapped children. In general, such "non-categorical" projects have tended to equal or exceed the amount of activity directed specifically at the field of mental retardation, and may be assumed to have virtually as much an impact on programming in the field of mental retardation as do those projects which relate to problems specific to the mentally retarded.

C. Impact on the Problem of Mental Retardation

It is frequently difficult to assess the direct impact of research activities on educational programming since the lag between the discovery of new knowledge and consequent changes in educational practices obscures the relationship. However, a number of suggestions regarding program impact are available. As of the end of 1974, supported projects had resulted in the distribution of over 500 project reports relating to education of the mentally retarded through the ERIC system, and at least an equal number of publications in professional journals. In addition, validated curriculum materials designed specifically for mentally retarded groups have been developed and are now available in the area of social learning, arithmetic, science, physical education, and self help skills. Special education instructional materials centers and regional resource centers for the handicapped which began as development/demonstration projects supported through the research program have now become institutionalized service operations providing services to the mentally retarded as well as other handicapped populations.

D. Current Activities

A number of research and research related activities relevant to the education of mentally retarded children are currently being supported by the Research Projects Branch. A major applied research program is involved in a series of studies relating to the effects of teacher behavior on pupils, and on ways of establishing more effective teacher behaviors. Another major program is investigating methods of optionally matching learning characteristics of retarded children with various teaching methods and environments. Development of additional specialized curriculum materials for the mentally retarded continues with particular emphasis on development of new materials for severely retarded children.

Additional efforts of a more general nature also have particularly important implications for the retarded. Among the most important projects currently being conducted is an investigation of reintegration of handicapped children into regular education programs. A second major effort involves a series of eleven demonstration projects involved in the investigation of techniques for integration of a wide variety of community services available to retarded and other handicapped children.

E. Future Goals

In order to stimulate more effective programming for handicapped children the research and development program is structured to link research and research-related activities more directly to the support of special education services. Major areas of emphasis are:

1. Assessment of the effectiveness of special education curricula and procedures.

2. Development of new curricula, materials, and techniques.

3. Encouragement of the broadest possible diffusion, utilization, and implementation of effective procedures.

Of particular importance in the area of mental retardation are: continued attention to development of curriculum and materials, investigation of the effects of integrating retarded children, and increased attention to the problems of severely and profoundly retarded children. Across all these activities attention will be concentrated on problems of early education and career education for the retarded.

RESEARCH PROJECTS IN MENTAL RETARDATION

Year	Number	Amount
1964	9	$ 238,270
1965	14	520,905
1966	39	1,110,089
1967	32	1,084,429
1968	31	1,608,076
1969	29	2,184,921
1970	16	1,601,709
1971	10	4,413,863
1972	7	2,204,723
1973	10	3,020,347
1974	14	2,599,405
1975	27	2,706,927
1976	15	3,000,000
1977	15	3,000,000

Other

Library Services and construction Act

Mentally retarded persons for all ages, whether residing in private homes or State institutions, benefit from programs funded under the Library Services and Construction Act (LSCA) Title I. Federal funds provided under this program are used to establish and improve libraries in residential institutions operated or substantially supported by the State; to provide specialized materials and services to persons who are unable to utilize conventialnal print material; and to extend and improve public library services where they are inadequate.

It is difficult to estimate the number of public library programs reaching the mentally retarded because they are often part of broader services, such as outreach programs or summer reading programs for handicapped

children. There is, however, substantial evidence that libraries are becoming more responsive to the needs of the mentally retarded, and that mentally handicapped persons can benefit from library programs and activities despite their limited use of books.

With the increased use of audio-visual materials, media, toys, educational and skill-building realia, etc., libraries are often successful in reaching these persons and attracting them to the library individually and in groups. Libraries are also developing special collections for the mentally retarded and sponsoring programs to meet their specialized needs. In State residential schools for the mentally retarded, library-centered bibliotherapy sessions assist the handicapped residents in relating to the world around them. Equally important, libraries are helping the surrounding community to better relate to them. By providing the necessary informational and educational support for parents, relatives, teachers, and laypersons who are in contact and deal with the mentally handicapped, libraries contribute significantly to heightened public awareness.

The following examples of LSCA-funded projects illustrate the diversity and effectiveness of library programs for the mentally retarded:

In one project, the library, working in conjunction with hospital staff, produced a video-type series to help mentally retarded adults acquire such daily life skills as shopping, meal preparation, riding public transportation, etc. This project resulted in mentally handicapped adults who were trained and capable of libing independently.

Other library projects aim to stimulate mentally retarded children with the use of realia selected for special education needs. At one library instruc-tional center, the children's librarian identified toys that could be used to develop specific skills and prepared a picture catalog to aid parents in selecting toys to help them deal with their children's individual learning problems.

Librarians use LSCA funds to test the value of materials for use with the severely retarded. In one State, a project was designed and implemented to evaluate the use of films in working with profoundly retarded children. This project provides sensory stimulation through specially selected films, rotated among institutions, as a first step towards developing "form dissemination capability."

SOCIAL AND REHABILITATION SERVICE

Mental Retardation

Introduction

Since its establishment in 1967, the Social and Rehabilitation Service has administered income support and social services programs for needy Americans, including the mentally retarded.

Three of the eight major Social and Rehabilitation Service components provide income maintenance, medical services and social services for the economically, physically, and mentally handicapped. Responsible for carrying out the legislative mandates concerned with the provision of services for retardates and their families are: 1) Assistance Payments Administration, Social Security Act, Titles IV, Part A and XVI; 2) Medical Services Administration, Social Security Act, Title XIX; and 3) Public Services Administration (formerly Community Services Administration), Social Security Act, Titles I, IV-A, X, XIV, XVI, and XX. Following is a description of the Social and Rehabilitation Service's efforts to assist the mentally retarded.

It is estimated that in F.Y. 1978 States will use $310,000,000 in Federal funds through the Social Services program for services for mentally retarded individuals. Child Welfare Services data on the mentally retarded are not available.

(Dollars in Thousands)

	FY 1975	FY 1976	FY 1977	FY 1978
Services to the Mentally Retarded 1/	$249,247	$295,800	$304,000	$310,000

1/ The amount shown in the President's Budget was very narrowly defined. The new reporting requirements under Title XX do not presently require States to report on such categories of individuals as services to the mentally retarded. These estimates are much broader and may include a wider spectrum of services such as day care, foster care, health related, protective services, etc.

Assistance Payments Administration

The Assistance Payments Administration has primary responsibility for grants to States for public assistance programs under the Social Security Act, Title IV, Part A, Aid to Families with Dependent Children and Emergency Welfare Assistance; and Title XVI, Aid to the Aged, Blind and Disabled (Guam, Puerto Rico and Virgin Islands only). It is in the disabled portion of the latter program that Federal financial participation is available to help needy individuals who also may be mentally retarded through territorially administered public welfare programs. Federal expenditures shown in the Table of Obligations are for Guam, Puerto Rico, and the Virgin Islands.

(dollars in thousands)

1975	1976	1977	1978
$255	$274	$293	$296

Medical Services Administration

Title XIX, known as Medicaid, provides Federal matching payments for State expenditures for health care for the poor. In FY 1976, fifty-three States and jurisdictions were participating in Medicaid (Arizona is the only State not participating, however, Arizona plans to begin its Medicaid program on July 1, 1977.)

With the federalization of the adult categories on January 1, 1974, under the Supplementary Security Income (SSI) program, States are not in all cases required to provide Medicaid to all adult recipients of cash assistance under Title XVI, as was the case in the past under Titles I, X, XIV, or XVI. Limited Medicaid coverage of SSI cash assistance recipients will apply in States which, in determining Medicaid eligibility, opt to apply any eligibility criteria from the January 1, 1972 medical assistance standard which is more restrictive than the eligibility requirements for the Federal Title XVI program for aged, blind, and disabled individuals. States which retain any eligibility factor(s) from their January 1, 1972, standard which is (are) more restrictive than the Title XVI eligibility factor(s) must deduct a person's medical expenses from his income in determining eligibility. (They are not required to cover Title XVI cash assistance recipients who otherwise do not meet the January 1972, medical assistance standard.) As of January 1, 1976, fifteen States have restricted Medicaid eligibility of SSI recipients under this option.

Thirty-six States extend Medicaid coverage to all recipients of cash assistance under the SSI program. States also have the option of providing Medicaid coverage to persons receiving a State Supplemental payment, subject to certain limitations. In addition, thirty-two States have elected to cover certain medically needy persons who are eligible for help only with their medical bills and who do not receive maintenance payments.

All Medicaid services included under the State plan (mandatory services include inpatient hospital care, outpatient care, physicians' services, skilled nursing facility services for individuals 21 years of age and older, early and periodic screening, diagnosis and treatment services for children under 21, lab and X-ray services, and home health services; in addition, States may cover a range of optional services including dental care, drugs, eyeglasses, intermediate care facility services, etc.) are available to eligible mentally retarded individuals.

Effective January 1, 1972, P.L. 92-223 transferred intermediate care services to Title XIX as an optional State service and authorized the provision of intermediate care facility services in public institutions for the mentally retarded if the institution provides health or rehabilitative services and if the eligible individuals are receiving active care and treatment. To assure that the Federal dollars made available for such institutional care would lead to higher quality care and services in an

improved environment, and not simply to a replacement of State dollars, the legislation contained a provision requiring the States to maintain their own fiscal effort. Thirty-eight States have responded to the new Title XIX authority by adding to their State plan coverage of ICF services in public institutions for the mentally retarded. Prior to January 1, 1972, some 17 States claimed Federal matching in the costs of care in institutions which qualified as skilled nursing home services. It should be noted that because services in the past were being provided to the mentally retarded as skilled nursing home services, the adoption of the intermediate care facility program resulted in a redesignation of facilities in some States. The result is that these facilities are able to provide services at a more appropriate level of care in instances where skilled nursing care is not medically necessary. States, however, continue to provide care for the mentally retarded in skilled nursing facilities where medically appropriate.

Total Federal expenditures for services for the institutionalized mentally retarded (in ICF's only) were estimated to be $339 million in FY 1976. Estimates are not available on the number of Medicaid dollars expended on all other Medicaid services provided to the mentally retarded. It should be emphasized that the Medicaid eligible mentally retarded person may receive the full range of Medicaid services, and receive them on the same basis as the rest of the Medicaid eligible population.

Estimated Federal Expenditures (in Millions)

FY 75	FY76	FY77	FY78
$195	$339	$417	$481

Public Services Administration

The Public Services Administration has responsibility for administering the Social Services program authorized under Titles I, IV-A, X, XVI, and XX, and Child Welfare Services authorized under Titles IV-B of the Social Security Act, as amended.

Under Title XX, grants are made to States for services to eligible individuals based on income or public assistance status. States may choose the services they will provide, as long as each service conforms to at least one of the five goals stated in the Act.

Within the broad spectrum of services provided to eligible individuals are those directed to serving the mentally retarded. Some of the services extended to the mentally retarded are:

(1) Day care services which facilitate the child or adult remaining in his own home in lieu of institutionalization.

(2) Short term family foster care during periods of crisis to prevent institutionalization and long term family foster care to provide benefits of family and community living in lieu of institutionalization.

(3) Services directed at attaining entrance to institutional placement where needed and services to move individuals out of institutions where feasible.

(4) Other services which will promote retention of the mentally retarded in their own homes and assist in the development of the individual to his maximum capacity for self care and independence. Among these services are homemaker and chore services, home management, counseling and services to expectant mothers which will reduce the incidence of mental retardation.

The Basic purpose of the Child Welfare Services program is to protect children from abuse, neglect, exploitation, or delinquency and to assure that they have an opportunity for normal development. Among the recipients of these services are mentally retarded children from all socio-economic groups.

DEPARTMENT OF HEALTH, EDUCATION AND WELFARE
PROGRAMS FOR MIGRANT AND OTHER SEASONAL FARMWORKERS

Opportunities for the economic and social advancement of the population of migrant and other seasonal farmworkers are limited for a variety of reasons including high seasonal unemployment, limited coverage under labor legislation, undereducation, poor health status and unfulfilled housing needs.

The Department of Health, Education and Welfare has the responsibility for funding and administering four programs which are designed to meet some of the needs of this special population. They are as follows:

1. Migrant Education - Office of Education

   Legislative authority:
   Elementary and Secondary Education Act of 1965, as amended; Title I (20 U.S.C. 241b)

   Objective:
   To provide grants to States for programs and projects to meet the special educational needs of children of migratory agricultural workers and fishermen, and to coordinate with similar programs and projects in all of the States.

   Programs: Grants to States

2. Special Vocational Rehabilitation Projects - Rehabilitation Services Administration

   Legislative authority:
   Rehabilitation Act, section 304(c)

   Objective:
   To provide rehabilitation services to handicapped migratory and other seasonal farmworkers.

   Programs:
   Demonstration projects in selected States.

3. Migrant Head Start - Office of Child Development

   Legislative authority:
   Economic Opportunity Act of 1964, as amended; section 222 (42 U.S.C. 2809)

   Objective:
   To expand child-care facilities available to children of migrant families and to develop a network of cooperating grantees to serve these children both while migrating and while they are in their home base areas.

   Programs:
   Child care and Head Start services

4. Migrant Health - Health Services Administration, Bureau of Community Health Services

Legislative authority:

Public Health Service Act, as amended (42 U.S.C. 242h)

Objective:

To provide grants to public and non-profit institutions and organizations to finance part of the cost of (1) establishing and operating family service clinics and (2) special projects to improve health services and health conditions for domestic agricultural migratory and seasonal workers.

Programs:

Full-time comprehensive health service projects
Part-time comprehensive health service projects
Part-time medical service projects
State-coordinated projects offering direct health services in several counties
Other health service projects

OFFICE OF EDUCATION

REPORT ON MIGRANTS

(Fiscal Year 1978)

Elementary and Secondary Education

Title I of the Elementary and Secondary Education Act, Public Law 89-10, as amended, provides payment to State educational agencies for assistance in educating migratory children of migratory agricultural workers and migratory fishermen.

Funds are used for programs which are designed to meet the special educational needs of such migratory children, and to coordinate these programs and projects with similar programs and projects in other States.

A migrant student record transfer system is located in Little Rock, Arkansas. Teletype terminals are located in 150 strategic areas serving 46 States and Puerto Rico. This transfer system is funded by an equal percentage of each State's allocation set aside by the U.S. Commissioner of Education. The purpose of the system is to provide to school districts enrolling migratory children rapid transmittal of pertinent general, health and academic data for each migratory child.

This system was developed through the cooperative efforts on behalf of the participating States through the work of an interstate committee. The program direction, specification for the computer, and the manner by which the system was to be operated was the task given and completed through this cooperation.

Because of the mobile nature of the target population, traditional educational practices needed to be adapted to meet this transitory state of migrant children in an educational environment. Since the inception of the program, States have undertaken this challenge and have developed unique approaches to meet these specific conditions. These efforts have resulted in the learn and earn vocational programs in Florida, New Jersey and North Carolina, in which career awareness and salable skills have been introduced such as supermarket cashiering, assembly line techniques and quality control, automotive tune up, and paramedic training, just to mention a few. These activities provide a small monetary compensation to the migrant student which places relevancy in instructional sevices acknowledging the economic situation in which the migrant finds himself.

The California Mini-Corps Program was designed to utilize current and former migrant children as tutors and program assistants. It has had a two-fold impact; 1) provides opportunities for employment of former migrants thus permitting them to pursue further educational opportunities in junior colleges and colleges, and 2) provides a model for individualizing instruction to further the educational achievement level of underachieving migrant children.

Since the inception of the program much attention has been focused on the language development of migrant children. These language development efforts have taken the form of bilingual and bicultural instructions, the development of oral language skills, and programs for English as a second language. The migrant program has made a reality of the inservice training of teachers as a basic component of all State activities to facilitate the adequate and efficient delivery of services to migrant children. Because of the mobile nature of the children, cooperation between sending and receiving States is required in order to insure a continuum of educational service. As a result of that challenge, the States have cooperated in exchanging teachers, mobile educational facilities, cooperative workshops and conferences, and consultant services.

Currently there are three major interstate program thrusts. The States of Minnesota, Wisconsin, Illinois, Indiana, Ohio and Michigan have formed a consortium of States to cooperatively plan and implement programs in their respective areas. Initially eastern States have assumed a similar responsibility regarding their migrant population. The States on the east coast have already demonstrated their cooperation and concern in interstate efforts by meeting at least annually to share ideas and discuss concerns relating to the east coast migrant stream. In May of 1977, the States of Washington, Idaho, and Oregon will co-host the 10th Annual National Conference on Migrant Education. This conference is initiated, organized and participated in by all the States providing educational services for migrant children.

An estimated 430,000 migrant children were served under this program in 1976. This figure will rise to approximately 483,000 in 1977 and 490,000 in 1978. These estimates are based on the expanded eligibility provision of Public Law 93-380.

Library Resources

Under Title I of the Library Services and Construction Act (LSCA), funds are made available to the States for the provision of library services to disadvantaged persons in rural and urban areas and for the extension of library services to geographical areas and groups of persons without such services.

Migrants are served on location with library programs and resources delivered by either the State library or nearby local libraries. Library resource centers and bookmobile services are the traditional means by which migrant workers are served, but these are often enhanced by special programs that recognize the severe difficulties experienced by migrants in obtaining adequate education. Such programs provide basic literacy and bilingual language insturction with the aim of acquainting migrants with library and other educational resources available to them.

The following projects exemplify the types of services LSCA supports: In New Jersey, the Cumberland County Library serves migrant farmworkers by incorporating a wide variety of library activities into its mobile delivery program. Spanish language films, magazines, books, and other materials are used as the basis for movie nights, consumer education classes, children's storyhours, games, and contests that win the migrants' trust. The library also has developed a Basic English program, planned in co-operation with other community agencies that serve migrants (e.g. Department of Health), and consisting of a manual and a series of video films.

Reaching out to migrants in Alabama the North Pell City Library takes its services to the top of Chandler Mountain where more than 600 migrants plant, tend, and harvest crops. A library resource center is temporarily established there each season and is reopened whenever the migrants return.

In Washington, a library program, funded jointly by LSCA and Right-To-Read, provides access to basic literacy instruction for Spanish-speaking migrants in the eastern countries of the State. A bookmobile, stocked with materials in both Spanish and English and staffed by Spanish-speaking personnel, visits the migrant camps on a regular basis during the picking seasons. Tutors conduct small classes in basic reading skills, beginning in Spanish and eventually introducing English language skills.

Title II of the Elementary and Secondary Education Act (ESEA Title II) granted funds to the States for the provision of school library resources, textbooks, and other instructional materials for the use of children and teachers in public and private elementary and secondary schools. Certain target groups of children who had greater need for materials had more made available to them under the States' relative need formulas. One such group was the children of migrant workers.

In FY 1976, one-half appropriation for ESEA Title II was granted under ESEA Title IV, Part B (Libraries and learning resources) and was administered categorically as Title II. The other half of the funds was combined with one-half the appropriation of Equipment and minor remodeling (NDEA Title III), and the Testing, counseling, and guidance protion of ESEA Title III. ESEA Title IV,

Part B provides funds for school library resources, textbooks, other instructional materials; instructional equipment and minor remodeling for strengthening instruction in the academic subjects; and testing, counseling, and guidance materials, equipment, and services for elementary and secondary schools. Children, teachers, and other school staff in public and nonpublic private elementary and secondary schools may benefit. ESEA Title IV annual program plans prepared by the States require a formula for the distribution of Part B funds to local educational agencies. The formula must be based on enrollment, high tax effort, and large numbers or percentages of children whose education imposes a higher than average cost. Children identified a high cost receive additional benefits. Two States selected migrant children as high cost, and 41 States also identified children from low-income families as imposing a high cost. Migrant children also qualify as being from low-income families. In FY 1977 and FY 1978, no separate funds were appropriated from ESEA Title II. All funds for Title II purposes were consolidated in ESEA Title IV, Part B appropriations.

Vocational Education

Matching grants are made to States on a formula basis to assist States in maintaining, extending, and improving existing vocational education programs and to develop new programs in vocational education. Many States have programs assisting children of migrant workers but the vocational education reporting system does not collect data to identify these children separate from other children. There is also no accounting for dollars by this category.

Adult Education

Formula grants are made to State departments of education under the Adult Education Act, as amended. These grants assist the States in establishing and expanding programs of adult public education so that adults can continue their education through completion of secondary school and secure job training to enable them to be more employable.

Adults sixteen years of age and older (including migrants) with less than a twelfth grade level of education are eligible for participation in this program. However, many State and local education agencies do not keep records of how many migrants participate in local programs or the amount of funds expended on such participation.

The Office of Education does not collect this information from the States. However, based on prior telephone surveys to the Regional Offices it was determined that approximately 1.8% of the total appropriation was being utilized for the education of adult migrants.

86-071 O - 77 - 36

Obligations for Programs for Migrants

	1975 Actual	1976 Actual	1977 Estimate	1978 Estimate
Elementary and Secondary Education:				
Educationally deprived children (Title I).....	$91,953,160	$97,090,478	$130,909,832	$150,000,000
Library Resources:				
Public library services (LSCA, Title I).....	181,000 1/	200,000	200,000	200,000
School library resources (ESEA, Title II).....	190,000	100,000	---	---
Libraries and learning resources (ESEA, Title IV, Part B).....	---	325,000	675,000	675,000
Occupational, Vocational, and Adult Education:				
Adult Education, grants to States..	1,215,000	1,215,000	1,287,000	1,449,000
Vocational education.....	2/	2/	2/	2/
Total.....	93,539,160	98,930,478	133,071,832	152,324,000

1/ The increase over previously reported FY 1975 LSCA funds expended for migrants is due to an udpate of project reports. The new figure includes both projects that were specifically and solely designed to serve migrants and a percentage of those projects that serve rural disadvantaged persons including migrants.

2/ Vocational Education reporting system does not collect data to identify migrant children.

OFFICE OF HUMAN DEVELOPMENT

Rehabilitation Services Administration

MIGRANTS

The estimated migratory population in the United States is 1,000,000. From the few efforts conducted to date and from data obtained from other programs with experience in migratory labor problems, it is estimated that at least 40,000 persons would be eligible and feasible for vocational rehabilitation services.

Appropriations for Special Projects for vocational rehabilitation services to handicapped migratory agricultural workers and seasonal farmworkers were made available for the first time in 1974 under Section 304(c) of the Rehabilitation Act. Eight projects were established in the following States which are currently in operation: California, Florida, Idaho, New Jersey, New York, Oregon, Texas and Wisconsin. Six Regional Offices are involved in the administration of these projects. Recent site visits to the projects confirm the fact that they are providing badly needed vocational rehabilitation services to this underserved minority group.

In accordance with Section 304(c), cooperation has been obtained from the Office of Education, the Public Health Service, and the Department of Labor, all of which sponsor projects for migratory workers.

Data provided by other programs substantiate proportionately greater health problems and related disabling conditions, and the necessity for concentrated services, including outreach efforts to familiarize migrants about services and to encourage them to modify their migratory patterns in order to be served. Emphasis which can be most effectively focused through this special program is necessary to deliver services, in cooperation with other programs, to migrants who present such unique and extensive problems.

A meeting was held in Washington in April 1975 which was attended by project directors and officials from State and Regional offices, cooperating agencies and consumer groups where information was exchanged on providing rehabilitation services to handicapped migratory workers. In 1976, San Antonio was the site of a second meeting. A select number of members of the staff from Central and Regional Offices, Directors and staff from the eight projects, representatives from government, public and private agencies, consumer groups and members of the migrant community in San Antonio were in attendance. Innovative techniques and methods were presented which could be used to expand and enhance vocational rehabilitation services to migratory workers were presented, and proceedings of this meeting will be published.

RSA can make a significant contribution toward the solution of the complex problems of the migrants, particularly as they are related to the preparation for and return of migrant workers to more stabilized employment.

The need for extending and improving the delivery of social and rehabilitation services to greater numbers of these people is becoming more urgent in light of USDA projections that there will be a reduction in the migratory work force in the future due to mechanization.

Rehabilitated Migratory Agricultural Worker and Seasonal Farmworkers

Fiscal Years	All Rehabilitants	Migratory Agricultural Workers and Seasonal Farmworkers
1974	361,138	350
1975	324,039	318
1976	303,328 1/	903 1/
1977	295,000 1/	800 1/
1978	286,000 1/	800 1/

1/ Estimated

Fiscal Year	1975	1976	1977	1978
Basic State Grants	$680,000	$2,161,000	$2,221,000	$2,280,000
Service Projects	736,000	795,000	530,000	1,530,000
Total, RSA	$1,416,000	$2,956,000	$2,751,000	$3,810,000

Office of Child Development

The Indian and Migrant Program Division (IMPD) in the Office of Child Development funds grantees to provide comprehensive developmental services to migrant preschool children and their families.

Because of the unique needs of migrant farmworking families, programs had to be designed to provide the family with access to these resources without creating economic or other hardships. Resources alone, without an adequate system of delivery, will not solve the problems of migrant families with preschool children.

IMPD has developed and worked with several different program models during the past few years. Some of these models have proven to be less successful than others. IMPD's findings have shown that in any given area or region, a combination of program models is necessary to meet the existing needs.

All of the models used a basic program design which incorporates Head Start standards and quality child care services. This design calls for some structural modifications to the traditional Head Start program including: (1) extending the hours of operation to coincide with the parents' working hours; (2) allowing all preschool children to participate, including infants, and (3) utilizing bilingual and bicultural staff where needed. These modifications are necessary in order to provide the type of full service program which is tailored to the life style of migrant families.

Basically, there are two categories of program models, the Local Programs and the National Programs. Local Programs are Head Start programs which are funded to serve local communities, and which may also serve migrant children.

There are two National Program models; the Prime Grantee model and the Network model.

The Prime Grantee model approaches the need to extend the period of services by funding programs in user areas which had longer field work seasons and could operate in one location for four or five months. Families remaining in the area for the entire work season had access to a full service program and the children received educational benefits from having been enrolled for a sufficiently long period.

The prime grantee model also attempts to deal with the problem of program continuity. A referral system was devised to refer participants to Head Start programs operating in their home base areas. The child's medical and educational records are also to be transferred. The home base programs, however, are under no obligation to accept referrals and frequently the programs are filled by the time the child returns to the area.

The network model differs from the others in that it operates programs in both the home base areas and user states. The program operations follow the migrant streams during the seasons when field work is available and are located in established centers where large concentrations of migrants are found. As the families move from one area to the next the children can be enrolled at the next site. As the target population increases or decreases in a given area, staff members can be regrouped to accommodate the change.

IMPD will continue to refine these models and to develop other innovative approaches to guarantee that delivery systems of quality services are provided to the target population. In addition, IMPD recognizes the growing need for an increased effort in program development on behalf of migrants who are attempting to settle out and for seasonal farmworker families.

In addition, Head Start funds training and technical assistance projects providing direct assistance to Migrant Head Start programs. Other OCD funds are used to support child abuse and neglect and experimental and research projects.

	FY 1976 Estimate	FY 1977 Estimate	FY 1978 Estimate
National Program Models.....	$5,900,000	$6,220,000	$6,220,000

PUBLIC HEALTH SERVICE

Health Services Administration
Bureau of Community Health Services

Migrant Health

The Migrant Health Program awards grants to plan, develop and operate projects to provide health care services to migrant agricultural laborers and seasonal farmworkers and their families in order to improve and maintain the level of their health relative to that of the general population. Services provided include diagnostic, therapeutic, and follow-up medical services, linkages with other health service programs and other federal programs serving migrants, referral for dental health care, counseling, preventive and outreach services.

