FEDERAL HEALTH POLICIES IN RURAL AREAS

Health Services for Rural Areas in the United States

APPENDIX TO HEARINGS

BEFORE THE

SUBCOMMITTEE ON FAMILY FARMS AND RURAL DEVELOPMENT

OF THE

COMMITTEE ON AGRICULTURE HOUSE OF REPRESENTATIVES

NINETY-THIRD CONGRESS

SECOND SESSION

OCTOBER 1, 2, AND 3, 1974

Serial No. 93-SSS

PART 2

Printed for the use of the Committee on Agriculture

U.S. GOVERNMENT PRINTING OFFICE
WASHINGTON : 1974

42-617 O

COMMITTEE ON AGRICULTURE

W. R. POAGE, Texas, *Chairman*

FRANK A. STUBBLEFIELD, Kentucky, *Vice Chairman*
THOMAS S. FOLEY, Washington
E DE LA GARZA, Texas
JOSEPH P. VIGORITO, Pennsylvania
WALTER B. JONES, North Carolina
B. F. SISK, California
BILL ALEXANDER, Arkansas
JOHN R. RARICK, Louisiana
ED JONES, Tennessee
JOHN MELCHER, Montana
DAWSON MATHIS, Georgia
BOB BERGLAND, Minnesota
FRANK E. DENHOLM, South Dakota
SPARK M. MATSUNAGA, Hawaii
GEORGE E. BROWN, JR., California
DAVID R. BOWEN, Mississippi
CHARLES ROSE, North Carolina
JERRY LITTON, Missouri
BILL GUNTER, Florida

WILLIAM C. WAMPLER, Virginia *Ranking Minority Member*
GEORGE A. GOODLING, Pennsylvania
ROBERT B. MATHIAS, California
WILEY MAYNE, Iowa
JOHN M. ZWACH, Minnesota
ROBERT PRICE, Texas
KEITH G. SEBELIUS, Kansas
WILMER D. MIZELL, North Carolina
PAUL FINDLEY, Illinois
LAMAR BAKER, Tennessee
CHARLES THONE, Nebraska
STEVEN D. SYMMS, Idaho
EDWARD YOUNG, South Carolina
JAMES P. JOHNSON, Colorado
EDWARD R. MADIGAN, Illinois
PETER A. PEYSER, New York

FOWLER C. WEST, *Staff Director*
JOHN F. O'NEAL, *General Counsel*
HYDE H. MURRAY, *Associate Counsel*
JOHN RAINBOLT, *Associate Counsel*
L. T. EASLEY, *Press Assistant*

SUBCOMMITTEE ON FAMILY FARMS AND RURAL DEVELOPMENT

BILL ALEXANDER, Arkansas, *Chairman*

JOSEPH P. VIGORITO, Pennsylvania
JOHN MELCHER, Montana
DAWSON MATHIS, Georgia
GEORGE E. BROWN, JR., California

KEITH G. SEBELIUS, Kansas
WILMER D. MIZELL, North Carolina
LAMAR BAKER, Tennessee
EDWARD YOUNG, South Carolina

LETTER OF REQUEST

U.S. HOUSE OF REPRESENTATIVES,
COMMITTEE ON AGRICULTURE,
Washington, D.C., May 10, 1974.

Mr. LESTER S. JAYSON,
Director, Congressional Research Service,
The Library of Congress, Washington, D.C.

DEAR MR. JAYSON: Included in the duties of the Subcommittee on Family Farms and Rural Development, House Committee on Agriculture, is the responsibility for oversight of rural health policy.

In this capacity, the Subcommittee is considering holding hearings in the near future to review rural health needs and problems, and to determine how these needs are being met, what services are available, how the government programs are being implemented, and what actions need to be taken to improve health services to the non-metropolitan areas.

The purpose of this letter is to ask for your assistance in preparing for these hearings. I would very much appreciate your assigning either one or two analysts to research rural health care, with the understanding that the material provided will be used as a part of the hearing record.