The Migrant Health Program is one of the integral parts of the Rural Health Initiative. The purpose of the Migrant Health Program is to support the planning, development, and delivery of high-quality health care services in rural areas for migrant and seasonal farmworkers and their families.

These health care services should be comprehensive and so organized that they are accessible to farmworkers and their families, and responsive to their self-identified needs.

During the current fiscal period (1977) the Migrant Health Program, administered by the Bureau of Community Health Services, HSA, DHEW, supports 125 migrant health projects. These projects provide the main source of health care services for the Nation's 2,700,000 migrants and seasonal farmworkers and their families. By September 30, 1977, these projects will have provided services to nearly 500,000 patients.

A special demonstration program, designed to provide hospital care effectively and economically for a selected migrant population and to gather and evaluate data on hospital utilization and cost of hospital services, was initiated during fiscal year 1974 at a level of $3 million. The Bureau of Health Insurance, SSA, serves as the fiscal intermediary for reimbursing hospitals for care provided to eligible migrants in this demonstration. Eleven migrant health projects have initiated programs with 19 hospitals to provide in-patient care for approximately 3,300 migrants at a fixed daily rate.

MULTIPLE SCLEROSIS

Multiple sclerosis (MS) is a devastating neurological disorder of young adults. Its unpredictable episodes attack the brain and spinal cord and destroy the protective nerve covering called myelin. When myelin destruction, or "demyelination" occurs, messages from nerves to muscles and sensory organs are impeded or lost, causing varying degrees of impairment. The extent and location of demyelination determines symptoms and severity. These can include impairment of muscle strength, control, or movement or they can result in sensory disturbances such as blurred vision or speech problems. When myelin destruction is either widespread or critically located, its effects are crippling.

Because myelin destruction is sporadic and myelin repair is only partial, MS symptoms follow a totally unpredictable course. MS patients may have symptoms which occur once with no additional episodes; or they may have a progressive series of episodes with varying periods of exacerbation (worsening of symptoms) followed by remission (cessation of symptoms); or they may have chronic progressive symptoms. This course differs for each person with MS.

Thus, each young man or woman afflicted with MS must endure the burden not only of coping with the symptoms, but the uncertainty of how to carry out life's activities without knowing how often the symptoms will strike, how long they will last, or how severe or incapacitating they may become.

It is estimated that 250,000 American men and women between the ages of 20 and 40 are victims of MS; another 250,000 suffer from closely related demyelinating disorders.

The cause and cure of MS are as yet unknown. The prognosis is uncertain. But remarkable advances in understanding "slow" viruses, coupled with important discoveries concerning the immune (defense) system, as well as an increased understanding of myelin have brought new levels of sophistication to MS research. It may well be that the key to demyelination and to MS lies in an integration of these three components.

Obligations

	1974	1975	1976	1977 estimate	1978 estimate
National Institutes of Health:					
National Institute of Neurological and Communicative Disorders and Stroke	$5,390,000	$6,980,000	$9,590,000	$11,060,000	$11,436,000
Office of Human Development:					
Basic State Grants	1,300,000	1,360,000	1,441,000	1,481,000	1,520,000
TOTAL	6,690,000	8,340,000	11,031,000	12,541,000	12,956,000

NATIONAL INSTITUTES OF HEALTH

National Institute of Neurological and Communicative Disorders and Stroke

The National Advisory Commission on Multiple Sclerosis wrote in its 1974 report, "...the time is now for a concerted, well-managed effort to unravel the mysteries of MS." The Institute has incorporated many recommendations made by the nine-member Multiple Sclerosis Commission, appointed by the Secretary of Health, Education, and Welfare in accordance with Public Law 92-563.

As suggested by the Commission and occasioned by important research leads, the NINCDS has greatly intensified its MS research here at the NINCDS and at other institutions, including support of five major MS Clinical Research Centers. In addition, MS research continues to be a major concern of the Institute's intramural program. The two major NINCDS laboratories currently engaged in viral research have been augmented by a recently established Neuroimmunology Branch, headed by a leading neuroimmunologist, who is conducting both basic and clinical MS research. Basic research directly related to the neurochemistry of myelin is being conducted in two other NINCDS laboratories.

Also, as suggested by the Commission, a contract has been awarded to ascertain the overall impact of MS by determining incidence, prevalence and costs. The country's 6,448 neurologists and neurosurgeons and 2,002 primary care physicians (selected at random) have been asked to identify all possible and probable MS patients seen during the six-year period 1970 through 1975. The same information is being collected from the nations' 267 teaching hospitals and a sample of 458 non-teaching hospitals to provide a comprehensive assessment of incidence and prevalence. After duplication is eliminated, patients will be asked to provide information on the direct and indirect costs of the disease by keeping a 90-day diary of all health related expenditures.

Viral Involvement in MS?

Work on the possible viral origins of MS received a tremendous boost after the brilliant demonstration of the existence of "slow viruses" by this year's Nobel Laureate in Medicine and Physiology, Dr. D. Carleton Gajdusek, working with Dr. Clarence Gibbs and colleagues. The scientists showed that at least two disorders affecting the central nervous system (CNS) are caused by atypical viruses which lie dormant in the body for years before some mechanism triggers them into action.

While MS bears no resemblance to these other two slow virus disorders, slow viruses may cause several different types of diseases. Arguing against the theory of slow viral involvement in MS is the inability, as yet, to transmit it to laboratory animals in the classical proof of a

virus. However, several important factors implicate viral involvement: first, there is an inflammation around blood vessels, consistent with viral infection. Second, epidemiological studies of the pattern and distribution of MS suggests a latent viral infection. Such studies have shown that persons who migrate from areas of high risk for MS to a low risk area before age 15 (and possibly as early as before age 5) adopt the low risk of their new country; while those who migrate after age 15 maintain the high risk of their homeland. This suggests that some factor or combination of events operating early in life leads to the subsequent development of MS. Third, many MS patients have elevated cerebrospinal levels of immunoglobulin G which is consistent with a viral infection. Immunoglobulin G is an antibody against measles. Significantly, high levels of this antibody have been found among all patients with another neurological disorder, subacute sclerosing panencephalitis (SSPE), caused by a slow, defective measles virus which strikes in the teenage years.

Because both SSPE and MS patients have increased immunoglobulin G levels, and since SSPE is known to be caused by defective measles virus, there is speculation that MS also may be caused by a defective virus which might be measles. Dr. John Sever and colleagues at the Institute's Bethesda laboratories found that the SSPE measles virus has a defective maturation process which may account for the virus' slow infection rate. Additional knowledge on how viral infection may be slowed is emerging from intensive studies by NINCDS scientist Dr. Robert Lazzarini and colleagues, and others, of viral fragments which are accidently formed by certain viruses during replication. They are called defective interfering (DI) particles and are not infectious. But importantly when they enter a cell with the infectious virus, they slow down viral infection by successfully competing with the infectious virus for materials needed for replication. In addition preliminary studies suggest that DI particles may also stimulate at least one part of the body's immune (defense) system. Work is under way to determine whether DI particles may be involved in the slowdown of the SSPE measles virus.

Further implication of measles occurred just a few months ago with a report by Drs. Louis Pertschuk, Albert Cook, and Jagdish Gupta of Long Island College Hospital and Kings County Hospital. Measles antigen was reportedly found in the small bowel of 30 MS patients but in none of the 24 non-MS controls. The scientists have postulated that a chronic measles infection of the small bowel could have a cross reactivity to the CNS, essentially making the body "allergic" to its own cells. If further investigations substantiate the findings, it may be one of the strongest leads to date linking measles virus to MS. Institute scientists currently are evaluating the findings to determine whether additional studies are needed.

Studies of other possible MS causing viruses, besides measles, also are being actively pursued. Dr. Richard Carp and colleagues at the New York State Institute for Basic Research in Mental Retardation initially reported isolating an agent from MS patients' brain tissue and sera. These findings, based on extremely difficult and complex tests, were not confirmed until last year when Dr. Werner Henle and colleagues from Philadelphia Childrens Hospital reported substantiation and extension of the studies. Work is continuing to further investigate these findings.

Immune System Alterations in MS?

If a common virus is involved in MS, why are only a few people affected by it? Bearing on this question are important studies reported this year concerning the immune (defense) system of MS patients. Preliminary evidence now suggests that there may be some association between susceptibility to MS and inherited "histocompatability antigens". During the past few years, increasingly convincing evidence of a genetic predisposition to MS has been amassed. Initial interest derived from studies of tissue rejection in transplant patients, where histocompatability (HLA) antigens were found to evoke tissue rejection. These antigens serve as markers of an individuals' underlying histocompatability genes; significantly, in mice these genes have been shown by a number of studies to be closely linked to genes which control specific immune responses.

HLA antigens are strategically located on the cell surface, and are thought to serve as receptors for viruses. Initially, 40 percent of MS patients were found to have two specific histocompatability antigens, labeled HLA-A3 and HLA-B7. Subsequent studies showed an even higher incidence (70 percent) of another antigen, HLA-DW2. Now, in an exciting new development this year, two laboratories have found that B-cell (a type of white cell) antigens, occur in 90 to 100 percent of MS patients tested. Intensive studies are in progress at NINCDS by Drs. Dale McFarlin and Henry McFarland to substantiate these findings by Drs. H. J. Winchester and associates at Rockefeller University, New York, and Dr. P. I. Terasaki and colleagues, at UCLA, under contract to NINCDS.

In order to analyze this association between HLA types and MS in greater detail, four important studies have been initiated. First, the Neuroimmunology and Infectious Disease Branches in the Institute's Intramural Research Program are conducting studies of families in which more than one member has MS.

Secondly, a massive study is being conducted in the Scottish Orkney and Shetland Islands where an astounding 250 persons per every 100,000 have MS (the highest known prevalence of MS in the world). Dr. David Poskanzer and colleagues at Massachusetts General Hospital, Boston, conducting the study under contract to the NINCDS, is exploring the

relationship between MS and histocompatability antigens and other possibly related biological factors. Additionally, NINCDS contractor Dr. Derek Roberts, University of Newcastle, is investigating the genetic lineage--going back 200 years--of MS patients, their families and non-MS controls. This is possible because the Islands have extraordinarily well kept records from parish marriage and death certificates. Information gained from interviews will be verified and will show whether MS incidence can be traced back to a particular family, as was the case in this country with another neurological disorder, Huntington's disease.

Third, 100 patients with MS are being studied by Dr. Donald Silberberg and colleagues at the Institute-supported MS Clinical Research Center at the University of Pennsylvania.

Fourth, NINCDS grantee Dr. Roger Detels and colleagues at UCLA are following 150 families with at least two members with MS, including 75 families with MS among primary relatives. Of particular additional interest is a cluster of MS patients in King County, Washington, where 8 students of the same high school graduating class of 1953 now have MS. The investigators also are obtaining data on the costs of MS in their study population.

What Role Does Myelin Play?

If a virus or immune system defects--or both--are operating in MS, what is their role in demyelination? NINCDS chemists Drs. Richard Quarles and Joseph Poduslo have shown that mammals have a high molecular weight glycoprotein which accounts for a major proportion of the myelin surface. These glycoproteins are the first to be destroyed by toxic agents. Furthermore, in other cells, they are known to be receptors for certain viruses. Scientists believe changes in glycoproteins may be involved in the regulation of viral replication.

In addition, one of the most exciting advances in MS research this year concerns a protein component of myelin, called myelin basic protein. In two separate studies supported by the National Multiple Sclerosis Society, one by Drs. Guy McKhann, Robert Herndon and Steven Cohen at The Johns Hopkins University, Baltimore, the other by Dr. John Whittier at the University of Tennessee, Memphis, myelin basic protein was found in the cerebrospinal fluid of patients with MS but seldom in fluid from patients with other neurological disorders. These observations were made possible through a new technique (radioimmunoassay), which employs radioactivity to reveal the presence of a specific protein. Moreover, increased amounts of myelin basic protein correlated with increased MS activity. Patients with inactive MS had no cerebrospinal fluid myelin basic protein; those with slowly progressive MS had low protein levels; while patients with an acute MS attack had very high protein levels. Thus, this technique has great potential for evaluating potential MS drugs; those which effectively reduce myelin basic protein levels could reasonably be expected to produce an improved clinical picture. Furthermore,

drug evaluation would be objective. This would be a tremendous advantage over the current subjective assessment by patients which is wrought with difficulties since MS symptoms can disappear for no apparent reason and may be totally unrelated to drug efficacy.

Treatment

Myelin basic protein potentially also may be a treatment for MS. When injected into animals, this protein causes a disease in animals, called Experimental Allergic Encephalomyelitis (EAE) which is similar to MS. But interestingly, subsequent injections of the protein arrest EAE's further progress. Therefore, can myelin basic protein also arrest the progress of MS? To answer this, a limited clinical study under Dr. Richard Eylar, University of Toronto, using myelin basic protein has just been planned, supported by the MS Society of Canada. Dr. Murray Bornstein, head of the Institute-supported MS Clinical Research Center at Yeshiva University will use sera from participating patients to determine whether the demyelinating activity of their blood corresponds with clinical changes in the disease. They will then compare results with those from non-treated MS patients.

During the past several years, two other experimental approaches to treatment--both involving the immune system--have been under investigation. Conflicting results have been reported concerning immunosuppressive therapy (lowering the immune response) using transfer factor. This consists essentially of transferring white cells from healthy donors to MS patients. Dr. John Zabriskie, Rockefeller University, N. Y., has found negative results, while Dr. Torben Fog of Denmark has reported more favorable data. Scientists are awaiting further substantiation from other scientists. The other approach, which consists of increasing the immune response of MS patients, still is under investigation in several studies. At the NINCDS-supported MS Clinical research Center at Emory University under Dr. Richard Kibbler, the immunoreactive drug levamisole is being clinically tested in 25 MS patients.

In addition to seeking curative treatment of MS, several studies are pursuing methods of ameliorating MS symptoms. These include the experimental combined use of chloropromazine and dilantin to suppress spasticity in MS patients being conducted by Dr. Stanley Cohan and colleagues at Georgetown University, Washington, D.C. Scientists at the UCLA Clinical Research Center under Dr. Frederick Wolfgram are using two drugs, methyl-dopa and dibenzyline for relief of bladder spasticity which causes incontinence. This is not only a difficult and embarrassing physical complication of MS, but can lead to infections which can be fatal. The drugs' action on bladder sphincters produce relief of urinary urgency. In one of the most important clinical advances to date, Dr. Keith Schneider, Albert Einstein College of Medicine, reported adapting a surgical technique for bladder incontinence to patients with MS.

The technique involves making an incision in the bladder which is kept closed except when the patient inserts a catheter to void, four times daily. In addition, work is continuing on possible development of electrical stimulation to provide bladder control. To date, experimental animal tests by Dr. Emil Tanagho and colleagues at the University of California, San Francisco, under contract to the NINCDS neural prosthesis program, indicate it may be possible to simultaneously stimulate contraction of muscles in the bladder wall while relaxing exit sphincters, similar to the natural urinary process. This procedure, which is still in the animal testing stage, may have potential for helping not only MS patients but those with spinal injury as well.

Diagnosis

Another finding this year (which needs further substantiation) may have dramatic implications for diagnosing MS. Dr. Nelson Levy and colleagues at Duke University have reported that white blood cells from MS patients, when mixed with cells that have been infected with measles virus, stuck together in a large rosette pattern. This pattern occurred much more frequently with MS blood samples than with samples provided by non-MS controls. If the test is found to be effective, it would mark a major advance since diagnosis currently is based on clinical findings. However, Dr. Ryoichi Mori, Kyushu University, Japan, found diametrically opposite results using this same test. Therefore work is under way to determine why the results varied so dramatically and whether results from either test can be substantiated.

Studies during the past years continue to offer hope that the disorder can be brought under control and that effective methods for diagnosis, treatment, and ultimately prevention can be found. Advances this year have made that goal a closer reality.

OFFICE OF HUMAN DEVELOPMENT

Rehabilitation Services Administration

MULTIPLE SCLEROSIS

Because of the nature of the disease, sometimes rapidly progressive and sometimes relatively quiescent for a period of years, multiple sclerosis has been a challenging problem for workers in the field of vocational rehabilitation. Estimating ultimate employment potential is extremely difficult, and the State-Federal program of vocational rehabilitation has had limited success in serving this disability group.

In 1976 the Rehabilitation Services Administration and the National Multiple Sclerosis Society established a committee to revise and up-date an inter-agency agreement which had been in effect since 1968. The services to the multiple sclerotic, initiate plans to develop techniques to predict their vocational potential and stimulate new approaches to assist in their vocational rehabilitation.

With further advances in drug therapy, neurosurgical procedures, and rehabilitation techniques, the rehabilitation potential of those suffering with multiple sclerosis should be greater than at present.

Rehabilitation Research

The Research and Training Centers supported by the Rehabilitation Services Administration are conducting research on ways through which the handicapping effect of multiple sclerosis can be better understood so that it can be counteracted or minimized. Four medically-oriented Research and Training Centers are conducting studies on the electrophysiological mechanisms in neuromuscular diseases such as multiple sclerosis, on quantitative and qualitative evaluation in diseases of the central nervous system, and on the histochemistry of human muscle spindles.

Number of Rehabilitations with Multiple Sclerosis

Fiscal Years	Persons Rehabilitated	
	Total	Multiple Sclerosis
1974	361,138	503
1975	324,039	603
1976	303,328 1/	600 1/
1977	295,000 1/	600 1/
1978	286,000 1/	500 1/

1/ Estimate

HEALTH RESOURCES ADMINISTRATION

Multiple Sclerosis

In 1974, an estimated 25,000 patients were hospitalized in short-stay hospitals in the United States with a first-listed diagnosis of multiple sclerosis. The average length of stay for these patients was 12.5 days. About 3 out of 4 discharges were female, and over half (61 percent) of the patients with a first-listed diagnosis of multiple sclerosis, were between the ages of 15-44 years. In addition to those patients with a first-listed diagnosis of multiple sclerosis, an estimated 13,000 discharges were hospitalized with a secondary diagnosis of multiple sclerosis.

NUTRITION

The National Institute of Arthritis, Metabolism, and Digestive Diseases (NIAMDD) bears principal responsibility for conducting and supporting a variety of programs in medically-oriented nutrition research. In addition to direct research activities in its laboratories and clinics in Bethesda, the Institute supports nutrition studies through grants and contracts to research centers throughout the United States and abroad.

Obligations for Programs in Nutrition

	1974	1975	1976	1977	1978 Estimate
National Institutes of Health: National Institute of Arthritis, Metabolism, & Digestive Diseases	$8,616,000	$9,632,000	$9,763,000	$10,138,000	$10,304,000

NATIONAL INSTITUTES OF HEALTH

National Institute of Arthritis, Metabolism, and Digestive Diseases

Research activities now underway through NIAMDD support cover the full spectrum of nutrition from fundamental metabolic and physiologic studies to programs designed to determine how best to alleviate malnutrition and nutritional deficiency diseases. Recent technological advances in the laboratory such as mass spectrometry, high pressure liquid chromatography and radioimmunoassay should markedly facilitate progress in basic nutrition studies.

Nutrition: A National Issue

In recent hearings before the Senate Select Committee on Nutrition and Human Needs, it was stressed that of the 10 leading causes of death in the United States today, six -- heart disease, stroke, cancer, diabetes, atherosclerosis and cirrhosis of the liver -- are or can be related in some way to diet. Similarly, in the United States, the problem of malnutrition, traditionally associated with the lower socioeconomic strata and "under"-consumption of food, has now also become a problem of "over"-consumption compounded by a lack of proper dietary education at all levels of society. In fact, medically significant obesity afflicts close to one quarter of the adult population, and an increasing proportion of children. At the present time, the health of millions of Americans is impaired by dietary excesses or, in lesser numbers, by deficiencies such as iron deficiency anemia which still persists in a significant proportion of the population.

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Faced with these challenges, nutrition research has become increasingly involved with the prevention of malnutrition and approaches to weight loss for the obese, as well as with the role of trace elements, their essentiality to health, and the actions of numerous vitamins in normal human growth and development. Investigations this past year have added to the knowledge base of human nutrition in health and disease, and also have revealed the extensive need for research in chronic nutritional disorders.

NIH Nutrition Coordinating Committee

To enhance communication and cooperation, and to coordinate nutrition activities at the National Institutes of Health, an NIH Nutrition Coordinating Committee has been established. Major activities of the Committee have centered primarily on the following:

1) development of a focal point for exchange of nutrition information within NIH, for program presentations by other Public Health Service agencies, and for the dissemination of such information to the scientific community when appropriate.

2) establishment of subcommittees to define the scope of nutrition involvement in each Institute, to develop a standard method of reporting on nutrition, to design a computer retrieval system for information on nutrition activities, and to organize workshops to identify gaps in nutrition knowledge.

3) development of the Nutrition Plan, establishing a coordinated approach to priorities and guidelines for NIH-supported nutrition research.

The Committee provides the focus for coordinating approximately $57 million in total NIH nutrition-related support, as well as $3,300,000 in nutrition training support for this past fiscal year.

RESEARCH ACCOMPLISHMENTS

Weight Loss in Intestinal Bypass Surgery

An NIAMDD grantee has shown that food intake is markedly decreased following intestinal bypass surgery for massive obesity, and suggests that this decrease, rather than malabsorption, might account for most of the loss of weight observed.

The rationale for bypass surgery is that a shortened intestine provides a smaller surface area for absorption of nutrients and hence, decreases absorption of calorie-bearing substances. In fact, the operation frequently produces frank malabsorption. It had not yet been established, however, whether decreased food intake might also be a factor in the significant weight loss observed.

To test this possibility, Dr. George A. Bray and associates at Harbor General Hospital in Torrance, California, examined the relationship between caloric intake and weight loss in 22 massively obese patients. Food intake, measured both before and after jejunoileostomy, "intestinal bypass," reflected a postsurgery consumption level of just over half of the original number of calories. Subsequent to surgery, most of the patients also developed a dislike for sweet tastes (sucrose and glucose).

The investigators report that although malabsorption was present, the profound and sustained fall in postoperative food intake, together with altered food preferences, may alone account for most of the weight loss observed in such patients. They attribute the decreased intake to a conscious effort to reduce the diarrhea associated with jejunoileal bypass, to decreased intestinal absorption of carbohydrate leading to decreased taste for that nutrient, and to the patient's conscious effort to avoid the unpleasant feeling of fullness in the shortened gut.

Obesity and "Set Point"

Recent research at St. Luke's Hospital Center in New York City has indicated that obese subjects spontaneously defend their overweight in response to a covertly-induced reduction in the caloric density of their diet.

In studies by Dr. Theodore Van Itallie and associates at the Institute-supported Obesity Center, food analogues considerably lower in caloric content, but indistinguishable in appearance, texture and taste, were substituted for normal foods in the diets of obese patients without their knowledge. The investigators found that the subjects consumed the low calorie food substitute in amounts adjusted not only to maintain their weight, but also to increase slightly their overweight. These findings are consistent with the proposition that obesity results because of an abnormally elevated "set point" for body fat content.

Essential Fatty Acid Deficiency In Total Parenteral Nutrition

NIAMDD grantee Dr. Belding Scribner and associates have used an intravenous fat solution to correct essential fatty acid deficiency resulting in skin lesions in three patients receiving total parenteral nutrition (existing only with the aid of intravenous infusion of nutrients).

Prior to the introduction of total parenteral nutrition, essential fatty acid deficiency had been described only in experimental animals and infants maintained on fat-free intravenous feeding. In the last two years, however, with increasing use of this procedure for prolonged periods, several investigators have reported essential fatty acid deficiency in adults undergoing such treatment.

Investigators at the University of Washington in Seattle describe progressive, dry, scaly, skin lesions associated with essential fatty acid deficiency in three patients on total parenteral nutrition. Characterized by markedly abnormal plasma lipid (fat) patterns, the patients were given daily intravenous fat in the form of linoleic acid.

All three patients showed improvement at the end of the first week of fat supplementation: measurements of plasma fatty acid showed a progressive return to a normal pattern, accompanied by a dramatic response in the skin lesions. The investigators' findings indicate that essential fatty acid deficiency is an increasingly common clinical problem in total parenteral nutrition. They therefore conclude that existing FDA restrictions on the use of intravenous fat should be modified to permit its administration in special circumstances.

Digestion of Dietary Fat

The exact nature of the complex, enigmatic series of activities which comprise the human digestive process has long eluded investigators. Recently, however, Institute scientists have demonstrated in man what may be the first step in the digestion of dietary fat.

It was generally believed that ingested triglycerides (the common edible fats and oils) were emulsified in the stomach by the churning, kneading and spurting movements of the stomach wall, and that digestion by enzymes did not occur until fat reached the duodenum, the first section of the small intestine.

In previous research, however, NIAMDD investigators Drs. Hayden L. Klaeveman and Robert O. Scow; Dr. Robert O. Wolf of the National Institute of Dental Research; and Georgetown University's Dr. Margit Hamosh reported that certain glands of the rat tongue secrete a potent enzyme that converts dietary triglyceride to partial glycerides -- a large class of compounds that occur naturally as fats and fatty oils -- and free fatty acids in the stomach.

The scientists now report that extracts obtained from the esophagus and gastric system of human subjects exhibit a fat-splitting activity similar to that found in the rat tongue and pharyngeal tissue (tissue lining the space between the mouth, nose and esophagus). The findings suggest that in man, glands in or near the pharynx secrete a pharyngeal lipase, an enzyme that accelerates the breakdown of fats, which acts in the stomach to split dietary triglyceride to partial glycerides and free fatty acids.

Acting like a detergent, the enzyme lipase breaks up the fats and oils into fine droplets, thereby facilitating the later stages of the digestive process in the intestine. The "detergent" action of pharyngeal lipase now constitutes what the investigators believe to be the first step in the digestion of dietary fats.

Zinc Therapy of Acrodermatitis Enteropathica

Acrodermatitis enteropathica is a hereditary disorder with severe gastrointestinal and cutaneous manifestations present from infancy. In many cases, the skin lesions resemble those of psoriasis with reddish, crusty areas on the face, scalp, groin, body orifices and extremities. Severe diarrhea, interference with proper growth, and baldness are characteristic of the disease.

Generally fatal if untreated, acrodermatitis enteropathica has long been refractory to most standard forms of therapy. In recent clinical studies at the University of Colorado, however, a 22-year-old patient has demonstrated a rapid and dramatic response to oral zinc sulfate therapy.

For 20 years, the patient had been treated successfully, but empirically, by oral administration of di-iodohydroxyquin or related anti-amebic compounds. Large doses of these agents are required continuously, however, and such therapy is not entirely satisfactory or effective. NIAMDD grantee Dr. K. Michael Hambidge and associate Dr. Kenneth H. Neldner evaluated the therapeutic effect of orally administered zinc sulfate over a period of 16 weeks, during which time the patient was alternately administered di-iodohydroxyquin or zinc sulfate therapy, or was temporarily without treatment.