Following is a list of areas which I feel need to be covered in the research effort.

(1) Probable effect of pending health legislation on non-metropolitan areas, i.e., what would this legislation mean to non-metropolitan areas; are these provisions which might discriminate against non-metropolitan areas in per capita funds as opposed to metropolitan or urban areas. In this same vein, perhaps the research could include information on per capita funds for (a) metropolitan areas, (b) areas with a population of 35,000 or more—but which are not in a metropolitan area, and, (c) areas of less than 35,000.

(2) What kinds of federal health programs are in existence and how many are actually operating in metropolitan areas, non-metropolitan areas of 35,000 to 50,000 population, and in areas with populations of 35,000 or less; what is the present funding and how much has been funded and spent in the past five years.

(3) Information is needed on: (a) methods being used to provide adequate health care facilities and health services personnel in areas with a population of 15,000 or less as well as for communities of 5,000 or less; (b) methods used, as well as suggested alternatives, to get persons who live in sparsely populated areas to hospitals and clinics; (c) suggestions for alternative methods of providing health care to non-metropolitan areas are also desired, such as, the establishment of satellite clinics so that no person is more than ten miles from a clinic

and no more than 20 to 30 miles from a hospital; establishment of a system of paramedics with electronics communications systems to the clinics and hospitals.

(4) Suggestions for incentives for persons in the medical profession to work in non-metropolitan or rural areas.

I am sure there are other areas which have not come to mind. I would, therefore, welcome any additional information or suggestions from your staff which would aid in pursuing the objectives of the hearings.

It will be appreciated if your staff will prepare a preliminary working paper as the basis of the research and contact my staff, either Desdie Prince or Dorothy Thomas, extension 5–4076, within ten days to discuss the proposed research. It is highly desirable that the first draft of the completed research be provided to me within three weeks after this discussion.

Your usual prompt and thorough attention to this matter will be greatly appreciated.

With kindest regards, I am,

Sincerely yours,

BILL ALEXANDER,
Chairman, Subcommittee on Family Farms and Rural Development.

LETTER OF TRANSMITTAL

THE LIBRARY OF CONGRESS,
CONGRESSIONAL RESEARCH SERVICE,
Washington, D.C., November 22, 1974.

Hon. BILL ALEXANDER,
Chairman, Subcommittee on Family Farms and Rural Development,
House Committee on Agriculture.

DEAR MR. CHAIRMAN: In your letter to me of May 10, 1974, you requested the Congressional Research Service "to review rural health needs and problems, to determine how these needs are being met, what services are available, how government programs are being implemented, and what actions need to be taken to improve health services to nonmetropolitan areas."

The attached report entitled "Health Services for Rural Areas in the United States" was prepared in response to your request. It was prepared by Mr. Herman E. Schmidt of our Education and Public Welfare Division.

If we can be of further assistance to the Subcommittee, please let me know.

Sincerely,

LESTER S. JAYSON, *Director.*

HEALTH SERVICES FOR RURAL AREAS IN THE UNITED STATES

Table of Contents

I. INTRODUCTION

This report was prepared by the Congressional Research Service in response to a written request from Congressman Bill Alexander, Chairman of the House Subcommittee on Family Farms and Rural Development of the Committee on Agriculture.

Congressman Alexander stated in his letter to Mr. Jayson of May 10, that the Subcommittee planned to hold hearings "to review rural health needs and problems, to determine how these needs are being met, what services are available, how the government programs are being implemented, and what actions need to be taken to improve health services to the non-metropolitan areas." He requested the assistance of the Congressional Research Service in preparing the necessary research as well as providing other assistance in preparation for the hearings.

A. Summary of Findings

There is little question that rural people have a more difficult time obtaining the services of a doctor or dentist, but there are surprisingly small overall differences between rural and urban people regarding the use of services, given the wide discrepancies in the availability of health professionals.

Perhaps more surprising are the relatively small differences in the amounts of acute and chronic illnesses between people in rural and urban areas, with much of the differences explained by the larger numbers of poor people and old people in rural areas. There is no question that old and poor people are sicker.

The major health services problem in rural areas is the shortage of health manpower. This is usually defined by experts as the absence of physicians and dentists, with the assumption, rightly or wrongly, that other health professionals can be attracted to rural areas if physicians and dentists are there. Given the lack of success to date in attracting physicians and dentists to rural areas, this should probably be the major focus of any efforts to improve health services in rural areas.

There is a great deal of discussion, planning, and activity within and among medical schools concerning programs to deal with health personnel shortages in rural areas. Although progress has been made, it is insufficient beside the size and complexity of the manpower shortage problem in rural areas.

Related to the problem of getting health professionals into rural areas is the problem of fitting them into a functioning health program, and retaining them. Far greater attention may have to be paid to developing relationships between rural health practitioners and institutions which can provide administrative and professional support.

Programs designed to attract health practitioners to rural areas will create a far different type of health care, with health professionals assigned to rural areas for a period of years and being replaced, in many instances.

Many rural people do not have the ability to pay for health services, or have health services paid for on their behalf. Almost half of the poor people in America are in rural areas and people in rural areas generally have lower incomes. In many rural areas health professionals cannot now be attracted or retained without financial subsidies.

Although there is little disagreement that rural people have fewer health services available to them, along with people in the inner cities, there is little agreement about the size of the problem, or what should be done about it.

Despite this lack of agreement, there are a large number of programs designed to provide more health services for rural people -- particularly by the Federal Government. For fiscal year 1972, the latest year for which data is available, 28.8 percent of reported Federal health outlays went to non-metropolitan areas. Over 90% of the outlays were made by the Medicare and Medicaid programs.

Most efforts which were examined and which show promise for improving health services for rural areas have been largely federally funded. Only limited data are available on State and local efforts and investments.

A final note: There is little question that the services are, in addition to being in short supply, of poor quality in many rural areas. At the same time, there appears to be a large number of areas where the quality of the care provided is very good, and where health resources have been used creatively and well. A number of these approaches are described in the sections on models in this report. There are many more, of course. In many rural states, for example, radiologists and pathologists move from town to town providing pathology and radiology services to small hospitals. In some cases, laboratories, through mail systems and transportation systems provide laboratory services to physicians in rural areas. The quality and cost of these arrangements the mixed. In some cases, performance is poor, in other cases it is not. Nevertheless, they are approaches which are

practical for the environment in which they function. There is a need for federal, state, and local planners to have a thorough understanding of the roles of health personnel in rural areas. It is remarkable, for example, how little the literature suggesting innovative uses of health manpower reflects an understanding of the fact that nurse practitioners and physicians assistants by other names have existed for a long time, and in many cases, worked very well. Whatever programs are finally developed would probably work best if very careful attention were given to identifying what is happening in rural areas now, and to accommodate, and not totally replace those arrangements.

B. The Problem of Defining Rural

Most of the information available comparing health resources and health conditions compares metropolitan and non-metropolitan areas. Some information was available for communities over 1000 and communities under 1000 people, e.g., the data from Iowa. A great deal of the data prepared by the National Center for Health Statistics breaks out data in non-metropolitan areas by farm and non-farm populations. The data presented in this report varies in its format. It is hoped that it is sufficiently comparable to be useful.

Again, using information on communities under 2500 and developing a set of data would be impractical. Health resources, because they require large numbers of people to support them, provide services to larger concentrations of populations. Although it is undoubtedly true that rural people do not have the same geographical access to care than urban people do, reporting data on communities under 2500 would distort the availability of services to these communities. It is not unusual for people in com-

munities of 2500 situated 15 miles from a medical center to have far better access to health services than people in large metropolitan areas who live 5 miles from a medical center.