In contrast to the alternatives, oral zinc sulfate resulted in rapid and complete clinical remission, as well as in a return to normal of plasma zinc and urinary zinc excretion. The findings of Drs. Hambidge and Neldner indicate that a severe zinc deficiency state is present in this disease, and that the inherited defect in this disease is either in or closely related to zinc metabolism -- possibly a deficiency in the gastrointestinal absorption of the element.

Dietary Fiber Workshop

The NIAMDD is co-sponsoring with the National Cancer Institute; the National Heart, Lung, and Blood Institute; and the National Institute of Environmental Health Sciences a comprehensive workshop on the Role of Dietary Fiber in Health. The role played by dietary fiber in nutrition in modern man, and its potential involvement in a number of various diseases, is one of the most timely and challenging topics in nutrition today.

US-Japan Cooperative Medical Science Program

Since 1965, the Malnutrition Panel of the US-Japan Cooperative Medical Science Program has served as the primary vehicle through which international nutrition research activities are supported. The projects funded under this $1.3 million grant and contract program are selected for relevance to: 1) the relationship of nutrition to physical or mental growth and development, 2) nutrition and anemia, 3) nutrition and immunity and 4) the determination of human nutrition requirements.

Approximately two-thirds of the 800 million children born each year in Asia, Africa and Latin America suffer some degree of malnutrition. Traditionally, the NIAMDD has supported nutrition research in these developing countries because of the availability of large population groups afflicted with specific nutritional deficiencies. The results from this research not only assist developing nations materially in meeting nutrition health problems, but also add to the limited body of knowledge surrounding normal nutrition requirements and the consequences of malnutrition.

The Malnutrition Panel has supported the following workshops and conferences to encourage needed research: 1) workshop on immune status of malnutrition, 2) workshop on health significance of iron deficiency anemia, 3) conference in Guatemala on the role of nutrition and infection in pregnancy and early childhood, and 4) conference on the "Biological and Cultural Sources of Variability in Human Nutrition."

The following projects are representative of research supported by the NIAMDD through the US-Japan Program:

Amino Acid Requirements

Dr. Guillermo Arroyave of the Institute of Nutrition of Central America and Panama (INCAP) in Guatemala recently completed the second year of research to determine the amino acid requirements of pre-school children. Studies thus far have examined the amino acids (protein building blocks) lysine and methionine-cystine, with upcoming investigations emphasizing requirements for tryptophan and threonine -- all essential for optimal growth in infancy and early childhood. Results of these studies will supply the amino acid requirement information necessary to evaluate the nutritive value of protein foods available for feeding this age group.

Bladder Stone Disease

Bladder stone disease has long posed a serious health problem to the Thai population, with a prevalence rate of 17 percent for infants and children under five years of age. In recent studies of this nutrition-related disorder, Drs. Aree Valyasevi and Sakorn Dhanamitta have assessed the value of supplemental orthophosphate in its prevention.

Previous studies by these investigators indicated that excessive quantities of oxalate crystals and oxalic acid salts were commonly found in the urine of villagers, but only rarely in specimens of urine from city dwellers. Similarly, dietary studies revealed that villagers consumed daily several local vegetables and other foods high in oxalic acid.

The current project was designed to evaluate the possible relationship between crystalluria, stone symptoms, dietary habits, intakes and dehydration. Early results have shown that phosphate supplementation is effective in diminishing the formation of crystals and clumps in the urine. The investigators noted, however, that it is too early to draw conclusions regarding its effect on bladder stone formation itself.

Nutrition: Infection and Immunity

Reduced immunity to disease is one of the many consequences of malnutrition. In recent studies in Guatemala, Drs. Michael Katz and Gerald T. Keusch examined the effects of nutritional status on the development of immunity during pregnancy.

The investigators noted that no functional abnormalities of the white blood cells from the umbilical cord were found with respect to their ability to ingest and kill bacteria. Serum factors required for these white blood cell functions were deficient, however, in children of low and intermediate birth weight. Indirect experimental evidence suggests that the deficient factor is serum complement, a major component in the body's infection-fighting mechanism. This abnormality may be a basis for greater susceptibility to infection of the lower birth weight infants from malnourished mothers.

Malnutrition and Immunoglobulin A

In related research, Dr. Ronald R. Watson and associates in Cali, Columbia found that tears of malnourished children contain 30 percent less IgA, ("immunoglobulin A", one of the five major chemical immune secretions by which the body protects itself from foreign substances) than normal controls. Concentrations of IgA were elevated in these same children when the nutritional status was improved.

Similarly, whole saliva IgA concentrations were somewhat reduced in malnourished children. These findings suggest that the increased susceptibility of malnourished children to infections of the mucosal surfaces of the eyes, respiratory tract, genito-urinary tract, and the gastrointestinal tract may be explained in part by decreased concentrations of protective substances in the secretions.

Anemia and Malnutrition Center

Through support from the US-Japan Malnutrition Program, a large nutrition research center has been established for several years in Chiang Mai, Thailand. This institution has yielded a significant amount of data in two priority areas of research -- nutritional anemias and interactions of malnutrition and infection. Because of important advances in the diagnosis and treatment of protein calorie malnutrition, the mortality rate of malnourished children in the center's metabolic unit has been reduced to 5 percent, the lowest rate on record.

The gradual shift from U.S. leadership to full Thai responsibility in all areas has been underway for several years. This is the last year of support under the original program project grant initiated 10 years ago.

Outlook

While the investigations of this past year have proved productive, they nonetheless illustrate the continuing need to extend our knowledge base of human nutrition. Such vital information provides the framework for progress in the prevention and treatment of many nutrition-related chronic disease conditions. The Institute anticipates even more significant advances in these research efforts in the coming years.

QUALITY OF CARE

Obligations

	1974 Actual	1975 Actual	1976 Actual	1977 Estimate	1978 Estimate
Public Health Service:					
Alcohol, Drug Abuse, and Mental Health Administration:					
National Institute on Drug Abuse....	$ 9,057,097	$11,439,736	$12,256,733	$ 8,426,601	$ 8,075,000
National Institute on Mental Health.	136,000	92,000	347,000	587,000	2,494,000
National Institute on Alcohol Abuse and Alcoholism...	68,740	147,315	---	175,000	150,000
Health Services Administration:					
Quality Assurance.....	31,684,000	40,338,000	66,521,000	65,493,000	77,952,000
Total.....	$40,945,837	$52,017,051	$79,124,733	$74,681,601	$88,671,000

1/ This amount includes $17,291 in TQ funds.

ALCOHOL, DRUG ABUSE, AND MENTAL HEALTH ADMINISTRATION

National Institute on Drug Abuse
Quality of Care

The National Institute on Drug Abuse (NIDA) sees quality of care as the fundamental objective for all of its efforts to deliver appropriate treatment and rehabilitation services to drug abusers. It is generally well known that just a few years ago the major Federal response to drug abuse was precipitated by a crisis stage. Emphasis at that time was clearly on the rapid development of treatment capacity where the need for services was found to exist. With such proliferation of programs, and the entry of thousands of workers into the field, additional needs surfaced in the areas of staff training and the development of criteria and standards for program operations.

Concern with quality of care issues transcends all components of the Institute. However, for purposes of this report, focus will be placed on the activities of the Division of Community Assistance and the Division of Resource Development (Services Research Branch, Manpower and Training Branch).

Division of Community Assistance (DCA)

The predominant mechanism for ensuring quality of care for programs funded by DCA is monitoring conducted by DCA staff. Where the need to improve program operations is identified via the monitoring process, technical assistance is provided.

In order to establish minimum standards for quality treatment services, NIDA developed the Federal Funding Criteria (FFC) for Drug Treatment Services and Central Intake Units. All the states are actively being encouraged to develop their own standards for program approval or licensure. State standards which are substantially consistent with the FFC may be accepted by NIDA in lieu of the FFC.

In addition, NIDA has supported the development of optimal standards for drug abuse treatment and rehabilitation programs by the Joint Commission on Accreditation of Hospitals (JCAH) and is currently subsidizing JCAH on a short term basis, for implementing these standards. One of the Institute's objectives for FY 1977 is "to assure that at least 10 percent or approximately 130 NIDA funded clinics are participating in the three-year quality improvement program under the auspices of JCAH."

Related activities in DCA include the development and distribution of manuals on treatment procedures and a clinical self-evaluation methodology. The latter is designed to assess a program's effectiveness by furnishing measures that relate to normative data based on extensive retrospective studies.

Services Research Branch, Division of Resource Development

This Branch supports a variety of demonstration projects aimed at discerning special treatment needs of women, youth and minority group members. Studies are further oriented toward evaluation of the effectiveness of different treatment models designed to meet client needs of these groups. Similarly, in the area of vocational rehabilitation, studies focus on the service needs of drug abuse clients, on assessment of differing techniques for meeting those needs, and on the ability of vocational rehabilitation efforts to enable clients to achieve vocational adjustment as well as control over illicit drug use and criminal activity.

Manpower and Training Branch, Division of Resource Development

The Manpower and Training Branch is directly involved in a number of program activities relating to the quality of care. These programs can be divided into two specific categories:

1. Development and delivery of training programs that provide job related skills for workers providing direct treatment services.

2. Identification and measurement of job skills and competence standards related to service delivery.

The following summaries describe the main program components within each category:

Skill Training - The majority of Branch programs are directed to this area either through the development of training programs or direct delivery of training. The National Drug Abuse Training Center provides validated training packages most of which involve skill development for direct treatment service deliverers. These packages are utilized by Regional Support Centers and the State Training Support Program (STSP) to meet skill related needs of drug workers. Additional demonstration programs funded through grants to academic and community programs provide both long and short term skill development for workers in all treatment service areas.

Job Skills - Two contracts have been funded for the purpose of specifying and measuring job related skills. The first with the Medical College of Pennsylvania represents the conclusion of three years of activity by both special contractors and state agencies in the identification of functions and skills actually involved in the delivery of treatment as well as the administration of drug programs. The result will be a skill matrix which will be provided to states for use in the development of their own credentialing programs. The second contract with the Board of Medical Examiners

is developing competency related questions in Substance Abuse for inclusion in Medical license examinations.

The Branch has also established an extensive program working directly with states to develop their capabilities to utilize a systems approach to the delivery of training services. This program - the State Training Support Program (STSP) involves identification of job related skill needs, development and utilization of resources to meet these needs and implementation of a credentialing process more directly related to job skills and performance than to abstract academic requirements.

Other Training - As described above, the development of increased skills relating to quality of care is the primary objective of the Branch. However, other job and professional skill development activities which are not directly related to primary care must be maintained to ensure successful program operation and professional growth. These programs mainly involve the further development of trainers at the state and program level, administrative and fiscal training, and the development of evaluation efforts to further improve the relationship between effective skill development and the "Quality of Care".

ALCOHOL, DRUG ABUSE, AND MENTAL HEALTH ADMINISTRATION

NIMH QUALITY ASSURANCE ACTIVITIES

In the last three years the National Institute of Mental Health (NIMH) has become increasingly concerned about the quality of care in mental health settings. This concern has been reflected by increased staff activity and commitment of resources in the quality assurance area and plans for an even larger investment in the future. These activities can be broadly classified into three major areas: the development and implementation of standards; treatment assessment; and the development of quality assurance systems.

Development and Implementation of Standards

One of the most important activities in this area in the last three years has been the development of standards for Community Mental Health Centers (CMHCs). Since 1974 the NIMH has supported the development of CMHC standards by the Joint Commission on Accreditation of Hospitals (JCAH), which entered the field testing stage in August, 1976. In addition the NIMH has developed a set of National Standards for CMHCs, fulfilling the requirement in the Community Mental Health Centers Amendments of 1975 (P.L. 94-63) that such standards be submitted to the House and Senate within 18 months of enactment of this legislation.

Many of the regulations developed in the past year and a half for the new CMHC amendments in P.L. 94-63 will relate directly to quality of care. The most important of these are requirements that centers develop their own internal quality assurance programs and an integrated medical records system.

In addition to standards for CMHCs, the NIMH has been concerned with standard development and implementation by other agencies for other mental health service settings. Activities include staff consultation to the Bureau of Health Insurance (BHI) and Bureau of Quality Assurance (BQA) in their development of standards for psychiatric hospitals and psychiatric units in general hospitals; technical assistance under a BHI/NIMH contract to provide NIMH consultant teams for Medicare survey of psychiatric hospitals; a contract with the Southern Regional Education Board to develop a report on the development of standards by State mental health agencies; and the sponsorship of a symposium for mental health professionals on standard setting and the law.

Treatment Assessment

In the last two years NIMH under contract to the Department of Defense (DOD) has been largely responsible for the initiation of a variety of Civilian Health And Medical Program of the Uniformed Service (CHAMPUS) treatment assessment activities including review of children and adolescents in residential treatment facilities and review in selected areas

of patients with a diagnosis of schizophrenia. Plans are now underway for review in selected areas of all inpatient psychiatric care. Working closely with the Civil Service Commission, Blue Cross/Blue Shield, and Washington area mental health providers, the NIMH has supported the development and implementation of provider peer review systems for assessing the quality of care in the Federal Employees Health Benefit Program (FEHBP) and the collection of utilization data for mental health services under this program.

In the coming year the NIMH will sponsor two studies, one evaluating the quality of mental health services in an organized general medical care setting and the other a two-state collaborative study of mental health treatment outcome. For 1978 the NIMH now plans to initiate a major $2 million targeted research effort to address efficacy of mental health treatments.

Development of Quality Assurance Systems

Activities in this area include all those technical assistance and resource development efforts aimed at increasing the capabilities of CMHCs, State mental health agencies, and others involved in and relating to the mental health field to develop functional quality assurance systems. The NIMH staff college is currently sponsoring a series of workshops on assuring the quality of mental health services and last year the NIMH co-sponsored, with NIDA, NIAAA and ADAMHA, a series of workshops on PSROs and the mental health, alcohol and drug abuse service systems. A manual has been developed and distributed to CMHCs on assessing and assuring quality in CMHCs which will assist them in meeting the new P.L. 94-63 quality assurance requirements. A large three-year grant has been awarded to the State of North Carolina for the development of a model State-wide patient care analysis and quality review system.

In addition to these activities the NIMH has been actively involved in consultation to the BQA regarding those aspects of the PSRO program which relate to mental health. More extensive liaison activities are planned with BQA in the future in this regard.

ALCOHOL, DRUG ABUSE, AND MENTAL HEALTH ADMINISTRATION

National Institute on Alcohol Abuse and Alcoholism
QUALITY OF CARE

Mechanisms for the development of quality of care are of major concern to the National Institute on Alcohol Abuse and Alcoholism (NIAAA). When the Institute funded the development of accreditation standards for alcoholism programs by the Joint Commission on Accreditation of Hospitals (JCAH), it took the first step toward the goal of quality assurance and associated fiscal responsibility in alcoholism programs across the nation.

Program Standards

Under contract from NIAAA, the JCAH developed nationally recognized standards of quality care for alcoholic people. Published in 1974 as an Accreditation Manual for Alcoholism programs, these standards were derived with the assistance of over 300 expert consultants from the alcoholism field. Adherence to these standards, as ascertained by survey from the Alcoholism Division of the Accreditation Council for Psychiatric Facilities within the JCAH, allows for accreditation of the program by the JCAH, a form of recognition that is respected by health professionals and consumers as well as third party payors such as Blue Cross, Medicare, and commercial health insurors. As of January 1, 1977, well over 200 alcoholism programs across the country will have been so accredited.

Practitioner Standards

The next step in the quality of care process was to assure the quality of the manpower in the field of alcoholism. Therefore, the development of standards and competency levels for one of the major care providers, the counselor, allowing for credentialling through certification by a national professional body, together with licensing or a similar process by the individual states, is underway and will provide additional controls leading toward the rendering of quality care. However, yet to be developed are the measurable clinical standards in the form of a Professional Standards Review Organization or similar procedure that determines with any degree of surety that the level of care sought is being obtained.

Clinical Standards

The Institute believes that the alcoholism field will require the firm establishment of clinical outcomes criteria to include acceptance by the field, together with a measurement procedure. An objective designed to bring about the development of a PSRO or similar quality assurance activity measuring clinical outcome may be initiated and underway sometime during FY 1977 or FY 1978. A major hindrance to this effort is perceived as the inability of the alcoholism field to arrive at a common definition of successful treatment outcome, or

"recovery." The three activities of accreditation, provider certification, and clinical evaluation must evolve and be developed into a coherent national quality of care program.

Evaluation

A recent follow-up study of clients at NIAAA funded Alcoholism Treatment Centers indicates the following:

(1) About 70% of ATC clients have recovered at 18 months after admission; only a small proportion of these have totally abstained however, and it appears that most recovered clients resume drinking small amounts (less than 1 oz. of ethanol per day).

(2) Success rates at 18 months are nearly as high as at 6 months; 6 month outcomes appear to be reliable indicators of long-term recovery rates.

(3) Different types of treatment have relatively uniform effect on client recovery, and no one treatment is superior to others.

(4) The more treatment a client receives, the better his chances for recovery.

(5) Certain background characteristics lead to somewhat lower recovery rates (e.g. low socio-economic status).

(6) Clients who drop out of treatment at an early stage achieve success rates only slightly lower than those who remain in the program.

HEALTH SERVICES ADMINISTRATION

QUALITY OF CARE

1. Provider Standards and Certification

When Medicare was enacted in 1965, the Secretary of HEW was required to establish national conditions of participation for a variety of providers of services to protect the health and safety of program beneficiaries. Prior to Medicare, little existed in the way of established professionally acceptable standards for some providers of services, particularly for long-term care facilities, home health agencies, and independent laboratories. Qualifications required for many types of health care manpower also were inadequate to ensure a safe level of quality of services. The Division of Provider Standards and Certification of the Bureau of Quality Assurance, working with the Social Security Administration, was assigned principal responsibility for standard-setting and surveillance of the program, and for other professional health aspects of Medicare of direct benefit to program beneficiaries.

These responsibilities increased as a result of the 1972 amendments to the Social Security Act which significantly strengthened the quality assurance and standards requirements for the Medicare and Medicaid programs. The amendments included expanded utilization review requirements, particularly for Medicaid; new long-term care facility requirements; validation of voluntary accreditation surveys; end-stage renal disease quality assurance requirements; and other provisions strengthening the health and safety standards for Medicare and Medicaid.

The objective of the Division of Provider Standards and Certification is the improvement of the health status of Medicare and Medicaid beneficiaries by ensuring that the types, quality, and quantity of services provided under the program are appropriate to patient needs. Since the beginning of the program, the effects of the standards, along with their continuous evaluation and revision, have been to promote the upgrading of individual institutions and agencies, to improve State licensure and certification programs, and to stimulate changes in national (non-governmental) accreditation programs. As an ongoing activity, the Division provides consultation and directly assists the Bureau of Health Insurance, SSA and the Medical Services Administration, SRS, in the process of development, interpretation, assessment, and modification of Medicare and Medicaid quality assurance system health and safety standards.

The Conditions of Participation for Skilled Nursing Facilities and Intermediate Care Facilities, and interpretive guidelines for use by State agencies and providers, and Conditions for Coverage of Services of Independent Laboratories were revised and issued in 1974. The revised regulations for skilled nursing facilities include special provisions for upgrading the quality of medical direction in these facilities, for improving discharge planning, and for safeguarding and ensuring patients' rights. Similar efforts were made to revise and update, in 1975, the Conditions of Participation for Hospitals. Experimentation and developmental activities are currently underway in the area of standards to ensure the quality of services provided in clinical laboratories and ambulatory health care centers.

In order to insure that providers are meeting appropriate health and safety standards, the Division conducts validation surveys. These surveys include validation of the accreditation system employed by the Joint Commission on the Accreditation of Hospitals (JCAH), validations stimulated by public complaints of conditions in health facilities, and routine validations of state surveys of health facilities.

The division has participated in several ongoing programs designed to promote and maintain the quality of care provided to Medicare and Medicaid beneficiaries. For example, the Division has provided support to the Bureau of Health Insurance and Medical Services Administration regional office staff in the conduct of comprehensive program reviews of State Medicare agencies. These reviews are a means of assessing the effectiveness of program policy and guidelines and the manner in which these are administered in the States. Through the provision of consultative and technical assistance, and other support activities, the Division has been involved in and has continued to promote quality assurance mechanisms.

Another ongoing comprehensive program instituted in 1970 was to improve the interpretation and uniform application of Federal health care programs by State agency personnel through training and evaluation of individual surveyor performance. This program was developed to meet a specific need following the enactment of Medicare and Medicaid, and has been supported by the States, the Social Security Administration, and the Social and Rehabilitation Service, all of which have assisted in its development. The health facility surveyors have a major responsibility for ensuring that long-term care facilities, hospitals, home health agencies, and other providers and suppliers of service, provide safe and adequate care and comply with required standards in serving Medicare and Medicaid beneficiaries. A pilot project was begun in FY 1977 to finance surveyor training through State tuitions, although Federal staff are still used as coordinators, faculty, and evaluators. Approximately 450 surveyors were trained in FY 1976.

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2. End-Stage Renal Disease

The objectives of the End-Stage Renal Disease Program are to implement the 1972 amendments to the Social Security Act (Sections 299 I of P. L. 92-603) by providing Medicare eligible end-stage renal disease (ESRD) patients with essential medical services, assuring patient access to treatment facilities which provide comprehensive care, controlling the cost of covered services, and assuring quality and appropriateness of services rendered.

In order to insure the accomplishment of these objectives, final regulations for the ESRD program, which were published on June 3, 1976, require the establishment of 32 ESRD network areas, each of which includes a Network Coordinating Council and a Medical Review Board. ESRD Networks are designated geographic areas containing facilities which share a collective responsibility for providing access to all the levels of care required by ESRD patients. Each ESRD facility designates a representative to serve on a Network Coordinating Council. Councils formulate a network plan which properly utilizes the resources of the network and coordinates referral of ESRD patients. The Council also appoints a Medical Review Board which is responsible for reviewing the appropriateness and the quality of ESRD care rendered within the network. Funds for the establishment and operation of ESRD Network Coordinating Councils and Medical Review Boards will be provided from the Medicare Trust Funds through the facilities reimbursement mechanism. In FY 1978 the Bureau of Quality Assurance of the Health Services Administration will provide technical assistance to ESRD Network Coordinating Councils and Medical Review Boards on medical issues, legal requirements, administrative mechanisms, and financial policies. This assistance will be essential during the critical early years in the development of these organizations. Efforts will also be undertaken to define and coordinate the interrelationships between the ESRD Program, Health Systems Agencies, and Professional Standards Review Organizations.

3. Professional Standards Review Organization

The Professional Standards Review Organization Program was authorized by the 1972 amendments to the Social Security Act. This provision requires the Secretary to establish and support a nationwide network of voluntary, non-profit groups of local physicians to regulate the quality of health care services paid for under Medicare, Medicaid, and Maternal and Child Health Programs. The purpose of the statute is to improve the quality of health care services and to make more cost effective the expenditures for health care services financed by Titles XVIII, XIX, and V of the Social Security Act. PSROs are to accomplish these purposes by applying sophisticated concepts of peer review through a system of voluntary local organizations, State Councils, and a National Council supported, regulated, monitored, and evaluated by the Federal Government.

PSROs will review the medical necessity of services, the quality of care delivered, and the appropriateness of the care in terms of the level, duration, and methods of treatment. In reviewing medical necessity and quality, PSROs will be determining whether health care services provided are necessary on the basis of professionally developed standards of norms of care, diagnosis, and treatment. In reviewing appropriateness, PSROs must determine whether the level at which health care services are provided (e.g., inpatient, outpatient, intermediate care) is the most efficient as well as the most effective level. This peer review system will assure that payment is made from Federal and State funds for only medically necessary, appropriate, and quality care.

Initially, PSROs will place emphasis on the review of institutional services, especially those provided in the acute general hospital. Eventually, the scope of their review will be expanded to encompass all facets of the health delivery system.

The PSRO program relates closely to and must be integrated with other health care review activities required by the Social Security Act particularly as the Act was amended in 1972. The PSRO legislation intends that utilization review, and other duplicative review activities will eventually be eliminated and PSROs will assume responsibility for such activities.

In 1974 the country was divided into 203 PSRO areas designated by the Secretary of DHEW. By the end of FY 1977 there will be 120 conditional PSROs. The hospital peer review system that these PSROs are using is an integrated one, which includes concurrent review, medical care evaluation studies and profile analysis.

PSRO activities during 1978 will focus on the following major objectives: continuation of the existing conditional PSROs; converting an additional 83 planning PSROs to conditional in order to cover all 203 PSRO areas; funding up to 18 Statewide Councils; implementation of all regulations issued during 1977; and coordination of the End-Stage Renal Disease (ESRD) and PSRO programs. PSROs will review 6.3 million Medicare/Medicaid admissions in FY 1978, about 60% of all Medicare/Medicaid admissions. Forty PSROs will be conducting long-term care review and 10 PSROs will be conducting ambulatory care review.

Another important objective in FY 1978 will be the evaluation of the impact of the PSRO program on the quality and utilization of health care services financed under Medicare, Medicaid, and Maternal and Child Health programs.

RESPIRATORY DISEASES

Obligations

Public Health Service:	1974	1975	1976	1977 Estimate	1978 Estimate
National Institutes of Health:					
National Institute of Allergy and Infectious Diseases	$ 7,015,346	$ 7,001,857	$ 7,418,137	$ 8,065,000	$ 8,837,000
National Heart, Lung, and Blood Institute	21,052,000	24,805,000	29,286,000	31,421,000	31,974,000
Health Service Administration	1,498,000	2,000,000	2,200,000	3,000,000	3,000,000
Center for Disease Control:					
National Institute for Occupational Safety and Health	8,483,000*	4,300,000	4,400,000	4,400,000	4,400,000
Office of Human Development:					
Research and Demonstrations	---	---	150,000	175,000	200,000
Research and Training Centers	50,000	75,000	250,000	300,000	325,000
Basic State Grants	7,150,000	6,800,000	5,483,000	5,922,000	5,320,000
Total, RSA	7,200,000	6,875,000	5,883,000	6,397,000	5,845,000
TOTAL, PHS	$45,248,346	$44,981,857	$49,187,137	$53,283,000	$54,056,000

* Includes $3,582 in special funding for coal mine clinics.

NATIONAL INSTITUTES OF HEALTH

National Institute of Allergy and Infectious Diseases

Infectious Respiratory Diseases

Swine Flu. This has been an unprecedented year for research on influenza, one of the most puzzling of acute respiratory diseases. Although

RESPIRATORY DISEASE

Diseases affecting the respiratory tract are among the most common of illnesses. Those parents who say despairingly "he has one cold after another" are often not exaggerating. Family and pediatric practice studies have shown that, in children under 5 years of age, the average number of acute respiratory infections per year ranges from 4 to 6. If one considers that symptoms of each infection may last from 10 days to 2 weeks, it is easy to visualize a succession of 8 to 12 weeks during the fall and winter months when every household with young children harbors at least one sick child.

But children are not the only victims of acute respiratory infections. Each year, in the United States, these diseases cause workers to lose approximately 125 million days from their jobs, thus costing employers nearly $5 billion in wages paid for sick leave. Furthermore, employees themselves pay out $613 million for medications each year and make more than 142 million visits to doctors' offices for treatment of acute respiratory infections.

In addition, studies have shown that infectious agents -- bacteria and viruses -- attacking the respiratory tract exacerbate problems many individuals already have with allergic conditions such as asthma and hypersensitivity pneumonitis; and the relationship between repeated acute respiratory infections and the subsequent development of chronic pulmonary disease has yet to be adequately explored.

The development of better means for preventing acute respiratory diseases and for treating them is a major goal of the National Institute of Allergy and Infectious Diseases (NIAID). In pursuit of this goal, NIAID-supported scientists coordinate their research efforts with those of investigators sponsored by FDA's Bureau of Biologics (BOB), the Center for Disease Control (CDC), and the U.S. Army.

influenza has long been recognized and the causative virus isolated some 40 years ago, control of the infection, in populations or in the individual, has not yet been achieved.

When in February 1976 a new strain of influenza virus was identified in recruits at Ft. Dix, N.J. -- long before it had had an opportunity to cause widespread outbreaks of disease -- scientists felt that, at last, they had the jump on the changeable influenza agent and would be able to prepare, in time, a vaccine that would be protective. Past experience has shown that whenever the influenza virus changes substantially (as it does about every 10 years) large segments of the population are vulnerable to infection. The last great epidemic, known as the Hong Kong Flu, affected 50 million Americans and cost the Nation nearly $4 billion.

Faced with the threat of a new epidemic, the President decided in March to support the development, manufacture, and administration of a swine flu vaccine which would be made available to the total U. S. population. Money to support this National Influenza Immunization Program was later appropriated by the Congress.

The role of the National Institute of Allergy and Infectious Diseases in this effort -- in cooperation with FDA's Bureau of Biologics -- was to organize and support clinical trials of the new vaccines prior to their licensing. The dispatch and success with which this assignment was carried out can be attributed to NIAID's long involvement in influenza research and to the existence of several vaccine evaluation centers where work had been supported by NIAID for a number of years.

The first field trials of vaccines prepared from the new virus known as A/New Jersey/76 (swine flu) began on April 21. These tests required the cooperation of about 30 principal investigators and some 5,000 volunteers.

Four vaccines were evaluated: whole virus vaccines developed by Merrell-National Laboratories and by Merck Sharp & Dohme; and split virus vaccines made by Wyeth Laboratories and by Parke, Davis & Company. Split virus vaccines were prepared by chemical treatment to disrupt the whole virus particles -- a process designed to reduce side reactions. In addition, a bivalent vaccine consisting of A/New Jersey/76 and A/Victoria/75 -- the strain prevalent in the population in 1975 -- was tested for use in the elderly and in other so-called "high risk" groups.

Results of the first studies, reported in June, indicated that with few reactions adults responded satisfactorily. Even the lowest amount (200 CCA units)* of any of the vaccines given induced high levels of antibody. Consequently, this dosage of monovalent (swine flu only) vaccine was recommended for all individuals over 18 years of age. It was agreed

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* A CCA (chick cell agglutination) unit is a technical term used to indicate virus content.

that the bivalent vaccine should contain 200 CCA units each of swine flu and A/Victoria.

Since initial trials of the vaccines in children were less satisfactory, 2,000 more volunteers, ranging in age from 3 to 24, were enrolled in a second group of tests. These were conducted throughout the country by 16 investigators whose work was supported by NIAID. The investigators tested the effectiveness of using smaller single doses of the whole virus vaccines, larger doses of the split virus vaccines, or two doses of vaccine given several weeks apart.

Results of these studies, reported in October, indicated that two doses of the split vaccine would effectively immunize children as young as 6 months with no serious reactions. However, when manufacturers of the split virus vaccine were not able to promise sufficient quantities to protect all youngsters, no recommendations were made for community-wide immunization of normal children. Fortunately, the number of severe or fatal cases of influenza in children and adolescents is usually small, although the disease can be very common in these age groups.

Other problems encountered by the National Influenza Immunization Program are well-known: the inability of the vaccine manufacturers to satisfy their needs for liability insurance coverage (resolved eventually by Congressional action); delay in anticipated delivery of vaccine and reductions in anticipated overall quantities; and "association" of immunization with deaths from heart attacks in the elderly.

The most recent complication, which led to temporary suspension of the Program, was the suspicion that vaccine administration might lead to the development in some individuals of a rare form of paralysis known as the Guillain-Barre Syndrome (GBS). Needless to say, there had been no hint of this, or any other serious complication, in any of the more than 7,000 volunteers who participated in the vaccine trials.

This lack of association between GBS and flu vaccine during testing, however, is to be expected if one considers the seemingly low incidence of the syndrome. As of December 25, 1976, out of a total of more than 40 million persons vaccinated, only 242 cases of Guillain-Barrè Syndrome had been reported to the Center for Disease Control. During the same period (October 1 through December 25) 234 cases were reported to have occurred in persons who had not been vaccinated.

Guillain-Barrè Syndrome has been of interest for years to investigators supported by NIH's National Institute of Neurological and Communicative Disorders and Stroke (NINCDS). In spite of intensive research, the causes of this syndrome (which has over 30 synonyms) remains elusive. There is commonly a history of a preceding respiratory illness, trauma, or other event, including immunization, but "epidemics" of GBS have never been recognized as sequalae of influenza epidemics. Precise data on past incidence are not available, but the CDC is now trying to collect such information by addressing questionnaires to all neurologists in the United States.

Because the question of a potential relationship between influenza immunization and development of GBS has been raised, the National Institute of Allergy and Infectious Diseases is joining NINCDS in collaborative studies

of the syndrome. An attempt will be made to clarify the factors involved in the possible development of the disease in association with influenza immunization. These investigations will be mostly of an immunologic nature, focusing on the general "immunocompetence" of the GBS patient group and the possibility of a genetic predisposition to the development of this neurologic disease. Other collaborative studies will attempt to determine the cause of GBS through isolation of viruses or other agents from patient specimens and to study acute and convalescent blood sera for specific antibody.

Surveillance. During the months following initial identification of the new influenza virus, extensive respiratory illness surveillance activities were implemented by the National Institute of Allergy and Infectious Diseases. These are in addition to CDC's extension of its regular disease surveillance program. In the NIAID studies, contractors in 10 locations throughout the country are keeping a close watch on the occurrence of respiratory illness in their communities, obtaining patient specimens from physicians and hospitals and using these for virus isolation of specific disease agents.

In addition, other NIAID-supported investigators are monitoring influenza in bird and animal populations, particularly in swine. The need for investigating the interactions of animal and human influenza grows out of scientific suspicion that recombination of influenza viruses in nonhuman species may result in new strains that pose a threat to humans. NIAID-supported investigators carrying out these studies are cooperating in an international surveillance network established in close collaboration with the World Health Organization.

To date, no new isolates of the A/New Jersey strain have been found except in a few cases where development of influenza can be related to contact with sick pigs. In none of these cases of human disease was there any evidence of spread to family members or schoolmates.

In general, there has been little influenza of any kind in the United States this year. The possibility exists that the A/New Jersey/76 strain represents a new virus which caused disease only in a highly susceptible population--recruits living in close quarters. However, this has never before been known to happen.

The last word is not yet in on whether or not we will have an epidemic of swine flu, but scientists are convinced that the ingredients for a pandemic (world-wide epidemic) this year or next clearly exist: an antigenically new influenza virus with a demonstrated capability for human-to-human spread, and a susceptible population.

Whatever the ultimate fate of the National Influenza Immunization Program, or, indeed, of the epidemic-producing ability of the swine flu virus, scientists are in agreement that this unique effort has provided valuable data on influenza vaccine development which will be put to good

use in the years ahead. Dosages, reactions, differences in age groups receiving the vaccine--never before have such factors been so carefully studied.

Other Influenza Research. Other approaches to the problem of influenza have not been abandoned during the past year, and encouraging results have been obtained in investigation of potential antiviral drugs. Further studies of the compound, amantadine, have shown that it is effective not only in preventing influenza, when given prior to exposure, but also diminishes the severity of symptoms when used to treat an established infection. Amantadine hydrochloride (Symmetrel) has now been licensed for use against all strains of influenza A. Although the drug is presently given orally, studies in animals suggest that therapeutic effects are increased when the compound is given intranasally by aerosol. NIAID is now making plans to test the efficacy of this route of administration in humans.

In an effort to develop other drugs which may be effective in treating influenza, the Institute is sponsoring trials of rimantadine, a compound related to amantadine. In the test tube and in experimental influenza infections in animals, rimantadine apparently has the same mode of action as amantadine but is more potent.

Since it is difficult to establish therapeutic efficacy of a compound in such brief, self-limited infections as influenza, NIAID contractors at the University of Rochester have developed a method for measuring pulmonary function abnormalities in uncomplicated influenza and using their rate of resolution as a measurement of the effect of an antiviral compound. This method will now be used to determine the relative efficacy of rimantadine as compared to amantadine in a group of 30-40 volunteers during a documented outbreak of influenza.

Pneumonia. Pneumococcal pneumonia, caused by Streptococcus pneumoniae, remains a serious disease. In spite of the availability and use of effective antibiotics, a 20 to 30 percent fatality rate of patients hospitalized with pneumococcal pneumonia has remained unchanged over the past decade. As reported last year, NIAID initiated several years ago trials of polysaccharide vaccines containing more than one type of S. pneumoniae. These tests have now been completed and it is anticipated that the vaccine will be licensed, probably next summer, and recommended for use in special "high-risk" population groups.

One population which might benefit from this vaccine might be children whose spleens have been removed or who are sickle cell anemia patients. NIAID is collaborating with investigators interested in studying use of the S. pneumoniae vaccine in such children. This collaboration involves supplying the vaccine and providing serologic assays through an Institute contractor at SUNY-Downstate Medical Center.

Allergic Respiratory Diseases

Asthma. Asthma is a common lung disease affecting some 9 million Americans. Few people can easily forget the sight of a child or adult having an asthma attack. The victim breathes rapidly and gasps for air. Spasms of coughing wrack his body. Wheezing sounds may be so loud that they can be heard across the room. In fact, the asthmatic acts and feels much like a drowning man struggling for air.

Scientists know that these symptoms of asthma are produced by spasmodic contractions of the bronchial airways of the lungs. On the basis of experiments in the laboratory and in animals, scientists believe that numerous chemical compounds can cause these spasms, and investigational leads suggesting evidence for specific chemical agents are being followed.

During the past year, NIAID grantees at Scripps Clinic and Research Foundation, La Jolla, California, have provided evidence that one chemical, histamine--a naturally occurring compound released as a result of the allergic reaction--is involved in asthmatic attacks. In carefully controlled studies of asthmatic patients before, during, and after induced attacks of their disease, the California investigators measured the level of histamine circulating in the blood. The scientists were able to show clearly, for the first time, that, during an attack, the histamine level was much higher than before, and that, when medications were given, the level dropped back to normal.

This important contribution to understanding one cause of asthmatic attacks should help scientists design further studies which could lead to the development of better means of preventing or treating the disorder.

Allergic Bronchopulmonary Aspergillosis. This disease, thought until recently to be a rarity in the United States, is being diagnosed with increasing frequency in patients with allergic asthma, particularly children and young adults.

Superficially, allergic bronchopulmonary aspergillosis resembles bronchial asthma but it is caused by a common mold, Aspergillus. This organism is able, in some people, to colonize within the bronchi and produce gradual inflammation and permanent scarring of lung tissue.

For the past year, grantees at Northwestern University's School of Medicine, Chicago, have been studying the nature of immune mechanisms involved in allergic bronchopulmonary aspergillosis. To date, the investigators have found that the body, in response to Aspergillus, makes at least two different classes of antibodies--blood proteins which are usually considered protective. However, in patients with allergic bronchopulmonary aspergillosis the antibodies do not seem to offer protection, but instead actually appear to play a role in causing the lung damage by inducing a state of specific hypersensitivity.

When the disease is treated with corticosteroids and levels of antibody fall, patients' symptoms improve and their chest x-rays begin to clear. Thus, by measuring Aspergillus antibody levels at frequent intervals, physicians can determine disease activity prior to the development of symptoms and by treatment be able to prevent irreversible lung damage.

Hypersensitivity Pneumonitis. Certain forms of allergic pneumonias are associated with exposure to a wide range of organic dusts generated in various occupations. NIAID grantees at Tulane University, New Orleans, have been working with animal models of these diseases in order to gain a better understanding of the conditions that cause allergic type pneumonias in man.

This past year these scientists were able to induce human-like hypersensitivity pneumonias in rabbits either by having them inhale "fungus-like" organisms or by directly introducing these materials into their lungs. Using these animal models, the investigators have been able to determine that only those fungus-like agents of a relatively insoluble nature can produce these pneumonias. Soluble agents were not able to produce pneumonia when inhaled or injected into the animals' lungs.

Since these animal models seem to simulate both the cellular and allergic aspects of human disease, work with them should greatly facilitate development of better diagnostic tests and more effective therapy.

In other work on hypersensitivity pneumonitis, NIAID grantees at the Medical College of Wisconsin reported during the past year that this unusual allergic lung disease could occur in individuals not exposed to occupational dusts. By investigating the environments of their patients, the Wisconsin scientists found that, when disseminated, certain heat-loving bacteria contaminating forced air heating or humidifying appliances could cause respiratory symptoms in sensitized individuals. Prolonged exposure, either in the home or at work, was associated with significant disturbances of lung function.

RESPIRATORY DISEASE

The chronic respiratory diseases—including such insidious and largely irreversible lung disorders as emphysema, chronic bronchitis, cystic fibrosis, various dust inhalation diseases, and pulmonary fibrosis, among others—constitute a national health problem of increasing dimensions. In the U.S., chronic lung diseases account for an estimated 150,000 deaths each year, cause 45 million days lost from work, 40 million days of bed-restricted activity, and cost the economy $6 billion a year in lost productivity, wages, and medical care costs.

The National Heart, Lung, and Blood Institute (NHLBI) bears primary responsibility for basic and clinical research to increase knowledge of lung structure and function, and to develop improved methods for the prevention, diagnosis, and relief of chronic lung diseases. The National Institute of Allergy and Infectious Diseases; National Cancer Institute; National Institute of Environmental Health Sciences; National Institute of Arthritis, Metabolism, and Digestive Diseases; and the Division of Research Resources also support some research projects bearing on chronic respiratory diseases.

The chronic respiratory diseases constitute an exceedingly complex problem demanding a broadly based, diversified approach to insure that each of the many aspects of the problem will be adequately explored.

National Heart, Lung, and Blood Institute

During Fiscal Year 1976, National Heart, Lung, and Blood Institute support of research and training activities in the field of chronic respiratory disease amounted to $29,286,000. The money funded research in Institute laboratories in Bethesda, Maryland, grants and contracts for R & D projects in medical institutions and industrial laboratories throughout the country, and related administrative costs. Most of this research is administered by the Institute's Division of Lung Diseases (DLD), and involved approximately 50 percent of the DLD budget.

This report focuses on the magnitude of health problems posed by these disorders; the current status of their diagnosis, prevention and treatment; and recent research advances, current research thrusts and future prospects concerning the following disease entities:

- chronic obstructive lung disease (COLD), primarily emphysema and chronic bronchitis.
- pulmonary fibrosis, invasion of the lung by uncontrolled scar tissue growth.
- coal workers' pneumoconiosis, or black lung disease.
- cystic fibrosis, a leading cause of chronic progressive lung disease in children.

Chronic Obstructive Lung Disease (COLD), a term largely synonymous with emphysema and chronic bronchitis, is a progressively debilitating, generally irreversible condition and a major cause of death and disability in the U. S. Currently, it accounts for more than 40,000 deaths annually. National Health Interview Survey data indicate that 6 1/2 million Americans have chronic bronchitis, and 1 1/4 million have emphysema. Nearly 1/2 million Americans suffer somewhat restricted activity because of COLD and another 20,000 are confined to bed. Emphysema now ranks third, after coronary heart disease and schizophrenic disorders, in terms of disability payments by the Social Security Administration.

Chronic bronchitis is characterized by a persistent inflammation and swelling of the linings of the bronchial airways, excessive production of mucus and other fluids that tend to block the airways and that lead to coughing and shortness of breath. The principal known factors contributing to the bronchial irritation of chronic bronchitis are smoking, air pollution, and recurrent respiratory infections. And these same irritants can promote the development of the companion disorder, emphysema. (Emphysema and chronic bronchitis quite frequently occur together, and it is often impossible to determine which of the two is the more important contributor to disability in a patient.)

The exact cause of emphysema is not known, but the initial event appears to be a breakdown in the thin coating of mucus and the many hair-like cilia that line all air passageways throughout the respiratory system. This lining normally protects lung tissues against inhaled dust, bacteria and other harmful materials, and the waving cilia propel these particles toward the throat where they can be eliminated from the body. With the breakdown of this protective lining, the noxious materials may begin to destroy normal lung architecture, producing large, inefficient air spaces. As a result, resistance to air flow increases and breathing becomes progressively more difficult.

COLD develops so insidiously that many victims are unaware of their condition until 50 percent or more of their lung function has been destroyed. For this reason, great emphasis has been placed on early

detection of structural, physiological and biochemical abnormalities which precede the development of more symptomatic, relatively irreversible disease. Recent advances in this area include:

- measurement of "closing volume"—the amount of air remaining in the lungs after smaller airways collapse at the end of expiration —is a new physiological method for detecting early changes in lung function which precede the signs and symptoms of COLD.

- an inexpensive, rapidly responding breathe-through carbon monoxide meter that will greatly improve tests to evaluate gas exchange in different regions of the lung.

- a portable, accurate, rapid device—a mass spectrometer coupled to a minicomputer—for the noninvasive measurement of lung weight shows great promise in detecting early signs of emphysema and in following responses to therapy.

Cigarette smoking is recognized as the primary risk factor predisposing to the development of COLD, and as a major factor in aggravating and accelerating its clinical course. But other risk factors —environmental, occupational, and genetic—and their interrelationships are also under close scrutiny in efforts to develop prevention, education and control programs against COLD. The latter include:

- a hereditary deficiency of an enzyme called alpha-1-antitrypsin predisposes to the development of an accelerated, severe form of emphysema that attacks young adults, making them more susceptible to the harmful effects of air pollution and smoking than normal subjects. Studies currently underway to clarify this abnormality include efforts to provide synthetic substitutes for the deficient enzyme.

- a population study of smokers has shown that, once pulmonary function abnormalities occur, they are progressive, and that age as well as smoking contributes to the downhill course.

Therapy is aimed at arresting or slowing the progress of COLD, relieving symptoms, improving the patient's physical condition, and helping him make the best use of whatever lung function he has. In addition to avoidance of smoking, air pollution and other irritants, therapy may include:

- bronchodilating agents to dilate constricted air passages.

- mucolytic drugs to liquify viscid mucus clogging air passages.

- respiratory stimulants to increase respiratory drive.

- steroids, to reduce inflammation and allergic reactions.

- antibiotics to protect against respiratory infections.

- physical therapy and breathing exercises to increase capacity for physical activity.

- oxygen therapy in selected patients to meet special oxygen needs resulting from exertion or mild-to-severe episodes of breathlessness.

The Institute supports studies in all these treatment modalities and is conducting a controlled clinical trial to evaluate the long-term effects of a particular kind of inhalation therapy—intermittent positive pressure breathing (IPPB)—in ambulatory patients with chronic obstructive lung disease.

Idiopathic Pulmonary Fibrosis

Fibrotic lung disorders—characterized by excessive collagen and connective tissue production and subsequent development throughout the lung of fibrous (scar) tissue that interferes with normal breathing—represent 15-20 percent of the non-infectious disorders of the lung. More than 130 disease entities have been implicated in the causation of pulmonary fibrosis, including pneumoconiosis and other diseases caused by occupational and environmental pollutants, drug reactions, infectious disorders, heart disease, pulmonary vascular disease, and cancer. In other instances, called idiopathic pulmonary fibrosis, the cause of the disease is unknown.

Idiopathic pulmonary fibrosis is a chronic, devastating illness, invariably resulting in death an average of 4-5 years from the onset of symptoms. Although 5 to 10 percent of patients with the disorder respond to steroid therapy, there is no known treatment for the remainder. Breathlessness of insidious onset is usually the first symptom, but in 25-40 percent of patients this follows a flu-like viral illness. Although the cause of the disorder is unknown, there are clearly defined features that are characteristic of idiopathic pulmonary fibrosis.

One of these is the presence of fibrous (scar) tissue and inflammatory cells in the alveolar walls. The disease process apparently begins as an inflammation of the alveoli (a stage that is probably reversible) followed by a "healing" or fibrotic response causing permanent tissue damage and encroaching progressively on lung function.

Recent studies suggest that a molecular derangement of Type I collagen (one of four collagen types found in the lung) may underlie the disease. The scientists speculate that a viral insult together with a genetic predisposition to the disease triggers an antigenic or "rejection" response by the body, complete with mobilization of phagocytes and other wandering inflammatory cells, directed against the now "foreign" collagen.

Tending to substantiate this theory are: the flu-like symptoms that commonly precede the onset of idiopathic pulmonary fibrosis; the tendency of the disorder to be familial, i.e., to occur in several members of the same family; and results of immunological comparisons of susceptible families with persons having no family history of the disorder.

Hopefully, this multidisciplinary approach to idiopathic pulmonary fibrosis will continue to produce new and useful knowledge concerning the causation, diagnosis, pathophysiology and therapy of this disorder.

Pneumoconiosis is a collective term for a number of different diseases caused by the inhalation and retention in the lungs of mineral or vegetable dusts and includes such diseases as asbestosis, silicosis, byssinosis, and coal workers' pneumoconiosis. While many of these diseases have been virtually eliminated by the application of vigorous dust-control measures in the industrial setting, certain pneumoconioses still constitute a significant health problem.

Coal workers' pneumoconiosis (CWP), or black lung disease, accounts for more deaths (approximately 1,000 per year in this country) than all other forms of pneumoconiosis combined, and afflicts an estimated 90,000 to 125,000 United States miners. A recent nationwide survey by the Public Health Service and the Bureau of Mines indicated that nearly 30 percent of working coal miners in the United States had black lung disease; of these 8.3 percent had progressive massive fibrosis.

CWP results from exposure to a dust which is a mixture of coal, kaolin, mica and silica, and is best defined as the accumulation of dust in the lungs and the tissue's reaction to its presence. Typically, victims of black lung disease require a decade or more of exposure to mine dusts before they are incapacitated or killed by the disease. Necessary for establishing a diagnosis of CWP are a history of exposure to coal dust, and certain relatively characteristic abnormalities on the chest x-ray.

CWP is separated into simple and complicated forms according to the appearance of chest x-ray films. The primary lesion of simple CWP is the macule. Macules are microscopic, focal deposits of inhaled dusts that become permanently incorporated into the walls of the small air passages (bronchioles), sacs (alveoli), and pulmonary blood vessels. These macules are grossly visible as blackened patches and streaks in lung slices even after only a few years of dust exposure.

In general, respiratory impairment associated with simple CWP is not severe, and affects the miner's ability to perform hard physical work only minimally and does not shorten life. Its clinical importance lies in the fact that it may be a precursor of progressive massive fibrosis.

Complicated CWP, or progressive massive fibrosis (PMF) leads to severe respiratory disability, pulmonary hypertension, and premature death. PMF is characterized by massive aggregates of collagenous, fibrous tissue separated by plentiful deposits of coal and often a few scattered inflammatory cells (lymphocytes). The fibrotic lesions encroach on the pulmonary vascular bed and destroy it.

Heart failure is the most common cause of death in persons with black lung disease; many others succumb to respiratory failure during an acute respiratory infection. No effective treatment is known. The cause of PMF

remains obscure, as do the factors that control its progression. PMF may appear several years after exposure has ceased and, in addition, may progress in the absence of further dust exposure. Only a minority of miners with simple CWP ever develop complicated CWP. The prevalence of PMF varies greatly from one country to another and from one region to another. This and other evidence suggest that, aside from dust, other factors operate in causing PMF.

Researchers have developed a sensitive test system for investigating immunological defense mechanisms in black lung disease. Clinical and autopsy evidence suggests that sensitization and subsequent exposure to any one of a number of antigenic substances may figure prominently in some cases of CWP. The test reveals immunological responses of cultured white blood cells to even very low levels of antigens, such as might be found in the respirable dusts of mine air samples.

Studies in animals are testing the hypothesis that PMF is the result of an altered inflammatory response of lung tissue caused by an induced hypersensitivity. This hypersensitivity may be accentuated by absorption of antigen to stored dust in the lungs, which prevents destruction of the antigen and favors prolongation of its activity. Guinea pigs sensitized with histoplasmin or tubercule bacillus antigens developed a persistent inflammatory reaction involving the alveolar wall in response to subsequent exposure to the appropriate antigen alone. But when pre-sensitized animals were given massive doses of coal dust along with antigen, massive lesions containing trapped dust and fibrosis were produced.

The finding that massive amounts of dusts are required for the development of PMF in experimental animals suggests that even moderate reductions in exposure to mine dust may effectively prevent the development of complicated CWP.

Cystic Fibrosis (CF), with an estimated frequency of one in 2,000 live births in white populations, is the most common lethal genetic disease of Caucasians. It causes much of the chronic progressive lung disease encountered in children. Indeed, obstructive lung disease accounts for 90 to 95 percent of deaths among those afflicted with cystic fibrosis.

When first recognized, cystic fibrosis seemed invariably and rapidly fatal. However, improved diagnosis and therapy has resulted in a U.S. population of 15,000-20,000 surviving CF patients, 2,000 of whom are adults. An additional 800-2,000 patients are diagnosed annually.

Clinically, cystic fibrosis is characterized by chronic pulmonary disease, pancreatic insufficiency, and elevated sweat electrolytes (sodium, chloride and potassium). Sweat electrolyte elevations are a cardinal diagnostic feature of CF, but are not related to the severity of the disease. (However, increased electrolyte excretion can result in massive salt depletion and even cardiovascular collapse.) Most CF morbidity and mortality stems from a mucus secretion abnormality: excessive amounts of unusually thick, viscous mucus obstruct organ passages, thus giving rise

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to chronic pulmonary disease, pancreatic insufficiency, intestinal obstruction and other complications.

A method recently developed by NHLBI grantees allows direct visualization of mucus production. By spraying powdered tantalum (an inert, radio-opaque metal) into the trachea of laboratory animals, the mucus glands can be visualized by fiberoptic bronchoscope and changes observed when the glands are stimulated. This technique is an important advance over previous methods, which depended on analysis of sputum, enabling studies of mucus production directly at the site of secretion.

Other studies are aimed at:

- biochemical studies of mucus and its glycoprotein components.
- determining whether impaired mucociliary transport—normally a major defense mechanism for the removal of natural debris and inhaled particles from the lung—is the cause or the effect of obstructive lung disease in CF.
- identifying a gene product—a factor in tissues and biological fluids of CF patients—related to the primary cause of CF.

Such investigations may elucidate the basic defect of cystic fibrosis, open new possibilities for genetic counseling and prenatal diagnosis, and provide insights for more effective therapy of CF and its complications.

Conclusion

Although the chronic respiratory diseases constitute an exceedingly complex national problem, significant inroads can be made into the health and economic tolls exacted by these diseases through the extensive application of existing methods of prevention, diagnosis, and treatment. Adequate control of these disorders, however, requires continuing basic and clinical research to reveal where and how we may intervene to halt the progression of underlying disease processes.

HEALTH SERVICES ADMINISTRATION

One of every six children in the United States under 17 years of age has one or more chronic pulmonary diseases. Of all the chronic diseases which affect children in this age range, pulmonary diseases account for 70 percent.

Three major chronic pulmonary diseases are asthma, chronic bronchitis and cystic fibrosis. The fact is that each of these diseases is usually manageable when detected in the very young child.

Chronic pulmonary disease is a life-long problem. Its management requires sophisticated equipment and personnel. In the course of these diseases acute episodes, requiring hospitalization, occur. Treatment, while not intensive once a stabilized status is achieved, is time-consuming. Continuous medical supervision, over extended periods of time, is required. The availability of appropriate manpower, therefore, is crucial to ameliorating the problem.

If primary pulmonary diseases are treated promptly and comprehensively, secondary chronic problems in the total (adult) population may be prevented or ameliorated. As it now stands, 36 million adults have chronic pulmonary disease, and the mortality rate is now more than 35,000 deaths annually. It has been doubling every five years. During 1968, respiratory cripples in the United States were paid $90 million in Social Security payments--7 percent of all disability payments--second only to sums paid for heart disease patients.

In 1970, the 4.6 million children with asthma and chronic bronchitis lost 9.9 million school days and had 20.0 million days of non-hospital disability. In 1971, children with asthma and chronic bronchitis spent 21.0 million days in short term hospitalization.

Children with asthma comprise 19 percent of those children in the birth to 17 age group with chronic pulmonary disease. Failure to recognize and treat it can lead to serious lung damage. While it is rarely fatal it can, if untreated, cause permanent pathological changes in the airways and lungs and make the child vulnerable to other illnesses. With proper management, 90 percent of asthmatic children will obtain complete relief (attacks ended) or marked reduction in severity of attacks.

Children with chronic bronchitis comprise 24 percent of those children in the birth to 17 age group with chronic pulmonary disease. If it is not brought under control, chronic bronchitis can lead to pulmonary emphysema. If treated adequately and early, its effect on the condition of pulmonary tissues can be minimized.

Improved treatment procedures are having some effect on the average in-patient hospital stay for asthma and chronic bronchitis patients. Between 1968 and 1971, the average patient day for asthma decreased from 6.6 to 4.5 and for chronic bronchitis from 5.1 to 4.5.

The number of children with cystic fibrosis cannot be readily established. This hereditary disease, first described in 1938, is estimated to occur in one of every 2,000 white live births. The gene frequency in the white population may be as high as one in 40. An increasing number of cases of cystic fibrosis is now being recognized in Blacks, Puerto Ricans and Orientals. Progress in diagnosis and treatment has removed the certainty of early death for children with cystic fibrosis. A number have now reached adulthood, completed their college education, have married and are living productive lives. A favorable outcome depends on early detection and treatment.1/

There are eleven centers currently receiving BCHS support: University of Colorado, Philadelphia Regional Pediatric Pulmonary Center, Columbia University, University of Washington, Tulane University/Louisiana State University, University of Hawaii, University of California (Irvine), Presbyterian Hospital (Albuquerque), University of Puerto Rico, Georgetown University, and University of Florida. They have in common their concern with training personnel for serving children with pulmonary disease and the organization and delivery of such services. Within this context, however, program emphasis varies widely depending upon factors such as geography, climate, existing resources and needs. For example, the nature of the Hawaii and Puerto Rico programs is related to their geographic isolation and their basically limited resources. The disease categories with which they are primarily concerned are different from mainland programs in that they are less concerned with cystic fibrosis (lower incidence due to genetic composition of the population and a lesser management problem because of climatic factors) but more heavily concerned with chronic asthma because of the abundance of tropical fungi and other allergens.

The New York and Philadelphia programs both serve large populations concentrated in relatively limited geographic areas with a multiplicity of

1/ The PPC program serves 30,000 children and provides training for health personnel. For further detail, see Cystic Fibrosis, NIH.

of agencies, facilities and services. Thus, they are more concerned with coordination of services and training to avoid duplication and to make appropriate use of the particular capabilities of each resource.

The Colorado and New Mexico programs both serve relatively sparse population scattered over vast geographic areas, including all or portions of adjacent States. These programs have a particular emphasis on patient referrals and transport, and on training personnel to upgrade services in areas remote from the major medical centers.

These differing emphases within a common framework of interests and concerns could be described for each of the presently funded centers. The above examples serve to illustrate the nature of the problem and the diversity of approaches being used for its resolution.

Although there is variation among the centers in services offered each typically takes personal and family histories, makes complete physical examinations with emphasis on the thorax, takes other measurements, and performs laboratory tests.

In-patient care is available for complex diagnostic problems or acute exacerbation of the disease which cannot be managed at home.

Out-patient services provide regular checkup and planned follow-up of patients and their treatment regimens. All centers have out-patient clinics, most of them on a weekly basis. Five have satellite clinics where services are taken to a peripheral area that does not have a pulmonary clinic. The satellite clinics can screen, offer ambulatory treatment and followup examination but lack the sophisticated laboratory equipment and personnel for certain evaluation and procedures.

Referrals of patients come from private physicians, public health clinics and nurses, their own or other hospitals or facilities, or from the families themselves.

Casefinding involves screening for signs or history suggestive of pulmonary disease. Those thus identified require a full evaluation before a diagnosis can be made.

Physical therapy provides an exercise routine to improve the vital capacity and promote bronchial drainage. Such therapy also includes graduated programs to keep the total muscle tone of the body at acceptable levels without producing undue fatigue. Eight centers offer physical therapy.

Inhalation or respiratory therapy is an outgrowth of physical therapy. The availability of these diversified services is relatively new. This form of therapy, which includes oxygen and regulated moisture regimes, has enabled many children to survive more comfortably. All centers have these services.

Social work and psychological services provide the support that parents must have. They also complement and make possible the vigorous therapeutic program these children need in order to survive and to have as healthy growth and development as possible. Seven centers provide psychosocial services, using either a social worker or a psychologist or both.

All centers have some patient and family education counseling and two have genetic counseling.

Two offer dietary and nutrition services to selected children but all attempt to make the family aware that an adequate well balanced diet is essential for these children, who must have basic foods in order to approximate normal growth and development. The nurse frequently gives nutritional advice.

All centers provide pediatric pulmonary disease consultation to health professionals and health facilities within the area they serve.

Facilities. Nine centers are consortia of hospitals, clinics and specialty laboratories. Four are affiliated with more than one educational institution. All have intensive care units for infants and/or children.

Staff. All the centers have a physician as medical director, usually a specialist in pediatric pulmonary diseases who demonstrates a basic concern for all aspects of preventive child care. Most have an assistant to the director who either is a physician specialist or a physician fellow who is learning the specialty. Two have administrative coordinators to amalgamate use of center facilities in total program efforts. In six centers, allied programs in the consortia have their own staffs, which generally consist of a physician director, an assistant who may be a physician or fellow, nurse or social worker, a pulmonary technician and a clerk. All centers have at least one registered nurse who has had on-the-job training in pulmonary care. This individual frequently plays the principal role in organizing the program and is required to offer services where other disciplines are not represented. The centers also have one or more pulmonary technicians as well as clerical personnel.

Most centers, depending on size, affiliations and resources, can also call on part-time assistance from the faculty in such specialties as cardiology, virology, genetics, microbiology, immunology, psychiatry, physiology and anesthesiology. Some centers obtain these special services from outside sources.

Training. Since nine of the eleven centers are consortia which provide a considerable range of services to a large number of patients, they present a particularly favorable climate for training.

The number of trainees is restricted to insure that supervision is adequate. Training objectives are two-fold. One is to train physicians and others to specialize in chronic pulmonary diseases. The second is to acquaint a larger number of health professionals with information about pulmonary disorders in children, so that they have a high index of suspicion, will be able to provide improved primary care for these children at home, and will make prompt referral of complex cases to other resources for care.

Ten of the eleven Pediatric Pulmonary Centers were orginally Cystic Fibrosis Centers until receipt of Federal funds. At that time they broadened their scope to include other pulmonary diseases. The first Federal funds were received in 1968, initially administered through the Chronic Disease Program of the Department of Health, Education, and Welfare, and subsequently transferred to the Regional Medical Programs Service. Administration of the program was placed in the Bureau of Community Health Services in 1973.

In addition to providing direct services at the 11 centers, a major goal for these funds is to provide training to the maximum numbers possible of physicians, nurses, and allied health personnel to provide adequate services to infants and children with chronic pulmonary disease. Long-term training has been provided to physician/fellows in all but one of the Centers. Short-term programs such as seminars, workshops, and in-service education have been offered for practicing physicians, nurses, respiratory therapists, nutritionists and other professional workers in all ten centers. In fiscal year 1976, Bureau of Community Health Services funds supported long-term training of 28 physicians and 69 other health professionals and short-term training of two physicians and 21 nurses. Non-BCHS-supported trainees in the ten[1/] centers numbered 2,158 in the same year.

1/ University of Florida is not included as data are not available due to being in its first year.

RESPIRATORY DISEASES

BUREAU OF MEDICAL SERVICES

The Department of Health, Education, and Welfare has a legislative mandate to provide direct health care services to specified beneficiaries under provisions of the Public Health Service Act and the Dependents' Medical Care Act. This responsibility is discharged, in part, through the Bureau of Medical Services (BMS) of the Health Services Administration and, within the Bureau, through its Division of Hospitals and Clinics and Division of Federal Employee Health. The program authorities of the Bureau's Divisions of Emergency Medical Services and Health Maintenance Organizations do not encompass the direct delivery of health care services.

The Division of Hospitals and Clinics provides comprehensive health care services to American Seamen, active duty members of the U. S. Coast Guard, members of the National Oceanic and Atmospheric Administration, and to active duty Commissioned Officers of the U. S. Public Health Service. Services may also be provided to retired members of the uniformed services and to dependents of active duty and retired members of the uniformed services under the authority of the Dependents' Medical Care Act.

In addition, the Public Health Service Act permits the providing of limited health services to Federal employees by the Bureau's Division of Federal Employee Health.

Health care services within the Division of Hospitals and Clinics (DHC) are provided by eight general medical-surgical hospitals, one specialized treatment center (Hansen's Disease), 26 free-standing outpatient clinics, and more than 400 contract physicians and hospitals located throughout the United States. This major system constitutes a nationwide network within the Department for the delivery of comprehensive health care services, for training, and for research. In addition, the Division of Federal Employee Health operates 136 clinics in Federal installations across the country.

As compared to Fiscal Year 1975, total workload increased throughout the system, particularly with respect to ambulatory care visits which registered a 7.9% increase during Fiscal Year 1976.

Funds for clinical research studies are distributed through the Central Clinical Investigations Committee of the Division of Hospitals and Clinics, a formally-constituted body, that is also responsible for monitoring and evaluating research programs. During the year,

approximately $300,000 of Fiscal Year 1976 funds of the Division of Hospitals and Clinics were expended for clinical research, of which $15,000 was allocated to research in respiratory diseases. Other studies in PHS hospitals received $1,028,000 from the National Institutes of Health and $389,000 from the National Center for Health Services Research during Fiscal Year 1976 for research projects not related to respiratory diseases.

All of the general hospitals and outpatient clinics within DHC diagnose and treat respiratory diseases. Unfortunately, precise data on an outpatient basis, cannot be obtained at this time. During F.Y. 1976 of the 31,819 discharges from USPHS hospitals, emphysema was included in 189 of these discharges. There were no recorded discharge diagnoses for Black Lung disease. For the emphysema diagnostic group, 4,599 patient days were utilized by this group with an estimated cost for these services of $515,088 based on an average daily rate of $112.

Six USPHS hospitals maintain inhalation therapy services and are therefore able to provide more extensive clinical services and training opportunities. These hospitals are located in Baltimore, Boston, New Orleans, San Francisco, Seattle and Staten Island. The outpatient department of the USPHS Hospital in Baltimore no longer routinely includes spirometry examinations in the multiphasic screening protocol. For the past year, only smokers over 35 years of age are asked to take the spirometry test. As a result, the number of spirometry examinations decreased but the percentage of abnormal findings increased. The number of spirometry tests performed during F.Y. 1976 was 1,027 as compared to 2,000 during F.Y. 1975. The percentage of abnormal findings in F.Y. 1976 was 23.3 whereas during the previous year 21.9% were found to be abnormal. The Baltimore hospital outpatient department maintains the practice of referring all persons with abnormal findings for further clinical follow-up.

CENTER FOR DISEASE CONTROL

National Institute for Occupational Safety and Health

Activity Under the Federal Coal Mine Health and Safety Act of 1969 (P.L. 91-173)

Under Public Law 91-173, the Federal Coal Mine Health and Safety Act of 1969 (as amended by P.L. 92-303), the Secretary of Health, Education, and Welfare conducts programs dedicated to improving the health and protecting the lives of coal miners and others whose work requires proximity to the products of coal mines. The law authorizes the operation of clinical facilities for analyzing and treating respiratory and pulmonary impairments in miners, and provides for major investigative and research efforts devoted to the prevention and early detection of respiratory diseases in coal miners. Operational authority for meeting these responsibilities has been delegated to the National Institute for Occupational Safety and Health (NIOSH), whose mission, with regard to the Federal Coal Mine Health and Safety Act of 1969, is to ensure that the coal miner performs his work under conditions that are as safe as possible to his health.

NATIONAL STUDY OF COAL-WORKERS' PNEUMOCONIOSIS

The National Study of Coal-Workers' Pneumoconiosis began in August 1969, prior to the enactment of the Federal Coal Mine Health and Safety Act of 1969. The purposes of the Study are (1) to relate coal-workers' pneumoconiosis (CWP) or black lung disease progression to levels of respirable dust exposure, (2) to provide a scientific basis for determining the progression of the disease by use of serial x-rays, and (3) to estimate the industry-wide prevalence of CWP.

The miners are examined at each participating mine by medical teams for NIOSH. Each examination includes an occupational history, two standard chest x-rays, a simple test of lung function, and a short questionnaire on chronic bronchitis developed by the Medical Research Council of Great Britain.

The miners were chosen for the Study to represent varying geographic regions, coal seams, and mining methods. Because the Study involves monitoring miners' health at 3 to 5 year intervals, mines with an expected working life of at least ten years and which employed at least 100 miners were chosen. An effort was also made to choose mines for which prior dust exposure information is available.

The first round of the Study, comprised of examinations of 9,076 miners at 31 mines, was completed in 1971. This study showed that approximately 30 percent of all miners tested had pneumoconiosis. The second round of the Study, completed in 1975 and comprised of examinations of 8,282 miners, showed that approximately 13 percent of all miners tested have had pneumoconiosis. Although the prevalence figures for pneumoconiosis are significantly lower in the second round, it should not be assumed that the health of coal miners has improved. Approximately one half of the men examined in the first round were not examined in the second. Many older men retired and some left the mining industry because of disability or other reasons. Often they have been replaced by young men who have not been exposed to coal mine dust. Thus the prevalence figures for the second round probably reflect the change in the miner sample rather than a general improvement in miner health.

DEVELOPMENT OF DIAGNOSTIC STANDARDS FOR COALWORKERS' PNEUMOCONIOSIS

Materials received through the autopsy service program have also been used in the development of diagnostic standards for coalworkers' pneumoconiosis. The purpose of this research is to develop a set of comparative standards for pathologists to rely on in diagnosing and determining the stages of coalworkers' pneumoconiosis and associated conditions. These standards are being developed by using a correlation of roentgenograms, observed pathological conditions, and analysis of the dust in the lung. No such standards currently exist.

Consultations were held with pathologists who were experts in pneumoconiosis and lung research. During 1975 a preliminary report was made to the Coal Mine Health Research Advisory Committee. A contract has been entered into with the College of American Pathologists and the American Society of Clinical Pathologists to assist in the development of these standards. When completed, these standards will be a means of improving the reliability and accuracy of the diagnosis of coalworkers' pneumoconiosis, and they will serve as a model of diagnostic standards for other respiratory diseases. The standards for coalworkers' pneumoconiosis will ultimately be published for dissemination to pathologists involved in its diagnosis.

During 1976 plans were underway for the third and future rounds of examinations of coal miners under Section 203 of the Federal Coal Mine Health and Safety Act of 1969. A first draft of amendments to the regulations which govern the examinations has been formulated. Comments from interested parties have been solicited and a final draft is scheduled to be finished early in 1977. From January 1, 1976 through September 30, 1976, 9,251 coal miner examinations were processed.

Section 203 (D) of the Act provides for the autopsy of any deceased coal miner regardless of whether or not the miner was employed at the time of death. NIOSH pays up to $200.00 to any pathologist for the autopsy properly performed and submitted according to specifications published in the Federal Register, May 14, 1971. During 1976, 375 autopsies were processed under the program.

ALOSH also provides autopsies in the event of a mine disaster. ALOSH performed examinations on 9 of the 15 men killed in March 1976 at Scotia mine.

Laboratory investigations under the Coal Mine Health and Safety Act, centered on biochemical, immunological, and physiological studies to determine inherited factors which may predispose or protect miners from the coal workers pneumoconiosis. One of these studies indicate that miners who have inherited particular transplantation antigens have less liklihood of developing pneumoconiosis.

In 1977 and 1978 the NIOSH proposes to (1) initiate the third round of examinations under the National Coal Study (approximately 10,000 miners to be examined); (2) complete studies evaluating the interactions of coal dust and infectious agents on immune or defense mechanisms in the lung; and (3) develop mandatory health standards, preventive examination programs, and protective engineering techniques to assure that coalworkers are provided a working environment which will prevent occupationally caused diseases.

Investigations were initiated, including environmental, epidemiological, and laboratory studies of the biological affects of coal dust and diesel emissions.

OFFICE OF HUMAN DEVELOPMENT

Rehabilitation Services Administration

Pulmonary-Respiratory Diseases

Chronic obstructive pulmonary diseases (COPD) are a major health problem in the United States today. The mortality rate from COPD has doubled in the past five years and this rate is accelerating. COPD is rising four times as fast as the mortality from bronchogenic carcinoma, even though this tremor has the fastest rising incidence among all malignant neoplasms. In addition, more social security disability funds are expended on COPD than any other disease or condition, except coronary heart disease.

The Rehabilitation Services Administration has initiated a clinical research presently in COPD to attack this seriously disabling condition. RSA research in the chronic pulmonary diseases has potential for significant cost benefits in addition to the improved quality of life for these persons. Hopefully, this new research effort will encourage the VR agencies to expand physical restoration and vocational preparation services more readily to this large population, once rehabilitation success can be proven. The concept of maintaining employment and productive living will be emphasized. This is a significant step to keep persons in employment rather than to become so handicapped as to lose self-sufficiency.

Recently completed research at the University of Nebraska Medical Center reports a high death rate, continued complications, and minimal return to employment for many COPD patients. It is therefore indicated that a re-evaluation of clinical techniques and methods be initiated so that definitive benefits can be identified. These techniques are all widely accepted and the evaluation of them should significantly affect the field. New techniques have also been forthcoming for the prediction and evaluation of those COPD patients who have rehabilitation potential. These techniques require further analysis and refinement before application to clinical practice. Thus, both RSA staff and outside consultants have agreed in formulating appropriate new directions of research, that immediate goals should be based upon the research knowledge and clinical knowledge gaps identified previously. This will assist rehabilitation facilities and hospitals to develop and utilize those methods and techniques which are most effective in maintaining work and functional capacity. The development of meaningful predictive criteria will enable rehabilitation counselors and State VR administrative and supervisory personnel to evaluate, plan and service COPD patients with the knowledge that cost effective results can be achieved.

RURAL HEALTH

Obligations

	1974	1975	1976	1977 Estimate	1978 Estimate
Public Health Service:					
Health Services Administration: 1/					
Bureau of Community Health Services	$ ---	$ ---	$ ---	$157,527,000	$165,405,000
Health Resources Administration:					
Bureau of Health Manpower	$33,400,000	$12,178,006	$11,861,750	$14,115,690	$15,500,000
Social and Rehabilitation Services	---	---	10,000,000	15,000,000	15,000,000
TOTAL	$33,400,000	$12,178,006	$21,861,750	$186,642,690	$195,905,000

1/ Excludes Indian Health Services

PUBLIC HEALTH SERVICE

Health Services Administration
Bureau of Community Health Services

Rural Health

The Rural Health Program has as its objective the improvement of the health of the population residing in rural areas of the United States. This segment of the population makes up about 31 percent of the total population.

Because of the remoteness of many of the areas in which the rural population resides, there is often very poor access to health services and facilities. Certain health indicators reflect the results of inadequate care for this large segment of the population.

In view of the conditions which characterize many rural areas such as low population density, high proportion of elderly and poor population, and remoteness from hospitals, it is not surprising that there is a critical shortage of physicians. It is the purpose of the Rural Health Program to reduce barriers of access to care by bringing health personnel into these areas and establishing health care delivery systems. To induce personnel to remain in the area and to improve the access to secondary and tertiary care, the Program is focused, also, on developing linkages with existing health services and hospitals in the surrounding areas. Such linkages make more comprehensive care available to the target population and provide the health service personnel with professional contacts and educational opportunities that hopefully will induce many to settle permanently in the areas they are serving.

In accordance with the basic purpose of the Rural Health Program, to develop new and innovative health care delivery systems for the rural population, the Bureau during fiscal year 1975 initiated an administrative effort to develop rural health care systems in communities having the greatest need. Through a Rural Health Initiative, resources of the Community Health Centers Program, Migrant Health Program, National Health Service Corps and the Appalachian Regional Commission were integrated to better utilize existing programs in addressing obstacles encountered in serving various population groups and underserved areas. A total of 47 projects were developed the first year. This more effective distribution of financial, medical and personnel resources to programs having effective linkages with secondary and tertiary levels of care was expanded to include referral and consultation activities with other PHS programs (such as: Community Mental Health Centers, alcoholism programs, etc.) in 1976. A total of 138 projects was funded that year. It is expected that a total of 248 will be funded in 1977.

The following table indicates the total rural health activities supported by the Bureau in fiscal year 1977:

Program level of funding	Purpose	Rural Activities
Community Health Centers		
On-going CHC's $184,516,000	Development of health services delivery capacity in medically underserved areas, the provision of high quality health services and the use of funds for health service capacity building through a "front end" financing approach	45 of the 164 on-going CHC's are serving rural areas at a level of $46,161,793
Primary Health Care Centers $28,860,000	Integration of the resources of the Community Health Centers, Migrant Health, Appalachian Health, Family Planning and National Health Service Corps Programs to serve populations of all these programs. These Centers are designed to build health service capacity in areas of extreme need and medical underservice	248 projects will serve approximately 1,188,000 persons at a level of $25,860,000
Home Health $3,000,000	Providing support for the establishment and initial operation of public and non-profit private agencies which will provide home health services to areas in which such services are not otherwise available	Of the 40 projects supported in FY 76, approximately 26 were located in rural areas. In total 72 projects would have been established in rural areas by the end of FY 1977 at a level of $1,609,000
Comprehensive Public Health Grants to States $90,000,000	Formula grants to assist States in establishing adequate public health services	States use part of the funds to support activities which serve rural areas, but there is no way to estimate rural versus urban

Program level of funding	Purpose	Rural Activities
Hypertension Program $9,000,000	Formula grants to States to assist in meeting the costs of establishing and maintaining programs for the screening, detection, diagnosis, prevention, and referral for treatment of hypertension	States use part of the funds to support activities which help rural areas, but there is no way to estimate rural versus urban
Maternal and child health (It is not possible to estimate this amount for formula grants. However, legislation requires emphasis on rural areas and this is taken care of in the maternal and child health formula by weighing rural live births by a factor of 2 to 1 urban live births). $345,424,000	Comprehensive health care and services, with emphasis on preventive services, provided to mothers and children; diagnostic, treatment, and follow-up care provided to children with crippling conditions or handicapping illnesses have been placed in rural areas by the jurisdiction	The 56 jurisdictions are required by P.L. 93-53 to operate programs of projects in health areas. The 56 health jurisdictions have 342 projects servicing rural populations
Family Planning $113,615,000	Provide a full range of high quality family planning services to people who want such services but for financial or other reasons do not have access to them	Of the 227 grants supported, 174 will provide services in rural areas at a level of $23,650,000
Migrant Health $30,000,000	Provides access to health care services to migratory and seasonal agricultural workers and members of their families	All 125 projects serve rural areas. However, 53 of the 125 projects are Primary Health Care Centers.

Program level of funding	Purpose	Rural Activities
National Health Service Corps $24,529,000	To help alleviate the geographic maldistribution of health manpower by providing health professionals to communities where shortages exist	337 of the 421 communities are in rural areas. Of the 337, 253 are providing services through the Rural Health Initiative at a level of $20,283,000

In addition to activities supported by funds appropriated to Public Health Service Administration, the Bureau also administers the Health Underserved Rural Areas (HURA) program. Administration of this program was transferred to the Bureau, effective January 1976, from MSA/SRS in order to consolidate major rural health activities under one administrative unit within PHS. Funding of the program remains in the Title XIX budget.

The mandate for HURA is to find additional methods that utilize basic medical funding programs more effectively and demonstrate new methods of delivery. In carrying out this mandate, HURA supports research and demonstration projects which utilize physician extenders in rural areas, stressing the delivery of comprehensive primary care services, especially preventive services. HURA's research activities will attempt to document how efficient management can provide a full range of health services, including preventive care, and the extent to which such services are cost effective over time.

The HURA long-term goals, as a result of its research activity are to:

1. Develop comprehensive models of primary care in rural areas which effectively utilize the services.
2. Fully develop the potential capacity of non-physician providers which extends the physician providers' capacity in rural areas.
3. Reduce the external barriers to ambulatory care for all rural residents; especially those that are Medicaid eligible.

In fiscal year 1976, 44 new HURA grant awards were added to the nine previously funded in 1975. Grant awards totalling $9.6 million of Title XIX funds were allocated and an additional $400,000 in contracts were awarded for technical assistance and research and demonstration activities.

In fiscal year 1977, $15 million for HURA projects is available, an increase of $5 million over fiscal year 1976. In order to further the research and demonstration activities of the HURA Program, emphasis will be

placed on funding additional State Medicaid Agencies and non-profit rural group practices.

The HURA Program has been integrated with the much larger Rural Health Initiative efforts within PHS to develop rural health care systems. It is anticipated that in fiscal year 1977 medical care will be provided to approximately 1.6 million previously unserved rural Americans through this effort.

HEALTH SERVICES ADMINISTRATION

Bureau of Medical Services

Rural Health

The Health Maintenance Organization Act of 1973 (P.L. 93-222) which was enacted December 29, 1973, provides assistance and encouragement for the establishment and expansion of health maintenance organizations which offer an alternative to the traditional fee-for-service delivery system. These health maintenance organizations are cost effective delivery mechanisms which provide good quality health care and provide the public with a meaningful choice in the way they receive and pay for health care.

Because people dwelling in rural and non-metropolitan areas often do not have available sophisticated medical care, a special assistance program for HMOs in rural areas is an integral part of the entire program of grants, contracts, loans, and loan guarantees to develop and establish HMOs. In each fiscal year, 20 percent of all the funds appropriated for projects for feasibility, planning, and initial development, must be specifically set aside for HMOs in non-metropolitan areas.

An entity applying for this non-metropolitan assistance must meet all of the statutory requirements for metropolitan applicants. In addition, at least two-thirds of the membership to be served by the HMO must reside in non-metropolitan areas.

The program has awarded 53 grants in the amount of $5,168,349 to entities serving primarily rural and non-metropolitan areas through September 1976. It is anticipated that seven projects will be funded in F.Y. 1977 and an additional five in 1978. The funding estimate for these projects is $7,240,000. Of the twelve projects to be funded, three are planning projects and nine are initial development. No feasibility projects will be granted in these last two years.

These grant awards are expected to produce a sufficient number of operational HMOs in non-metropolitan areas to permit a realistic demonstration of the HMO method of health care delivery in non-metropolitan areas.

HMO Non-Metropolitan* Grants

	FY 75 Actual		FY 76 Actual		FY 77 Estimate		FY 78 Estimate	
	#	$	#	$	#	$	#	$
Feasibility	27	1,315,248	4	168,460	-	---	-	---
Planning	3	374,482	10	1,210,425	3	300,000	-	---
Initial Development	4	831,160	5	1,268,574	4	3,320,000	5	3,620,000
Totals	34	2,520,890	19	2,647,459**	7	3,620,000	5	3,620,000

The Health Maintenance Organization Program expects to award approximately 20% of its 1977 and 1978 grant funds to projects serving primarily non-metropolitan areas. If less than 20% of the funds are obligated for these projects because of a lack of approvable projects, the funds will be carried forward to the succeeding year as authorized by law.

* Awards to projects proposing to enroll 66% of its membership from non-metropolitan areas (i.e. from areas outside of SMSA's and outside cities of 50,000 or more).

**Includes for TQ six grants and $959,608.

HEALTH RESOURCES ADMINISTRATION

Bureau of Health Manpower

Rural Health

The AHEC program provides funds to medical schools and university health science centers for the purpose of decentralizing medical and other health professions programs in rural areas. This program links the resources and training programs of health science centers to community hospitals and other local educational institutions. These projects operate from 27 remote site locations covering approximately 200 rural counties in 13 states.

The Nurse Practitioner program has two grant projects which aid in meeting the health delivery needs in rural settings. One project is to develop and implement an on-going educational program for nurse practitioners to meet the demands for family patient care in rural areas, and the other implements and evaluates clinical placement resources in a rural area to be utilized by registered nurses to familiarize them with the social and professional aspects of rural practice.

Cumulative thru 1974	1975 Actual	1976 Actual	1977 Estimate	1978 Estimate
$33,400,000	$12,178,006	$11,861,750	$14,115,690	$15,500,000

SPINAL CORD INJURY

In terms of human suffering and economic loss, acute injury to the spinal cord is a tragedy almost beyond comparison. Once destruction to the spinal cord has occurred, nothing presently available can reverse lifetime paralysis below the level of the injury. Although continuing advances in medical care and rehabilitation make it possible for many victims of spinal cord injury to lead useful and productive lives, most will always have medical and surgical problems.

The National Paraplegia Foundation and the Paralyzed Veterans of America, both voluntary health agencies concerned with the problem of spinal cord injury, estimate that there are between 125,000 and 200,000 paraplegics and quadriplegics in the United States today. According to insurance figures there are 10,000 to 12,000 new civilian paraplegics each year. Since the majority of these are young people between the ages of 18 and 30, their tragic situation is a cause for concern beyond the mere question of numbers. The catastrophe of spinal cord injury is not limited to the victim but also is experienced by his family, friends, community and society in general.

Ever-mounting costs of initial hospitalization and lifetime care of the spinal cord injured, plus lost earning capacity for the individual and reduced productivity for the Nation, total billions of dollars each year. It is estimated that supporting a single individual injured in the prime of youth may exceed one million dollars during a lifetime.

The Department of Health, Education, and Welfare's responsibilities for research programs in Spinal Cord Injury are centered in the National Institute of Neurological and Communicative Disorders and Stroke (NINCDS) of the National Institutes of Health; for rehabilitation, the Rehabilitation Services Administration; and for service, the Health Services Administration.

SPINAL CORD INJURY

Obligations

	1974	1975	1976	1977 Estimate	1978 Estimate
National Institutes of Health:					
National Institute of Neurological and Communicative Disorders and Stroke	$7,249,000	$8,819,000	$10,304,000	$11,320,000	$11,754,000
Office of Human Development:					
Service Projects	---	---	1,000,000	2,500,000	2,500,000
Research and Demonstrations	2,100,000	2,100,000	2,100,000	1,600,000	1,600,000
Rehabilitation Research and Training Centers	716,000	1,200,000	1,200,000	1,300,000	1,300,000
Special Foreign Currency Program	---	110,000	150,000	200,000	---
Basic State Grants	3,900,000	5,440,000	7,203,000	8,884,000	10,650,000
TOTAL	13,965,000	17,669,000	21,957,000	25,804,000	27,804,000

NATIONAL INSTITUTES OF HEALTH

National Institute of Neurological and Communicative Disorders and Stroke

The spinal cord is a bundle of nerve fibers and cells measuring on the average 17 inches in length, and providing the central connections between the brain and the muscles, skin, and internal organs. The cord is enclosed by 33 blocklike bones, called vertebrae. These vertebrae allow a remarkable range of motion while normally protecting the spinal cord and nerve roots from injury. Nevertheless, injury can and does occur, often the result of vehicular and athletic accidents.

Causes of Spinal Cord Injury

Injury to the nerve roots or substance of the spinal cord may result directly from falls or from blows to the neck or back; from stab wounds, gunshot, shrapnel, and other penetrating missiles; and from fracture or dislocations of the spine which impinge upon the spinal cord or its roots. Indirect injury to the spinal cord, however, is the most frequent cause of trauma. This may occur as a result of excessive flexion or extension of the spine in falls, diving, and automobile accidents. Diseases such as multiple sclerosis also can injure the spinal cord and result in paraplegia.

Severity of Spinal Cord Injury

Traumatic damage to the spinal cord may range from a transient concussion from which there is full recovery, to a complete transection which precludes any neurological recovery below the level of injury.

The lower the injury on the spinal cord, the better off the patient is for the simple reason that more of the cord remains intact. Muscles controlled by nerves in the spinal cord above the injury often regain full function after the period of "shock" to the spinal cord wears off.

In the patients who survive spinal cord injury, some degree of improvement in the neurological signs is to be expected in most cases except where the cord is transected. The outlook is even better when the symptoms are due mainly to hemorrhage into the cord. As long as some nerve fibers in the spinal cord are uninjured, improvement in the patient may occur; this usually occurs during the first six months after injury, but sometimes requires a longer period of time.

Management of Spinal Cord Injury

Since World War II, progress in the management of spinal cord injury has been spectacular. Sulfonamides and antibiotics, surgical alignment of bony developments, rapid transportation of the acutely injured, and better rehabilitation methods have revolutionized the

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entire philosophy for the care of patients with injuries to the spinal cord. More recently, improved mechanical aids to ambulation, special devices for operating an automobile, and public interest in removing architectural barriers to mobility have offered increased participation in the mainstream of society to the spinal cord injured.

NINCDS Spinal Cord Injury Research Program

This area of research is a striking example of a clinically important problem--paraplegia--which is being addressed primarily through a coordinated program of fundamental research and clinical evaluation.

Scientists at NINCDS-supported Acute Spinal Cord Injury Clinical Research Centers are investigating the pathophysiology of spinal cord injury from the physiological, anatomical, and biochemical standpoints in the hope of uncovering leads which might be applied constructively to the clinical treatments of such injury. Simultaneously they are tackling the important problem of more rapid delivery of therapy to the acutely spinal cord injured.

Elsewhere, a number of investigators are examining the possibility of functional regeneration within the central nervous system.

Long-range NINCDS research efforts also include the development of prosthetic devices for the spinal cord injured and the use of angiography, computerized axial tomography (CAT), and evoked responses in the diagnosis and treatment of the spinal cord injured. However, because of the relative importance of recent developments concerning acute spinal cord injury and regeneration in the central nervous system, these areas will receive major emphasis in this report.

New Approaches to Acute Injury

There is growing evidence that the first few hours after spinal cord injury are critical if progression of spinal cord degeneration is to be halted. This has spurred a search for new methods of rapid diagnosis, evaluation, and treatment, and has prompted the establishment of NINCDS-supported Acute Spinal Cord Injury Research Centers; these centers now exist at Ohio State University, Columbus, Yale University, New Haven, Connecticut, St. Joseph's Hospital and Medical Center, Phoenix, Arixona, the Medical University of South Carolina, and New York University. There is also a program project at the University of North Carolina, Chapel Hill, where multidisciplinary fundamental research is being pursued.

In addition to pathophysiological investigations, these Centers also have a responsibility for community research on problems such as roadside diagnosis and emergency therapy, rapid transportation to the Centers, emergency room differential diagnosis, and patient handling. The nature of the treatment during these phases of the injury may be key factors in preventing lasting damage to the spinal cord.

Although there have been no major conceptual changes regarding treatment of the spinal cord injured, these Centers are continuing to produce vital new knowledge about the injury process, are stimulating research in other laboratories, and are promoting a healthy exchange of information about acute spinal cord injury among investigators and clinicians in their own and other clinics in this country and abroad. This international interaction was evidenced at the Workshop of NINCDS Acute Spinal Cord Injury Clinical Research Center Program Directors on May 21-23, in Columbus, Ohio, and at the Fourth Biennial Conference on Regeneration in the Central Nervous System which was sponsored by the National Paraplegia Foundation on May 31-June 2 in Hollywood, Florida.

Participants at both of these meetings heard Dr. Levon A. Matinian, Orbeli Institute of Physiology, Yerevan, Soviet Armenia, summarize the results of his animal experiments on enzyme therapy in traumatic lesions of the spinal cord. Working with the female white rat whose cord is surgically transected, Dr. Matinian utilized each of several enzymes, separately and in combination, to see whether any of these chemicals might block the formation of scar tissue, allow the severed nerves to grow, and promote functional regeneration. He reported that combination therapy gave better results than any individual enzyme and that his best results demonstrated forty to fifty percent of animals recovering up to seventy to eighty percent return of hind limb locomotion function.

Scientists consider Dr. Matinian's findings provocative, and the NINCDS will have his experiments repeated and the results analyzed. However, these investigators caution it would be premature to extrapolate the Russian scientist's work to humans or to associate it with clinical care at this time.

Progress Reported at NINCDS Spinal Research Centers

One of the major problems which is being addressed at NINCDS Centers is how to make better and more rapid use of what is already known about spinal cord injury therapy.

Progress in this area has been made at two of the Centers. At the New York University Center, the activities of the Spinal Cord Intensive Care Unit are being directed by Dr. Joseph Ransohoff, who has been able to develop a referral network in order to increase the number of patients available for study in the unit within the critical first few hours after injury. Patients at these Centers are receiving the latest diagnostic methods in order to differentiate between those with transected cords and those with cords non-functional because of concussion (severe shaking or jarring) and contusion (a bruising, crushing injury in which the skin is not broken).

At the Yale Center, Dr. William E. Collins is focusing on modes of therapy to arrest self-destruction of the contused cord. This secondary injury occurs within hours of the original trauma and numerous leads are being pursued in an effort to understand the nature of the possible biochemical mechanisms responsible for the lesion's progression. Dr. Samuel B. Webb, also of the Yale Center, is continuing his epidemiological studies of spinal cord injury. Information being gathered on the cost, incidence, mortality, morbidity, and the long-term results of the best method of treating spinal cord injury is expected to have a significant impact on the future delivery of medical care. In biochemical studies of the injured spinal cord, Dr. Collins has shown an increase in 5-hydroxytryptamine (a very active vasoconstrictor which may decrease spinal cord blood flow). Further studies concerning the possible effects of posttraumatic vasoconstrictors are planned.

At the Ohio State Center, Drs. R. M. Nerem and E. G. Bingham, Jr. are developing a technique of estimating cord blood flow which would not require penetration of the cord and might be utilized during laminectomy, the removal of the posterior arch of a vertebra. Use of the hot film anemometer on the surface of the cord demonstrates makred changes in current following trauma. The investigators are now attempting to correlate these changes with other established methods of determining blood flow. To date this technique has been applied only within the confines of animal research. Additional calibration studies now in progress will have a direct influence on the clinical applicability of this non-invasive method.

In other studies at this Center, Drs. P. R. Hyman, H. R. Weed, and S. H. Koozekanani are working on the development of a computer-based system for sensory evoked response testing in acute spinal cord and brain trauma. Dr. William E. Hunt, Director of the Center, has found that spinal cord myelin has a lower protein content than brain myelin and is physically less stable. These observations on differences in cord myelin and its protein content are being pursued because they are essential to understanding the problem of the response to injury.

Dr. Phanor Perot, Director of the Medical University of South Carolina Center is conducting both basic and applied research on evoked potentials. The hypothesis of the clinical electrophysiology project is that non-invasive electrical tests might be developed to determine whether the spinal cord was conducting nerve impulses across the site of an injury, and that such conduction would assist in establishing a diagnosis and prognosis.

Nerve Growth and Regeneration

The problem of paraplegia in man has heretofore been considered insoluble, and this may yet prove to be true. However, if a solution is found, it is believed that it will be discovered in the laboratories dedicated to basic neurobiological research.

The Institute's regeneration program in this area has been expanded in the past year in response to impetus from the U.S. Congress and to the report of the NINCDS Ad Hoc Subcommittee on Growth and Regeneration in the Central Nervous System. The recommendations of the leaders in the field who served on the Subcommittee were published in the December 1975 issue of Experimental Neurology and have since stimulated research on the possibility of functional central nervous system regeneration and have sparked the interest of young neuroscientists in this field.

A number of advances at the basic research level which may help scientists learn how to repair damaged central nerves have been made. Working on the adaptability of nerve cells, NINCDS grantee Richard P. Bunge, Washington University School of Medicine in St. Louis, and Paul Patterson, Harvard University in Cambridge, have shown that in certain situations peripheral nerves are adaptable and hence more amenable to regeneration than once had been thought. This raises the question, "Are central nerve cells equally adaptable?"

Marcus Singer, a grantee at Case Western Reserve University in Cleveland, has been studying the role of the myelin sheath which surrounds the nerve axon. His observations show that myelin is not just an insulator as previous evidence indicated. Specifically, he found that if the myelin is damaged, the axon will not function and that if the axon is cut, the myelin degenerates. More data are being sought on the connection between the two in the hope that something beneficial may emerge in terms of better understanding and treating spinal cord injury.

Valuable insights that bear on regeneration in the central nervous system are coming from a number of other NINCDS grantees, including Dr. Gerald D. Fischback and his colleagues at Harvard Medical School who are investigating the problem of how nerves normally recognize their target cells. An amazing thing about the central nervous system is the precision with which different nerve cells are connected with each other or with muscle cells. If severed nerves are to be repaired, they must be made to grow new axons and the axons linked up with proper target cells. In probing this mechanism, Dr. Fischback's group found that when a motor nerve in tissue culture aims for a target muscle cell in that culture, the neuron does not gravitate to the muscle cell's acetylcholine receptor but to another spot on the muscle cell. Thus, the acetylcholine receptor at least can be ruled out as one of the factors that guides a motor neuron to a muscle cell.

Dr. Bernice Grafstein and her associates at Cornell University Medical College are studying regeneration in lower animals in the hope of finding the key to repair central axons in people. For instance, the retinal ganglion cells in the goldfish, which go from the eye to the brain, regenerate if severed and also find their way to the proper target cells. In studying why this is so, Dr. Grafstein has found that there are changes in the protein metabolism of these cells only 24 hours after being cut. As a result of this discovery she is now focusing her attention on events that occur very soon after transection.

It is hoped that these and other encouraging developments, and the quarter century of careful investigations which preceded them, will lead to a breakthrough which will benefit not only the Nation's paraplegics but America's 3 million victims of head injuries, 2 million victims of stroke, and 500,000 multiple sclerosis patients for whom there is no treatment at this time.

OFFICE OF HUMAN DEVELOPMENT

Rehabilitation Services Administration

Spinal Cord Injury

It is estimated that there are more than 125,000 persons in the U.S. paralyzed as a result of spinal cord injury. In addition, approximately 8,000 to 10,000 new cases result each year. Most spinal cord injuries are the result of automobile, water, and contact sports accidents; industrial falls; and incidents of violence, such as gunshot wounds.

Because of the catastrophic and astronomically expensive results of spinal cord injury, the Rehabilitation Services Administration has initiated a program of research to determine the rehabilitation benefits and cost effectiveness of a service delivery system dealing exclusively with spinal cord injury. It is planned that these projects will result in the development of a nationwide network of service systems for all SCI patients.

Eleven Model SCI Systems have been initiated throughout the U.S. utilizing Rehabilitation Research and Demonstration Grant funds. The system concept includes emergency care and proper handling at the accident scene, sophisticated intensive care, a comprehensive program of rehabilitation services, vocational and educational preparation, and community placement with long-term follow-up services.

The total RSA spinal cord injury rehabilitation effort is developing into a coordinated and effective program through the utilization of both R&D and other Special Projects resources. The results of these projects are being developed into meaningful and effective programs by which State vocational rehabilitation agencies, private rehabilitation facilities or medical institutions can significantly improve and expand comprehensive rehabilitation services to the spinal cord injured. A national coordinating center for the retrieval and analysis of standardized data has been established, as part of a model system.

Due to the interests of other governmental agencies in the prevention, care, and treatment of SCI, the RSA has initiated collaborative activities with the VA, National Institutes of Health, and the Department of Defense in the interest of improved spinal cord injury rehabilitation.

The major emphasis of spinal cord injury research in the RT Centers has been toward the prevention and treatment of costly medical complications, the development of new rehabilitation techniques, and the identification of psychological, social, and community charactersitics that mitigate against successful rehabilitation and independent living. Approximately 60 projects are being conducted in these important areas.

In the research utilization and training areas, the RT Centers have developed specific short-term clinical training programs for medical specialists and in-service training for rehabilitation counselors, social workers, physical and occupational therapists, and hospital administrators.

HEALTH RESOURCES ADMINISTRATION

SPINAL CORD INJURY

There were an estimated 16,000 patients hospitalized with a first-listed diagnosis of spinal cord injury in 1974. Of these patients, over half (55 percent) were in the 15-44 year age group. An additional 15,000 discharges had spinal cord injury as a secondary diagnosis. The average length of stay was 21.1 days for both sexes. Males tended to stay in the hospital longer than females for spinal cord injury, with an average stay of 23.2 days compared with 18.6 days for females.

STROKE

Stroke (cerebrovascular disease) ranks third among causes of death in the United States, exceeded only by heart disease and cancer. Each year about 500,000 Americans are stricken, and about 200,000 die. Strokes incapacitate far more people than they kill, and are among the leading causes of long-term disability in the United States. There are about 2.5 million stroke survivors in the country, 30 percent of whom have gone back to work or to their normal activity, with 55 percent disabled but capable of carrying on the activities of daily living, often with help. Fifteen percent are so incapacitated that total nursing care is required for the rest of their lives.

There are many types of strokes, but in a large number of cases, it is impractical for the physician, in preparing the death certificate, to identify the specific cause of the stroke. The following table, based on figures collected by the National Center for Health Statistics, shows the principal categories used by physicians in certifying stroke deaths.

U.S. Stroke Mortality - 1975 (provisional)

Cerebral hemorrhage	26,960	
Cerebral thrombosis	49,510	
Cerebral embolism	870	
All other	118,290	
	195,630	(total)

The total of 195,630 for 1975, compared with totals of 207,424 for 1974 and 214,313 for 1973 indicates that a slight decline is occurring. This decline can be attributed to better control of high blood pressure (a presumptive cause of many strokes) and the rising quality of medical care, including stroke treatment, rather than to new knowledge of the fundamental causes of strokes and new ways of preventing its occurrence or consequences. It is toward these latter needs that most of the present research thrust is directed.

Obligations for Programs in Stroke (Cerebrovascular Disease)

	1974	1975	1976	1977 estimate	1978 estimate
National Institutes of Health: National Institute of Neurological and Communicative Disorders and Stroke	$9,137,000	$11,134,000	$9,965,000	$10,869,000	$11,285,000
National Heart, Lung, and Blood Institute.	$3,662,000	$ 3,733,000	$4,167,000	$ 4,400,000	$ 4,500,000

NATIONAL INSTITUTES OF HEALTH

National Institute of Neurological and Communicative Disorders and Stroke

What Is A Stroke?

A stroke is a sudden loss of brain function resulting from interference with the blood supply to the brain. It is often the culmination of progressive cerebrovascular disease, which may extend over many years, and which is not easily detectable in the course of the usual physical examination. Some strokes are minor episodes, while others may cause death in a few minutes. Usually they are brought on by one of four events: thrombosis--a clot within a blood vessel of the brain or neck; cerebral embolism--the blocking of a blood vessel in the brain by a piece of clot or other material carried through the circulation from some other part of the body; narrowing of an artery supplying blood to the brain, usually as a result of atherosclerosis; or cerebral hemorrhage--the rupture of a cerebral blood vessel with bleeding into the brain tissue.

Whatever the specific process involved, interference with the blood supply to the brain for more than about five minutes invariably leads to death of brain cells and impairment of function. Temporary or permanent loss of movement, thought, memory, speech or sensation is the result.

The NINCDS Program

In the past 10 years there has been a substantial increase in medical and scientific interest in cerebrovascular disease. This has been brought about in large part by the growth of Federal support of research and training. Responsibility for the Federal program resides chiefly in the National Institute of Neurological and Communicative Disorders and Stroke (NINCDS), a component of the National Institutes of Health, and located in Bethesda, Maryland.

In Fiscal Year 1976, Institute support for research in stroke amounted to approximately $9.9 million, representing 51 research project grants, 15 clinical research centers, 5 research contracts, and approximately 20 intramural research projects. Additional support was provided for research training in neurology and related disciplines and for relevant research in fundamental neurosciences, as well as for scientific conferences and publications.

Clinical Research Centers

Cerebrovascular clinical research centers in university medical complexes across the country now make up the largest segment of the stroke program. These units, nearly all of which are multidisciplinary, typically are staffed by as many as 15 to 20 scientists and physicians, plus technicians and other assistants. The units vary in approach, some concentrating on single research areas, as at The Johns Hopkins University, where the epidemiological aspects of stroke are being studied. These

include studies of factors influencing incidence (new cases) and prevalence (total number of cases), methods for early detection of "high risk" segments of the population, familial aggregation of stroke cases, and similar questions. A center at Boston University devotes its efforts primarily to research on aphasia, speech disorders which often follow a stroke.

Other centers are broader in focus, often using several approaches, such as the physical dynamics of blood flow, brain cell metabolism, pharmacology, surgery, the development of better methods of diagnosis and treatment, and many others. Each center has an interrelated clinical and basic research program, and has accommodations for up to 30 research patients. All the centers also conduct training programs for young physicians, scientists, and other workers.

Project Grants

In addition to the team efforts of the clinical research centers, smaller individual research projects are being conducted with Institute support. These range from basic laboratory studies in such fields as neurophysiology and biochemistry to clinical investigations of drug effectiveness, improvement of diagnostic devices and techniques, and development of improved surgical and medical treatments. These smaller projects often produce basic information which is later exploited by the larger teams in the stroke research centers.

Cooperative Studies

One type of study which the NINCDS is uniquely able to sponsor by reason of its resources and central role is the cooperative study--the large scale gathering and analysis of data from groups of institutions, using uniform definitions and methods. In this way, valid statistics can be produced and used as the basis for choices in research planning, and for evaluating improvements in treatment or diagnosis.

NINCDS has sponsored a number of cooperative studies in cerebrovascular disease. One study of current interest is being planned in India, and will focus on strokes in younger age groups (30 to 45). In contrast to the United States, some African and Asian countries appear to be experiencing an increase in stroke incidence among these younger people, and even children. It would be of great value to know why this is happening, not only to the health officials in the countries concerned, but also to American scientists concerned with strokes in young people here.

Another cooperative study being planned is an evaluation of a surgical procedure for the prevention of an impending stroke. The procedure involves joining blood vessels so that blood travels from a scalp artery through an opening in the skull to supplement the blood supply within the brain, and has now been carried out in a substantial number of patients. A multi-institutional study is probably the only way the long-term value of this procedure can be judged.

Comprehensive Stroke Centers

A new development in the Institute's stroke program has been the launching of six feasibility studies for comprehensive stroke centers. As conceived, these centers would have the objective of increasing utilization of community resources in applied clinical research and speeding application of new research developments and information at the community level. It is believed that much can be done for stroke patients by better evaluation and coordination of available resources locally, and by improved dissemination of new findings on treatment and prevention.

Program Management

In the past year, a Stroke and Nervous System Trauma Program was established within the Institute as part of an overall reorganization. This unit, headed by an Associate Director, oversees the Institute's Stroke and Trauma Program, advises the Director, and serves as a coordinator for the entire national effort in cerebrovascular disease.

Diagnosis

There are many types of cerebrovascular disease, many locations in which it may occur, and many other conditions which may have a bearing on treatment. It is thus of utmost importance to improve diagnosis, both its preciseness and availability. The effort is characterized by finding better methods, and refinement and improvement of existing ones. The best of the established methods, x-ray angiography, involves injection of radiopaque dye into the neck arteries and subsequent x-ray examination of the brain. However, the procedure carries some risk of reaction to the dye, and the films require great skill for interpretation because of the complexity of the brain's circulation and the problem of obtaining depth or three dimensional perception. Solution of the latter problem has been attempted through the technique of x-ray tomography, in which the picture is focused on a specific section or plane within the head. There is still the problem of shadows from tissues above and beneath the target area which obscure precise interpretation.

Many other methods have been tried or are in limited use, including injection or inhalation of radioisotopes and subsequent scanning with a radiation counting camera, ultrasound projection and translation of the echoes into a picture, recording and analysis of bruits (abnormal sounds) in neck and head arteries, examination of retinal arteries, minute measurements of heat patterns radiating from the face or scalp, and various others. Except for the isotope scan, however, all of these methods are too imprecise to be extensively useful in clinical practice.

A new diagnostic technique, computerized axial tomography (CAT scanning) has been hailed by an NINCDS grantee as "probably the most important advance in radiology in 50 years." The technique employs a narrow beam of x-rays to rapidly scan the patient's head in a series of thin "slices." The beams pass through the head and hit radiation detectors which feed signals into a high speed computer. At each of

tens of thousands of points in the plane of the scan, the computer calculates the difference between the x-rays originally emitted and those received on the crystal detectors--the absorption coefficient--of the intervening tissues, blood, and bone. The computer also produces an oscilloscope picture for immediate viewing or photographic recording. The equipment is considered to be approximately 100 times more sensitive than conventional x-ray, and is being used to find cysts, tumors, abscesses, cerebral infarcts, and intracerebral hemorrhages. Several hundred of the devices are now in use in the U.S., and a major effort is under way to refine and improve the method and its application. Whole body scanners also are coming into use, and the equipment is being designed to work at higher speeds, both to enhance population screening possibilities, and also to surmount problems caused by body movements, i.e., breathing and heartbeat. Most of the institutions housing NINCDS stroke research centers have the equipment.

Another scanning method, considered to have potential comparable to CAT scanning, is positron emission transaxial tomography (PETT), now undergoing development at the NINCDS-supported stroke research center at Washington University in St. Louis. The principle is similar to CAT scanning, but the equipment employs radiation emitted by injected or inhaled radioisotopes rather than transmitted radiation. An instrument now being built at the Center will produce four-plane images simultaneously in about one minute, and will have a resolution of 0.75 cm. and a diameter of reconstruction of 25 cm. Various isotopes will be used to reflect various characteristics, such as regional cerebral perfusion and altered brain permeability. The Center has the advantage of an "in house" cyclotron at the University which can be used for production of isotopes tailored to the needs of the researchers.

Scanning with ultrasound is also being explored at several Institute-supported stroke centers, including the Massachusetts Institute of Technology, Cambridge, Massachusetts and Bowman-Gray School of Medicine, Winston-Salem, North Carolina. The MIT group will soon have in place a scanner which will produce high resolution transverse and longitudinal and cross-sectional images of the cervical carotid (neck) arteries and a 20-point velocity profile across the arteries. At Bowman-Gray, both extracranial and intracranial blood vessels are being studied with ultrasound diagnostic equipment. Ultrasound techniques have reached a level of refinement where they may well come into widespread use as mass screening devices in cerebrovascular disease. This is important because of their relatively low cost, and the fact that they are non-invasive, posing no hazard or discomfort to the patient.

Treatment

Progress in treatment of cerebrovascular disease is based on many small but significant improvements rather than any striking advances. Treatment must vary according to the stage of the illness and the type of problem encountered. No one new procedure or development is expected to affect the prospects for all patients, but mention of a few provides a measure of progress and the generally optimistic outlook.

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Surgery

In the past, cerebrovascular surgery has been limited almost entirely to correction of flaws or blockages (aneurysms, clots, malformations, etc.) in the larger arteries such as the carotid arteries in the neck, which are relatively accessible. In recent years, intracranial arteries have come within reach of the surgeon. With the operating microscope, it is possible to remove clots from very small vessels, and also to make grafts of very small blood vessels (down to one millimeter in diameter) in order to by-pass occlusions and provide collateral circulation.

During the year Institute grantees reported on several projects in this area, including work on development of better animal models for experimental stroke surgery; a better tissue adhesive (alpha ethylcyano-acrylate) for grafting and repair of small and medium sized arteries; and several surgical procedures, such as the scalp to intracranial (middle cerebral artery) by-pass operation mentioned above.

Drugs

A broad-scale search continues for better drugs for treating cerebrovascular disease. Anticoagulants are commonly used in non-hemorrhagic strokes, as are blood pressure lowering agents. Efforts are being made to evaluate clot-dissolving (thrombolytic) agents, and drugs that relax the brain blood vessels and allow them to open to their fullest diameter (vasodilators). Several drugs now are being evaluated including steroids to control the edema (swelling) following strokes, and anesthetics to control the arterial spasms following subarachnoid hemorrhage.

Possible use of aspirin in preventing some kinds of strokes continues to be of interest. Two cooperative studies, one American and the other Canadian, are in progress, and, it is hoped, will soon provide some conclusive data.

Interest has mounted in the past several years on the possible role of neurotransmitters in stroke. These substances provide electrochemical mechanisms for transmitting inhibitory or excitatory messages from one nerve to another, or to a target muscle or organ. Several neurotransmitters are believed to "leak" out of the nerve cells following a stroke or other injury to the brain or central nervous system, setting up a vicious circle in which the problem is further aggravated. Among the theories proposed are that the neurotransmitter molecules may flood receptor sites, causing either hyperpolarization or depolarization and consequent interference with normal transmission, and that some may act on local blood vessels, causing further constriction, deprivation of blood supply, and spasm. One NINCDS grantee, working with gerbils, has noted that when a stroke is produced in these animals, neurotransmitter release takes place with widespread effects, some of which are deleterious to cerebral metabolism and circulation generally. Also, he has found

that oxygen lack in the infarcted area impairs the breakdown of neurotransmitters released in the tissue. Institute scientists and grantees are now focusing on such questions as which particular brain cells are most affected; whether similar changes occur in the brains of humans suffering strokes; precisely how the neurotransmitters affect structures into which they are released; whether there might be treatment benefit in using drugs to block neuro-transmitter receptor cells soon after strokes; and whether long-term stroke survivors suffer from inadequate neurotransmitter production, which might be treated with drugs to replace neurotransmitters or stimulate production within the body. They suggest that perhaps some day strokes, like Parkinson's disease, will be treated with drugs designed to modify the levels or actions of neurotransmitters.

Outlook

There continue to be many urgent needs in the field of cerebrovascular disease. With additional numbers of Americans moving into the age groups most menaced by stroke, and with increased recognition of strokes in children and young adults, it becomes increasingly important that the Institute's research and training programs continue to gain momentum. The Federal efforts promise to more than repay their supporters in terms of better health.

HEALTH RESOURCES ADMINISTRATION

Stroke

Based on the 1974 data from the National Hospital Discharge Survey, there were an estimated 620,000 discharges from short-stay hospitals in the United States with a first-listed diagnosis of cerebrovascular disease (stroke) and an additional 664,000 discharges with a secondary diagnosis of stroke. Patients with a first-listed diagnosis of stroke remained in the hospital per episode for almost 2 weeks (13.3 days on the average) and approximately three out of four stroke patients were at least 65 years old. Over 8 million days of patient care in short-stay hospitals were utilized for patients with a first-listed diagnosis of stroke.

SUDDEN INFANT DEATH SYNDROME

Each year in the United States approximately 7,500 infants, usually between the ages of one and six months, die suddenly, quietly, and unexpectedly in their cribs, during what is considered a normal sleep period. At autopsy no significant cause of death can be found. These babies are victims of the sudden infant death syndrome (SIDS). SIDS is the leading cause of death between the ages of one and 12 months, with an incidence rate of about two per 1,000 live births.

The National Institute of Child Health and Human Development (NICHD) of the National Institutes of Health has primary Federal responsibility for research on the sudden infant death syndrome. Other Federal programs supporting projects related to SIDS involve the National Institute of Neurological and Communicative Disorders and Stroke, the National Heart, Lung, and Blood Institute, and the National Institute of Arthritis, Metabolism, and Digestive Diseases, within the National Institutes of Health; the Office for Maternal and Child Health, Bureau of Community Health Services, Health Services Administration; the National Center for Health Statistics, Health Resources Administration; and the National Institute of Mental Health, Alcohol, Drug Abuse, and Mental Health Administration.

Obligations for programs in the Sudden Infant Death Syndrome

	1974	1975	1976	1977 Estimated	1978 Estimated
National Institutes of Health:					
National Institute of Child Health and Human Development...	$5,300,000*	$6,322,000	$ 8.906.000**	$7.700,000	$7,700,000
National Institute of Neurological & Communicative Disorders and Stroke.....	---	35,000	---	---	---
National Heart, Lung, and Blood Institute.....	20.000	25,000	---	---	---
National Institute of Arthritis, Metabolism, and Digestive Diseases	---	---	---	---	---
Health Services Administration:					
Bureau of Community Health Services, Maternal and Child Health.....	114,000	2,000,000	2,556,000**	2,000,000	---
Health Resources Administration:					
National Center for Health Statistics...	1,000	2,000	3,000**	2,000	2,000
Alcohol, Drug Abuse and Mental Health Administration:					
National Institute of Mental Health....	--	163,000	21,486**	--	---
Total	$5,435,000	$8,547,000	$11,486,486	$9,702,000	$7,702,000

*Includes restoration of 1973 impounded funds in the amount of $616,000.

**Includes Transitional Quarter

NATIONAL INSTITUTES OF HEALTH

National Institute of Child Health and Human Development

The sudden infant death syndrome (SIDS) is defined as the sudden death of any infant or young child which is unexpected by history and in which a thorough postmortem examination fails to demonstrate an adequate cause of death. Other terms used to describe the syndrome include crib death, cot death, sudden unexplained death, and sudden death in infancy.

Crib death is a world-wide public health problem. It strikes without warning. In the majority of cases the baby is in good health. There is no history of serious upper respiratory infection, although there may be evidence of a slight cold or stuffy nose which is usually of such a minor degree that medical advice is not sought. The peak incidence of SIDS is consistently found the world over to be between the 2nd and 4th months of life. The risk is higher in males than in females, in non-white than in white babies, in one of twins as compared to single born babies, in families of lower socioeconomic status, in low birthweight infants particularly those who had gestational ages between 34 and 35 weeks, and in babies who had recent upper respiratory infections. The frequency of SIDS deaths in the United States is greatest during the cold weather months, and between 12 midnight and 8:00 a.m. than during other periods of the 24 hours.

Many causes have been offered to explain these deaths including neurophysiologic, cardiorespiratory, metabolic, endocrine, and immunologic disturbances, and infections. However, to date no single cause has been shown to be responsible for these deaths. Why these infants die so suddenly, quietly, and unexpectedly is still unknown, but it is becoming evident that SIDS victims are not totally healthy infants before death as previously believed, and further that the cause of their deaths is not through a single mechanism.

The Sudden Infant Death Syndrome Act of 1974

The Sudden Infant Death Syndrome Act of 1974 (P.L. 93-270 April 22, 1974), fixed by statute the responsibility of The National Institute of Child Health and Human Development for the conduct of SIDS research. It required the Secretary to implement a program to develop and disseminate public and professional informational and educational materials relating to SIDS, and authorized the Secretary to make grants and contracts for projects which include both the collection, analysis, and furnishing of information (derived from postmortem examinations and other means) as to the causes of SIDS, and to provide information and counseling services to families affected by SIDS. The Act authorized $2 million, $3 million,

and $4 million for fiscal years 1975, 1976, 1977 respectively for the informational, educational, statistical, and counseling programs and delegated the responsibility for these aspects of the legislation to the Office of Maternal and Child Health, Bureau of Community Health Services, Health Services Administration.

The NICHD has been designated as the lead agency for P.L. 93-270 and has been given responsibility for coordination and implementation of the law. The Department of Health, Education, and Welfare has established an interdepartmental committee to coordinate Federal efforts in SIDS. It is chaired by an official of the NICHD and has representation from all Departmental programs involved in SIDS activities.

NIH Research Programs

During 1976, the NICHD continued to expand its research efforts in the sudden infant death syndrome. The objectives of the Institute's SIDS research program are to increase understanding of the causes and underlying mechanisms of the syndrome; to identify infants at risk of becoming victims; to explore preventive approaches; to elucidate the psychological impact of a sudden and unexpected infant death on the parents, siblings, and the extended family; to stimulate scientists to direct investigative efforts toward the solution of this complex problem; and to inform the scientific and general communities about SIDS through workshops, conferences, and publications.

The Institute's research emphasis areas include developmental neurophysiology, autonomic disturbances, and sleep state; respiratory, laryngeal, cardiac functions and responses to stimuli; metabolic, endocrine, and genetic factors; immunology and infection; epidemiology; anatomic pathology; and behavioral considerations.

The NICHD obligated $8,906,000 in fiscal year 1976, including the Transition Quarter, to support 122 research projects pertaining to SIDS. Of this total, $2,818,000 supported 33 research projects specifically concerned with SIDS in accordance with the provisions of Section 2(c) of P.L. 93-270. The remaining $6,088,000 provided support for 89 projects generally related to the overall problem of SIDS.

As a result of NICHD supported investigations between 1972 and 1976, it is evident that SIDS babies are not the healthy infants before death that they were once believed to be. These babies appear to have subtle physiologic defects of a neurologic, cardiorespiratory, and/or metabolic nature, yielding increasing evidence that the syndrome is not caused by a single mechanism as previously believed. Instead, a number of developmental, environmental, and pathological factors are involved, which under a complex set of circumstances interact and rapidly set up a sequence of events that produces a sudden, unexplained, and unexpected infant death.

NICHD supported scientists have shown that periodic cessation of breathing (apnea) and associated changes in heart rate in infants during sleep are characteristic in the early months of life. Research has revealed that prolonged apneic episodes may affect availability of oxygen to tissues tissues, and that frequent apneic periods are more likely to occur in infants considered to be at high risk for SIDS, e.g, growth retarded in utero, prematurely born. Studies using animal models have shown that stimulation of the nerve controlling the function of the upper airway by certain liquids (cow's milk, sugar water) can cause apnea that may result in death. A higher incidence of brief apneic pauses and more frequent regurgitation of stomach contents have been documented in studies of "near miss" infants than in infants not exhibiting "near miss" episodes. There is preliminary evidence that infants at risk for SIDS may be identified by characteristic cry patterns.

The National Institute of Neurological and Communicative Disorders and Stroke in 1975 undertook an analysis of all the deaths of children occuring in the Collaborative Perinatal Project. One hundred twenty-five sudden infant death syndrome victims from a population of 53,721 live-born infants followed up since birth from this large prospective study were compared with matched controls. Some of the future SIDS victims showed evidences of neonatal brain dysfunction including abnormalities in respiration, feeding, temperature regulation, and specific neurologic tests. These abnormalities could not be related to events in labor or delivery. Many of the future victims were either mildly underweight for gestational age or showed a retardation in postnatal growth prior to death. The gestations that produced the SIDS victims were characterized by a greater frequency of mothers who smoked cigarettes and had anemia. The demographic profile of SIDS families proved to be identical to the profile for families with excessive perinatal mortality. Findings have been published in the American Journal of Diseases of Children, 130:1207-1210, 1976. Further analysis of data on these SIDS victims is underway.

The National Heart, Lung, and Blood Institute in 1975 supported a pilot project on prolongation of specific heartbeat intervals (QT as measured on electrocardiographs) in parents and siblings of SIDS victims. This project which showed abnormalities in about 25 percent of 42 families in which an infant died of SIDS has been completed. Several NICHD supported investigators are pursuing this line of research.

The National Institute of Arthritis, Metabolism, and Digestive Diseases in 1975 supported a feasibility project on specific enzymes which control the formation of gluconeogenic enzymes and their role in SIDS. This study is now being supported by NICHD.

NICHD Workshop, Lecture Series, and Information Program

Since 1971, the NICHD has been sponsoring a series of SIDS research planning workshops to consider the nature and scope of this problem and to identify specific research areas in need of in-depth study. These workshops have attracted a number of scientists to work on the problem of SIDS. In 1976, the thirteenth workshop (Metabolic Factors) in the series was held. A summary report of each workshop is available.

In February 1974, the NICHD initiated a lecture series on NEW RESEARCH PERSPECTIVES IN THE SUDDEN INFANT DEATH SYNDROME. The purpose of these lectures is to highlight recent research findings by sharing them with the scientific community and public. The subjects of the two lectures given in 1976 were Perinatal Factors in SIDS and Current Status of SIDS Research. During 1976, NICHD staff presented scientific papers on SIDS at seven professional meetings.

The Institute has a large number of publications available for distribution to the scientific community and general public. These include the SIDS research planning workshops (13); bibliographies (6); scientific articles and books (6); informational brochures and reports of meetings (3). Approximately 50,000 pieces of SIDS literature were distributed in 1976.

HEALTH SERVICES ADMINISTRATION

Bureau of Community Health Services, Office for Maternal and Child Health

The activities of the Bureau of Community Health Services, Office for Maternal and Child Health, in the first twelve months following the signing of P.L. 93-270 focused on the development of an implementation plan; preparation, publication, and distribution of regulations and program guidelines; staff recruitment; and awarding 24 counseling project applications.

By June 30, 1976, 31 SIDS Information and Counseling Projects had received grant awards; 22 were continued as second year projects and nine first year projects were added. They are located in 28 States in the ten HEW Regions. They cover a population base of 124,000,000. The anticipated number of SIDS deaths in the areas covered by the 31 SIDS Information and Counseling Projects is 4,550, more than half the U.S. annual estimated total of 7,500 SIDS deaths.

Three motion pictures have been produced. The film "After Our Baby Died" sensitizes health professionals to the problem of SIDS. "You Are Not Alone" is a film to help health professionals and volunteer groups to counsel families affected by SIDS. "A Call for Help" instructs police officers and emergency workers in dealing with SIDS families with greater sensitivity. Copies of these films have been supplied to the 31 SIDS

Information and Counseling Projects, to selected community mental health centers, and to two SIDS voluntary organizations. A four-minute general audience film and two 30-second public service TV spots were produced from clips of these three films. These have been distributed to about 300 TV stations and to the 31 SIDS Information and Counseling Projects.

Numerous educational conferences and workshops have been conducted. Some workshops have been interdisciplinary and statewide or bi-regional in nature while others have been planned for in-depth discussion of the responsibilities and roles in providing appropriate services to families who have lost infants to SIDS. A national conference for medical pathologists to define the standard autopsy protocol for infants who die suddenly and unexpectedly was held in November 1975. The conference proceedings have been distributed to the projects, interested pathologists, and other professional groups. A meeting of the SIDS Information and Counseling Projects was held in March 1976 with representation from the projects, parent organizations, and the DHEW SIDS Interagency Panel.

Approximately 20 separate publications and over 100,000 general informational pieces on SIDS have been distributed to more than 5,000 individuals, official agencies, voluntary organizations, professional organizations, and educational institutions and to the 31 SIDS Information and Counseling Projects for use in conferences, workshops, and for families families of SIDS victims. An informational article on the epidemiology of SIDS was sent to 65,000 physicians. Two SIDS exhibits have been prepared and have been well received at various national conventions.

Three contracts have been awarded. One is to the University of Utah, Center for Human Toxicology to assess the need for routine toxicological analysis in cases of sudden and unexpected deaths in infants. A second contract was awarded to the National Sudden Infant Death Syndrome Foundation to conduct educational programs and to develop resources for services to SIDS families in those states and areas where there are no Federally funded SIDS Information and Counseling projects. A third contract has been awarded to Sheehan, Phinney, Bass, and Green (Mr. Alan Cleveland) to conduct a surveillance and analysis of State statutes affecting the medico-legal investigations of sudden, unexplained deaths in infants. Their findings and recommendations will be published in 1977.

HEALTH RESOURCES ADMINISTRATION

National Center for Health Statistics

The National Center for Health Statistics instituted a special code in the International Classification of Diseases (adapted) for SIDS beginning with 1973. This code has been in use for three years. Data are available for each of these years.

ALCOHOL, DRUG ABUSE AND MENTAL HEALTH ADMINISTRATION

National Institute of Mental Health

In 1974, the National Institute of Mental Health (NIMH) contracted with the National Sudden Infant Death Syndrome Foundation, to develop a two-year program designed to provide educational and counseling information and service to medical professionals, paraprofessionals, and SIDS families.

The goals of the contract are to identify a SIDS mental health consultant within each community to provide support, back up, and assistance to health professionals and representatives of parent groups working directly with SIDS families; to inform mental health workers of existing support systems and SIDS families within the community; to encourage affiliation of community mental health centers with existing health services concerned with the management of SIDS; and to educate mental health workers about SIDS as a disease entity and to further their understanding of the mental health aspects unique to SIDS families.

The contractor has visited health departments in major American communities throughout the nation in order to consult with health officers, public health nursing directors, medical examiners, and coroners on humanizing the medical management for SIDS cases. Through the use of existing medical knowledge and expertise, publications, and health resources, the the contractor has developed recommendations for procedures and guidelines in establishing a program to handle SIDS cases in a more compassionate and sensitive manner. The contract was amended in June 1976 for a six-month period (9/76 - 3/77) to enable the National Sudden Infant Death Syndrome Foundation to assist with the development of organized mental health back up services to the 31 SIDS Information and Counseling Projects.

VENEREAL DISEASES

Obligations

	1974	1975	1976	1977 Estimate	1978 Estimate
Public Health Services:					
Center for Disease Control:					
Grants	$24,800,000	$28,000,000	$19,840,000	$18,000,000	$18,000,000
Direct Operations	7,513,000	8,230,000	8,524,000	9,246,000	9,246,000
National Institutes of Health:					
Allergy and Infectious Diseases	2,937,000	3,069,000	4,324,000	5,198,000	6,098,000

During 1976, a penicillinase-producing strain of Neisseria gonorrhoeae emerged, posing implications for the treatment and control of gonorrhea. In addition, the incidence of both syphilis and gonorrhea remain at unacceptably high levels. Other sexually transmitted diseases (STD), such as genital herpes virus, nonspecific urethritis, and trichomoniasis, continue to be increasingly recognized as major public health problems.

Through project grants and technical assistance, the Federal Government is helping States to meet the health threats of syphilis and gonorrhea by mounting more effective control programs. In addition, basic and applied research efforts are being directed toward these other diseases with the major objective of characterizing the patho-physiology and epidemiology sufficiently to permit recommendations for control efforts.

The major Federal foci for State assistance are the Center for Disease Control (CDC) and the HEW Regional Offices; and for research, they are the CDC and the National Institute of Allergy and Infectious Diseases (NIAID). In addition to major research investments in syphilis and gonorrhea, the CDC and NIAID are sponsoring research studies in the other sexually transmitted diseases.

The CDC and NIAID programs are more fully described in the following section.

CENTER FOR DISEASE CONTROL

Federal, State and local governments, private medicine and voluntary organizations have shared responsibility for venereal disease control efforts almost from the initiation of the programs. This partnership has greatly reduced the prevalence of syphilis from an all-time high of 575,593 in fiscal year 1943 to 76,736 in 1976, a reduction of almost one-half million cases.

Since fiscal year 1940 the efforts of this partnership have been reflected in a reduction of the complications of syphilis: Infant deaths from syphilis have declined 99 percent; first admissions to mental hospitals with psychoses caused by syphilis have declined 98 percent; all deaths caused by syphilis have declined 98 percent; reported cases of congenital syphilis have declined 96 percent. Most cases of congenital syphilis discovered today are in adults who were born in the past era of higher disease incidence; only 22.3 percent (170 of 764) of the congenital syphilis cases reported in fiscal year 1976 were in infants under 1 year of age.

The trend in reported infectious syphilis, as well as that of syphilis in all stages, is declining; total syphilis decreased 6.9 percent in fiscal year 1976, to 76,736 cases from 82,397 in fiscal year 1975. Since successful inroads have been made in reducing the reservoir of untreated syphilis of long duration, control efforts are concentrated on preventing new (infectious) cases. The trend of reported cases of primary and secondary syphilis, usually interpreted as paralleling the actual incidence, has changed direction several times: It increased during World War II to peak at more than 100,000 cases in 1947, then declined by as much as 50 percent per year to reach an all-time low of 6,251 cases in 1957; for the next few years, however, the number of cases increased, to peak at more than 23,000 in fiscal year 1965. The trend fluctuated again, going down by almost 1,000 cases per year through fiscal year 1970, then increasing again until 1975 (except for a slight decrease in 1974). The present downward trend began in fiscal year 1976 and has continued into the early months of fiscal year 1977.

Reported primary and secondary syphilis cases declined 13.4 percent during November 1976 over the number reported for November 1975--the eighth successive monthly decline. Infectious syphilis cases reported in fiscal year 1976 numbered 24,933, a decrease of 3.2 percent from fiscal year 1975. The decrease in cases in men was 1.6 percent; for women it was 7.2 percent; men accounted for 72.7 percent of reported infectious syphilis cases; women, only 27.3 percent.

Gonorrhea continues to rank first among all reportable diseases. The trend in reported cases of gonorrhea generally decreased from fiscal year 1947 through fiscal year 1957 but began to increase steadily thereafter. After fiscal year 1973, when federally assisted State and local gonorrhea control programs were first implemented, the

increasing incidence in reported cases began to slow, from 12.7 percent in fiscal year 1973 to 6.9 percent in 1976. The 1,011,014 cases of gonorrhea reported in fiscal year 1976 represent an increase of 65,069 cases over fiscal year 1975. The trends in reported cases continue to differ for men and women: In fiscal year 1976 cases in men numbered 602,135, an increase of 7.2 percent; cases in women numbered 408,879, an increase of 6.4 percent. Efforts are continuing to close the gap in reported cases between men and women by focusing screening efforts on high-risk female populations and by encouraging male patients to bring or refer their sexual partners to medical care.

The 63 large urban areas with populations of 200,000 or more continue to report gonorrhea most frequently. Although 18 (28.6%) of these areas reported a decrease in gonorrhea during fiscal year 1976, the total cases reported by those areas increased 7.2 percent over fiscal year 1975, compared with an increase of 6.5 percent for the rest of the nation. Containing 27 percent of the nation's population, these 63 cities reported 53.3 percent of the gonorrhea cases during fiscal year 1976. Reported gonorrhea case rates vary from State to State; some of these differences, however, reflect differences in casefinding activity, availability of public clinics, and reporting practices, as well as variations in attack rates. In fiscal year 1976, the highest gonorrhea rates per 100,000 population were reported by Alaska, 1215.3; Georgia, 911.8; Tennessee, 822.9; Maryland, 815.2; and South Carolina, 785.8. The lowest gonorrhea rates were reported by New Hampshire, 87.3, and North Dakota, 127.2.

For both syphilis and gonorrhea, the 20-24 age group is at greatest risk of infection. Teenagers (15-19 years old) make up the second highest risk group for gonorrhea, while the 25-29 age group is the second highest risk group for syphilis.

The development and implementation of control programs which focus on disease intervention activities designed to reduce the incidence of these diseases is being emphasized. The primary objectives of these programs are: (1) Screening high-risk female populations for gonorrhea; (2) controlling the spread of penicillinase-producing Neisseria gonorrhoeae (PPNG); (3) surveillance of syphilis through serologic screening of specific population segments; (4) providing contact-referral services to patients with infectious syphilis and gonorrhea; (5) providing venereal disease facts to people at risk to prevent exposure and to influence infected individuals to seek early medical care for themselves and their sex partners; and (6) involving the private medical community in all aspects of venereal disease control.

During fiscal year 1976, of the 9,109,264 culture specimens obtained from women in the gonorrhea screening programs, 393,657 (4.3%) were positive for gonorrhea. Treatment was documented for 91 percent of these infected women. Although positivity rates were highest (19.0%) among venereal disease clinic patients, some 90 percent of all tests were performed in other settings. In these other settings, positivity rates ranged from a low of 1.6 percent among private family planning

groups, to a high of 5.3 percent among women who were tested in detention centers. Private physicians obtained test specimens from 2,377,977 women, of which 47,005 (2.0%) were positive for gonorrhea.

In addition to screening efforts, outreach medical coverage for at-risk groups resulted in the contact-referral process being applied to 325,483 patients during fiscal year 1976. This interview contact-referral procedure resulted in 229,382 contacts to gonorrhea patients being examined and 188,524 persons being treated therapeutically or preventively.

As a result of gonorrhea screening and other outreach efforts, infected women are being treated earlier in their infection and removed from the infectious reservoir. Therefore, they are prevented from spreading the disease and from developing serious complications.

Recent studies indicate that the complications of gonorrhea in women are serious and costly. In one study area pelvic inflammatory disease (PID) occurred in 17 percent of all women known to be infected with gonorrhea. Based upon pilot studies in selected areas and two private surveys, it is estimated that more than 500,000 cases of pelvic inflammatory disease occur annually in the United States. Recently acquired gonorrhea accounts for approximately 80 percent of first-episode cases and 20 percent of recurrent cases. The risk of sterility increases from 20 percent after one episode of PID to 40 percent after two episodes to more than 75 percent after three episodes. Gonorrhea contributes directly or indirectly to more than 50,000 new cases of involuntary sterility each year. For just women, the estimated national costs of the complications of gonorrhea amount to $212 million annually, including about 175,000 hospital admissions totaling 1.2 million hospital days. Because of the serious complications of gonorrhea in women, research efforts continue to focus on defining additional risk factors, diagnostic techniques, and therapeutic modalities for PID.

Syphilis control efforts are focused on disease-intervention activities, including case detection, surveillance and prevention. Almost 43 million serologic tests for syphilis were performed during fiscal year 1976. Of these, 1,114,481 tests were reactive, and 59,846 persons were identified as infected with syphilis.

The epidemiologic process applied to early syphilis cases is directed toward preventing infection through treatment of persons in the infectious stages before they spread the disease and toward preventing disease by treating sexual contacts while they are incubating disease. During fiscal year 1976, the syphilis epidemiologic process was provided to 44,176 patients with early syphilis; 126,681 named suspects were examined,

with 12,127 new cases of syphilis detected and treated and an estimated 3,270 additional new cases of syphilis prevented.

Because of population mobility and a high rate of interstate and international disease transmission, program efforts are directed at ensuring the rapid exchange of contact information between program areas. Almost 12 percent of all reported sexual contacts to known syphilis cases during fiscal year 1976 resided in States or countries other than those in which the original patients received treatment. Every State, the District of Columbia, Puerto Rico, and the Virgin Islands exchanged contact information with at least one other program area in fiscal year 1976. Information was exchanged, on an interstate and international basis, on 15,069 syphilis contacts in fiscal year 1975 and 14,509 in fiscal year 1976, a decrease of 3.7 percent. Because of this exchange of contact information in fiscal year 1976, 8,527 (58.8%) persons were examined and of these, 674 (7.9%) were treated for a previously undetected syphilis infection.

Sexually transmitted diseases (STDs) other than the five traditional "venereal" diseases continue to be increasingly recognized as major public health problems because they produce morbidity, cause patient loss of productivity, and impose demands on medical care facilities.

Among the most important STDs are nongonococcal urethritis, with an estimated incidence of more than 2.5 million cases annually; trichomoniasis, with an estimated incidence of more than 3 million cases annually; and genital herpes, with some 300,000 cases annually. Data obtained from a national survey of private physicians found that for every 100 cases of gonorrhea treated by private physicians, approximately 57 cases of nongonococcal urethritis, 204 cases of trichomoniasis, 11 cases of genital herpes, 10 cases of pediculosis pubis and 27 cases of venereal warts were treated. Preliminary data from a nationwide STD Monitoring Network reveal that the incidence of these diseases in the population seeking care in public clinics parallels the incidence in private practices. Studies also indicate that the comparative incidence of nongonococcal and gonococcal urethritis varies greatly from area to area and from population to population. One study found that an average of 3.8 and 7.4 cases of gonococcal urethritis (GC) and nongonococcal urethritis (NGU), respectively, were seen by each physician in a 3-month retrospective survey of 2,118 practicing physicians; the ratio of NGU to GC cases treated by private physicians was 2:1, but in eight area public VD clinics it was 1.7:1. An estimated 68 percent of all male gonorrhea cases occurring during the study period were treated by other than public clinics and no more than 5.8 percent were actually reported. In the study area the annual incidence of male gonorrhea was estimated to be 16.2 per 1000, and male NGU, 29.0 per 1000. A retrospective survey of conjunctivitis cases in newborns in a large metropolitan hospital has shown that chlamydia causes four times as much conjunctivitis as the gonococcus. This form of conjunctivitis, called "inclusion

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conjunctivitis," has seasonal peaks similar to those of other venereal diseases. The national STD Monitoring Network will continue to measure the magnitude of STDs and to identify populations at greater risk of infection.

Because persons with a history of repeated infections are considered the high-risk population, they are the primary target of education efforts designed to reduce further reinfection and disease transmission. These efforts include developing methodologies to evaluate strengths and weaknesses of alternatives for delivering venereal disease education to high-risk groups. Other educational programs emphasize involving health care providers in all aspects of the venereal disease control effort.

Program activities continue to be directed toward the private medical community which plays an important role in venereal disease control. Physicians are encouraged not only to diagnose properly and treat effectively, but also to treat sex partners simultaneously and to involve patients in referring their sex partners to medical care. Program efforts continue to keep the private physician aware of the venereal disease control program, to encourage him to participate in all aspects of the control program, and to provide him with diagnostic and treatment information.

As well as being responsible for implementing national venereal disease control programs, the Center for Disease Control continues to play an important role nationally in stimulating and conducting research in the venereal diseases. Operational research is focused on applying and evaluating new techniques of venereal disease control, including clinical and basic venereal disease research as it relates to disease epidemiology and control methods.

Researchers at CDC discovered penicillinase-producing Neisseria gonorrhoeae in the United States simultaneously with similar observations in England. This strain is absolutely resistant to penicillin. A vast amount of new information has been amassed in the very short time since the discovery in August 1976. Through collaborative efforts with the World Health Organization and the Republic of the Philippines, the CDC demonstrated that 30-50 percent of gonorrhea patients in the Far East harbor this strain. The mechanism of the production of resistance has been elucidated. This strain has spread to at least ten different countries since early 1976 and by January 1, 1977, 75 cases of this penicillin-resistant gonorrhea in 17 different States had been confirmed at the CDC. Continued importation from the Far East is expected but may be diminished by intensive screening. Only five States have any evidence of several-generation spread of these strains in the civilian population and such spread has been controlled by case-by-case epidemiology, public and professional education and rapid interstate exchange of contact information. A major objective has become identifying cases and preventing their spread. This effort must succeed, or it will become necessary to abandon penicillin and adopt other less satisfactory but more expensive antibiotics for treatment of all gonorrhea.

Established to evaluate CDC recommendations for the treatment of uncomplicated gonorrhea, to test new treatment schedules and antibiotics, and to monitor organism antibiotic resistance and adverse patient drug reactions, the gonorrhea therapy monitoring system continues in five geographic areas. This study has shown that for the first time in a quarter century, the antibiotic resistance of gonococci in the United States has begun to decrease because of the widespread use of optimal therapy as recommended. Although this advance is severely threatened by the emergence of penicillinase-producing strains, the reversal of a spiraling trend toward increased antibiotic resistance is encouraging. Gonococcal antibiotic resistance has also been shown to vary seasonally, with peaks in the winter months and valleys in the summer months. Gonococci that are very sensitive to antibiotics tend to cause fewer symptoms and at the same time cause blood-borne infection. The auxotype system developed and improved by NIAID researchers has been applied to the CDC collection of gonococcal isolates from the monitoring network; gonococcal types vary significantly by region--an important factor to consider in developing gonococcal vaccines. The CDC plans to maintain surveillance of gonococcal resistance, to test new drugs for efficacy, and to continue to explore the meaning of auxotypic variations of gonococci.

The Therapy Monitoring System and other special studies will be used to document the efficacy of urgently needed therapy alternatives to spectinomycin which is the only remaining drug effective against penicillinase-producing gonococci.

Clinical studies are ongoing that should provide improved diagnostic techniques for herpes infection, simplified treatment for trichomoniasis, better understanding of pelvic inflammatory disease, nongonococcal urethritis and nonspecific vaginitis.

Basic control models for syphilis and gonorrhea have been developed. The developmental process of these models has caused venereal disease control programs to focus more clearly on unresolved or poorly understood facets of disease transmission and on resource allocations to maximize disease control results. Mathematical modeling for gonorrhea control and the development of methods of forecasting disease trends have continued. In addition to supporting the policies of intervention focused on the effective transmitters of gonorrhea, the concept of an equilibrium is being examined. Mathematical analysis suggests that the benefits of current program efforts will continue to accrue to the population if all program components are maintained or improved.

The CDC has supported studies for the control and study of venereal diseases which are designed to: (1) Establish adequate disease surveillance in the public and private medical sectors to assess the magnitude of the disease problem; (2) assess various disease control

techniques which are designed to reduce the incidence and prevalence of disease; (3) increase the efficiency of collecting patient data, expedite patient care and improve the gathering of epidemiologic information; and (4) perform selected studies on biologic and epidemiologic aspects of the sexually transmitted diseases. These areas continue to form the nucleus for innovative program initiatives.

Previous studies demonstrated that repeatedly infected patients are a major problem in controlling gonorrhea. Several studies are currently ongoing to investigate more efficient ways to bring all infected sexual partners to treatment to prevent disease spread and reinfection.

The Center for Disease Control gives high priority to its role in maintaining high-quality diagnostic laboratory services, including proficiency testing, reagent standardization, research, and ongoing maintenance of methods for laboratory training. Preliminary results from a national pilot gonorrhea proficiency testing system indicate that the quality of media in screening laboratories is high. Plans are to continue this program and to include an assessment of laboratory capability to detect more fastidious gonococci and screen for penicillinase production in the next shipment of blind test samples. The Center has increased the understanding of the basic bacteriology and immunology of gonorrhea through developing a standard selective culture medium for Neisseria gonorrhoeae, discovering and describing two types (Type I and II) of virulent colonies of N. gonorrhoeae which are the source of gonococcal pili, measuring the in vitro antibiotic susceptibility of N. gonorrhoeae from 1950 to the present, developing transport systems for N. gonorrhoeae culture specimens, and applying gas liquid chromatography as a diagnostic test on body fluids.

Researchers at the CDC developed the FTA-ABS test for syphilis (now the standard confirmatory test), reevaluated the CSF-FTA-ABS and the FTA-ABS-IgM tests, and adapted the microhemagglutination test to syphilis serology. Gonococcal and syphilis infections were first established in animals by researchers at the CDC; these animal models have been the basis for advances in understanding the pathogenesis and immunology of both diseases.

With a marked increase in the number of positive FTA-ABS tests in patients in whom syphilis was considered unlikely and in whom none of the factors thought to be associated with "false-positive" FTA-ABS reactions could be documented, a comprehensive reevaluation of the performance of the FTA-ABS test is being carried out through the cooperation of more than 20 State health department laboratories. Also, studies to determine the relative values of other serologic tests for syphilis have been undertaken. A recently completed study of more than 1,000 clinically defined patients confirmed the promise of a hemagglutination test for syphilis antibody with the high specificity of the FTA-ABS test.

Because NIAID's major role focuses on the life and reproductive processes of the causative microorganisms of venereal disease, the CDC coordinates with them all basic research in these areas. The NIH recently convened a special conference on penicillinase-producing gonococci to determine several important research priorities resulting from this discovery, including increased emphasis on vaccine development and understanding the reasons for this dramatic change in the gonococcus.

During 1978, screening programs for gonorrhea will become more focused as nonproductive screening efforts are discontinued and as posttreatment and periodic rescreening is expanded for both male and female gonorrhea patients. Counseling will increase to encourage patients to refer their sexual partners for diagnosis and treatment; these shifts in emphasis are geared to discovering infection or reinfection quickly within this group, and thereby significantly interrupting the spread of disease. Each of these program efforts reduces both cost of contact followup and the likelihood of immediate exposure of the patient to reinfection. Control efforts for penicillin-resistant gonorrhea organisms will emphasize the existence of this strain and the appropriate diagnostic, therapeutic and case management measures necessary to control its spread. Syphilis epidemiologic case management efforts will be strengthened to maximize the impact of contact referral and epidemiologic treatment on case prevention, and to continue to gear health department policies and control program activities to specific high-risk groups, particularly the gay community, which has emerged as a group for which specially tailored control programs have proved very effective.

For women, pelvic inflammatory disease is one of the most serious complications of gonorrhea. Renewed research efforts will be undertaken to define the additional risk factors, diagnostic techniques and therapeutic modalities for PID, and direct control efforts will continue to emphasize preventive transmission of primary disease, reinfection, and relapse. Prospective evaluations of in- and outpatient therapy for PID continue.

Although currently available serologic tests developed for screening populations for gonorrhea lack the desired levels of sensitivity and specificity, efforts to develop an acceptable test will continue. Basic to the development of such a serologic test is a bank of well-characterized sera from patient populations with relative low prevalences of gonococcal infection (3-8 percent). The CDC will continue to expand its bank of characterized sera through research efforts with universities, private health care providers and official health agencies.

In recent years, the incidence of syphilis in homosexual men has increased. More cost-effective VD casefinding approaches among this population will be sought, with emphasis on establishing contact with the gay community, implementing VD and other STD screening and education programs for this population, and improving relationships with the private medical community that provides VD services to homosexuals.

In syphilis research, the focus will continue on developing a medium for culturing Treponema pallidum in vitro, a necessity for refining serologic tests, developing a syphilis vaccine, and expanding our knowledge about the pathogenesis of syphilis. Studies are being conducted in the growth of T. pallidum in a hemodialysis system and in various animal models.

The social aspects of VD, recognized since the early part of the 20th century, probably have contributed to the spread of these diseases. Therefore, efforts will be pursued to measure the impact of these social factors on disease spread and to develop intervention strategies based on understanding the behavioral aspects of venereal disease control.

Efforts will be expanded to develop control measures for a number of STDs other than syphilis and gonorrhea because of their increasing national significance. These expanded efforts, comprising a balanced program to support the development of control methodologies, education and operational research, include: (1) establishing adequate disease surveillance to assess and define the magnitude of the disease problem, (2) assessing various disease control techniques designed to reduce the incidence and prevalence of these diseases, (3) increasing the efficiency of collecting patient data, expediting patient care and improving the collection of epidemiologic information, and (4) performing selected studies on the epidemiologic aspects of these diseases.

NATIONAL INSTITUTES OF HEALTH

National Institute of Allergy and Infectious Diseases

The NIAID Program

The inability of public education programs and contact tracing and treatment to halt the spread of sexually-transmitted diseases has re-emphasized the need for both basic and applied research programs. The National Institute of Allergy and Infectious Diseases (NIAID) continues to serve as the focus for this effort and, since 1971, has been expanding its program in this area.

Currently, NIAID supports 45 established venereal disease investigators as well as a number of post-doctoral Fellows in training. Six contractors and a small group of intramural scientists are also working on specialized problems in sexually-transmitted diseases.

In 1974, NIAID awarded the first grants for program projects, or Venereal Disease Research Centers, to the University of Washington, Seattle, and to the Harvard University School of Public Health, Boston. In 1975, a third center was established at Baylor College of Medicine, Houston. This year, the fourth program project grant was awarded to Cornell University in New York. These centers make possible a broader range of multidisciplinary studies.

Gonorrhea continues to be the most common sexually-transmitted disease--in fact, the most commonly reported bacterial infection. Penicillin has been used for many years as a relatively inexpensive and effective treatment. However, in March 1976 a strain of gonococcus totally resistant to penicillin was identified in this country. As of December, at least 57 cases had been reported. Deeply concerned about the spread of this strain, NIAID officials called together more than 40 eminent scientists and representatives of government agencies to discuss the role of federal institutions in helping to solve this problem and to identify possible research avenues that should be explored. Dr. King K. Holmes of the University of Washington chaired the conference, which met at NIAID in Bethesda, Maryland on December 17.

Perhaps the second most common sexually-transmitted disease is non-gonococcal urethritis (NGU). NIAID organized and supported a Workshop on NGU and Related Oculogenital Infections, which was held at the W. Alton Jones Cell Science Center, Lake Placid, New York, on April 28-30. National and international experts participated in an in-depth discussion of the problem. The conference proceedings will be published in 1977.

Gonorrhea

Gonorrhea is caused by a bacterium known as the gonococcus but with the scientific name Neisseria gonorrhoeae. This organism typically infects the mucous lining of the genital and urinary tracts. In men, this results

in a purulent (pus-producing) infection of the urethra, the canal carrying urine to the outside of the body from the bladder. In women, the organism usually infects the urethra and the cervix (the opening of the womb). A newborn may acquire a purulent infection of the eyes in passage through the infected birth canal of the mother. To prevent this and other eye infections, physicians place silver nitrate solution in the eyes of all infants immediately after birth.

Complications of gonococcal infection often include sterility and arthritis, but, rarely, may also result in infection of the brain (meningitis) or heart (endocarditis), or the widespread presence of gonococci in the blood (gonococcemia). Physicians are also finding evidence of gonococcal infections in other areas of the body, such as the rectum and throat.

Early symptoms of gonorrhea usually appear within two to eight days after exposure by sexual contact. However, many persons--especially women--may have no apparent symptoms of the disease until much later. These symptom-free infections may be a factor in the current uncontrolled spread of this disease.

The Causal Organism. The gonococcus has been recognized for almost 100 years, but it is still a puzzle in many respects. NIAID-supported scientists are trying to answer the many questions that remain about how the organism grows, affects its hosts, and develops resistance to antibiotics. This latter problem is particularly crucial in the light of the new highly resistant strains currently being seen.

Penicillin-resistant gonococci are not completely new. In fact, significantly higher doses of penicillin have been given in recent years because of increasing gonococcal resistance. A NIAID grantee--Dr. Frederick Sparling of the University North Carolina--has recently established the probable biochemical basis for this chromosomally mediated low-level penicillin resistance. He has found that two mutations result in alterations of different outer membrane proteins and, thus, in altered permeability to various antibiotics. (Epidemiologic investigations suggest that these mutations may also result in decreased virulence of the gonococcus.)

The new 1976 strains, however, are resistant in a different way. These gonococci produce the enzyme beta-lactamase (penicillinase), which destroys penicillin and other related antibiotics. Dr. Stanley Falkow, University of Washington, has demonstrated that these gonococci have plasmids (units of DNA that exist outside the cell's chromosomes) that code for penicillinase production. His investigation has indicated that these plasmids, fortunately, are relatively unstable and are not easily transmitted between gonococci, which probably accounts for the relatively slow spread of this new type of gonorrhea.

Dr. Holmes and his colleagues, particularly Dr. Falkow, have pointed out the close relationship of these plasmids to those found on penicillin-resistant strains of Hemophilus influenzae. The possibility of dangerous

further spread to other bacteria is thus very real. Emergence of the penicillinase-producing gonococcus underscores vividly the necessity for continuing the basic research required to understand the properties of different strains of gonococci and to develop preventive measures, such as a vaccine.

Structure and Classification. Before a vaccine can be developed, scientists must first learn more about the antigenic structure of the gonococcus. Indications are that one reason infected persons are not immune to a second infection is that there are many antigenically different strains of gonococci. Investigators are trying to divide these different strains into groups (serotypes) according to antibodies formed in the blood. Such a typing system also would be valuable in epidemiologic studies and in diagnosis, particularly of asymptomatic infection.

Dr. Kenneth Johnston, a NIAID contractor at the University of Texas in Dallas, has developed a serologic typing system using antigens from the major outer membrane protein and has identified 16 distinct serotypes. Dr. Thomas M. Buchanan at the University of Washington is studying antigens from the outer membrane proteins and from pili (microscopic hair-like appendages on the surface of virulent gonococci). He has determined that outer membrane protein antigens allow prediction of bactericidal activity of antiserum to gonococci, whereas pili do not seem to be involved in this reaction.

Another classification system, called auxotyping, is based on the fact that gonococci have a number of different growth requirements. Dr. Charles Brinton of the University of Pittsburgh has used a combination of pili serotyping and auxotyping to establish 12 gonococcal auxo-serotypes.

Dr. Frank E. Young and his colleagues at the University of Rochester, New York, in their study of auxotypes, have determined that there are populations of gonococci unique in various parts of the U.S., despite the mobility of our society. They have also clearly established that there is no common or single strain that produces disseminated gonococcal infection (DGI). However, there are a few strains that have a higher propensity toward production of dissemination, particularly in certain areas of the country.

In other studies of DGI, Drs. George Crawford and Buchanan, working with Dr. Holmes in Seattle, recovered gonococci of a single auxotype from 89 percent of patients with DGI. Recently, they recovered this same auxotype from 24 of 25 men with asymptomatic gonorrhea and from only 11 of 25 men with symptomatic disease. This information can be important in focusing the efforts of control programs.

Infection and Host Response. In a study of host response, Drs. Robert P. Williams and John Knox, and their colleagues at Baylor College of Medicine, incubated human sperm with the female hormones, estradiol and progesterone. They then exposed the sperm to type 1 (virulent) gonococci and found that the number attached to the sperm was reduced by 50 percent. Male hormones did not have the same effect. Gonorrhea in women is known

to worsen with the onset of menstruation and late in pregnancy when the levels of these female hormones are the highest. Perhaps the hormones cause the gonococci to break loose from their attachment to tissue, circulate freely in the blood stream, and then cause systemic gonorrhea.

Another investigator, Dr. Abraham I. Braude of the University of California, San Diego, recently showed that the seemingly natural resistance of the male urethra to gonococci could be due to the antibacterial properties of urine. He showed that acidity was the major killing factor, but urea and sodium chloride were also specifically bactericidal. This could explain why gonococci do not usually infect the bladder or the kidney.

Syphilis

Syphilis is caused by Treponema pallidum, a spiral-shaped, very mobile bacterium known as a spirochete. Like gonorrhea, syphilis is acquired through sexual intercourse with a person who is in the infectious stage. Syphilis may also be acquired by an unborn child from an infected mother.

There are several stages of syphilis. In the primary stage, a small sore, or chancre, may appear 10 to 90 days after exposure. The chancre will disappear without treatment, but a rash may develop three to six weeks later during the secondary stage. Like the chancre, the rash will disappear without treatment, but meanwhile the spirochetes will have begun to invade any of several organs in the body.

If untreated, syphilis remains infectious through a stage known as early latent syphilis, for about two years from the time of initial infection. In this early latent stage, the organisms begin their destructive attack on the heart, brain, spinal cord, or other organs. Untreated syphilis can cause mental illness, blindness, heart disease, and death.

Biology of Spirochetes. A principal hindrance to research on T. pallidum is the inability of scientists to grow this bacterium outside of man--the only animal that naturally acquires the disease. Although discovered more than 70 years ago, the organism cannot yet be grown in the laboratory.

For many years, T. pallidum has been considered anaerobic, that is, living and growing only in the absence of oxygen. However, in 1975, a NIAID grantee, Dr. C.D. Cox of the University of Massachusetts, Amherst, reported that the organism is a microaerophile that requires a small amount of oxygen. Now he as well as other investigators are continuing these studies with the hope that laboratory cultivation will soon be possible.

Contracts were awarded in 1974 to encourage research directed toward in vitro cultivation of the organism. So far, no one has succeeded in achieving long-term in vitro cultivation, but progress is being made.

Immunity and Vaccine Development. An understanding of the mechanisms

of immunity--the ways in which the host protects itself against invading microorganisms--is a necessary base for the development of preventive measures such as a vaccine. However, the role of immunity in syphilis is still unclear. Dr. Russell S. Weiser, University of Washington, used the rabbit model to show that large serial doses of immune serum given 48 hours before treponemal challenge gave definite protection against experimental syphilis, probably due to the presence of specific antibody. Dr. James N. Miller of UCLA, also using the rabbit model, has developed a neutralization test that may provide a way to measure the immune status of the host. When adapted to the human system, this test could be used to determine differences in the immune status of patients and to provide valuable insight into the pathogenesis of the disease.

Herpes Simplex Virus Infections

A sexually-transmitted disease of increasing prevalence and great concern is herpes simplex virus (HSV) type 2 infection. The herpes simplex virus--Herpesvirus hominis--has been shown to exist in two types--1 and 2. Type 1 infections are commonly found above the waist, as in "fever blisters," and type 2 below the waist, as in genital infections. Although not as serious as gonorrhea or syphilis, genital herpes infections may produce acute, severe pain and temporary disability. Like fever blisters, these genital infections tend to recur.

In addition, HSV infection of the female genital region may cause disseminated herpes virus infection of the newborn--frequently a fatal or crippling disease. Obstetricians, when they diagnose genital herpes in an expectant mother, often make plans for delivering the baby by caesarean section to avoid its exposure to the virus.

Unfortunately, no treatment is yet available for HSV infections. Dr. Raphael Dolin, working at NIAID, used a guinea pig model and showed that the antiviral agent ara-A (adenine arabinoside) was effective against HSV infections in the experimental animals. Human therapy trials will begin soon. Dr. Charles Alford of the University of Alabama--a NIAID contractor--is already evaluating ara-A in patients with other types of herpes virus infections and preliminary results are encouraging.

Dr. Bernard Roizman of the University of Chicago has defined markers that distinguish different strains of HSV. He is now using these markers in epidemiologic studies to trace the source of infection in an outbreak in a hospital nursery.

Non-Gonococcal Urethritis (NGU)

In men, NGU is the second most common sexually-transmitted disease syndrome in the U.S. The symptoms mimic those of early gonorrhea and differentiation is important since NGU does not usually respond to penicillin. In women, the disease is less well-defined and many women have no symptoms at all. Recently, important progress has been made in defining the cause or causes of NGU.

For example, Chlamydia trachomatis is a bacterium known to cause trachoma (a serious eye infection) and a venereal disease called lymphogranuloma venerum or LGV. Studies by Dr. Julius Schachter of the University of California at San Francisco and Dr. King K. Holmes of the University of Washington have shown that C. trachomatis accounts for 33 to 50 percent of all cases of male NGU.

Another study by Dr. Schachter on chlamydial infections of newborns indicates that 1 of 3 infants at risk develops overt disease, usually conjunctivitis. He also found that chlamydial carriers among normal women ranged between 5 to 10 percent resulting in a high number of infants potentially exposed to chlamydial infection.

Ureaplasma urealyticum is a mycoplasma, a particular type of bacteria without cell walls. It is also implicated in sexually-transmitted diseases, and Dr. Holmes has recently reported its importance in NGU. This organism is also suspected as a cause of human reproductive failure and spontaneous abortion. Dr. Thomas A. Stamey at Stanford University is studying the fundamental biology of U. urealyticum in order to learn how it causes human disease.

Group B Streptococcal Infections

The study of Group B streptococcal infections of the genital tract is particularly vital because this disease is now one of the most important infections affecting newborn infants in this country. However, scientists are not yet sure that Group B infections are sexually-transmitted. Epidemiologic studies are currently underway at Baylor University and Harvard University to clarify this question.

Also at Harvard University, Drs. Carol J. Baker and Dennis L. Kasper have determined that the newborn infants at risk from Group B streptococcal infections are those with maternal antibody deficiency. They suggest that immunization, with a polysaccharide vaccine, of women documented to be antibody-deficient might be a reasonable way to prevent these serious infections in newborns.

Trichomoniasis

Trichomoniasis is a parasitic infection caused by a protozoan, Trichomonas vaginalis. An estimated 2.5 to 3 million Americans each year have this infection, which is most commonly transmitted by direct sexual contact. In humans, this organism only infects the genitourinary tract, causing vaginal lesions and a discharge in women. The infection is usually without symptoms in men. At birth the newborn may acquire a genitourinary infection from an infected mother.

Although trichomoniasis does not, as far as is known, lead to serious complications, it is personally annoying and can confuse the evaluation of a Pap smear, the test for cervical cancer. This parasite can make test cells appear atypical, often resulting in a false-positive test reading.

In a preliminary report of an ongoing epidemiologic study, NIAID grantee Dr. Gerald L. Mandell, of the University of Virginia, reported that 40 percent of the 300 women entering the VD clinic with trichomoniasis also had gonorrhea. Dr. Mandell and his colleagues are further evaluating this data.

Sexually-transmitted diseases continue to be important causes of illness and disability in men and women and to affect unborn children. The increasing incidence of gonorrhea and syphilis, despite antibiotic therapy, underlines the need for a better basic understanding of the organisms causing these diseases. Research supported by NIAID should contribute toward reversal of the epidemic trends and provide new hope for controlling all venereal diseases.

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