II. THE PROBLEM

A. Comparisons Between Rural and Urban Areas

On December 31, 1972 there were 140 counties in the United States without a physician[1/]

COUNTIES WITHOUT PHYSICIANS LISTED BY STATE

State and county, Dec. 31, 1972	Square miles	Resident population, Dec. 31, 1971	Population per square mile
Total, 50 States and District of Columbia:			
3,084 counties	3,541,072	207,486,300	59
100 percent	(100.0)	(100.0)	
Total counties without a physician:			
140	138,463	497,000	4
4.5 percent	(3.9)	(0.2)	
Alabama	50,851	3,493,200	69
Coosa	650	11,200	17
California	156,537	20,329,900	130
Alpine	723	500	1
Colorado	103,797	2,313,900	22
Archuleta	1,364	2,700	2
Costilla	1,213	2,800	2
Custer	737	1,300	2
Dolores	1,026	1,200	1
Elbert	1,864	4,100	2
Hinsdale	1,054	200	(*)
Kiowa	1,767	2,300	1
Mineral	921	1,000	1
Florida	54,136	7,143,600	132
Glades	753	4,100	5
Lafayette	549	3,000	5
Liberty	839	3,300	4
Georgia	58,197	4,694,800	81
Atkinson	318	5,300	17
Baker	355	3,600	10
Brantley	447	6,500	15
Bryan	443	7,300	16
Dawson	211	4,000	19
Echols	425	1,800	4
Lee	355	7,700	22
Long	402	3,800	9
McIntosh	426	7,800	18
Pike	230	7,400	32
Quitman	171	2,500	15
Taliaferro	195	2,600	13
Webster	195	2,100	11
Wheeler	306	4,300	14
Idaho	82,677	739,600	9
Boise	1,910	2,100	1
Clark	1,751	1,100	1
Custer	4,929	3,200	1
Owyhee	7,641	6,100	1
Kansas	82,056	2,261,500	28
Elk	647	3,800	6
Kentucky	39,851	3,307,300	83
Menifee	210	4,000	19
Owsley	197	5,100	26
Robertson	101	2,300	23

See footnote at end of table.

State and county, Dec. 31, 1972	Square miles	Resident population, Dec. 31, 1971	Population per square mile
Michigan	56, 817	9, 045, 400	159
Keweenaw	528	2, 100	4
Montmorency	555	5, 600	10
Mississippi	47, 358	2, 229, 500	47
Issaquena	414	2, 800	7
Missouri	69, 046	4, 777, 600	69
Bollinger	621	9, 400	15
Carter	506	4, 000	8
Clark	506	8, 600	17
De Kalb	423	7, 200	17
Hickory	397	4, 700	12
McDonald	540	13, 000	24
Maries	525	6, 900	13
Mercer	455	5, 200	11
Osage	608	11, 200	18
Ozark	732	5, 900	8
Putnam	518	6, 200	12
Ralls	478	7, 600	16
Reynolds	817	6, 400	8
Schuyler	306	5, 100	17
Scotland	441	5, 500	12
Shannon	999	7, 700	8
Montana	145, 603	713, 600	5
Golden Valley	1, 176	900	1
Judith Basin	1, 880	2, 600	1
Petroleum	1, 655	800	(1)
Prairie	1, 730	1, 900	1
Treasure	985	1, 000	1
Wibaux	890	1, 400	2
Nebraska	76, 528	1, 523, 200	20
Arthur	704	600	1
Banner	738	1, 200	2
Blaine	710	1, 200	2
Gosper	464	2, 300	5
Grant	764	800	1
Greeley	570	5, 200	9
Hayes	711	1, 700	2
Keya Paha	768	1, 100	1
Logan	570	1, 000	2
Loup	574	1, 000	2
McPherson	856	800	1
Sioux	2, 063	1, 800	1
Thomas	716	1, 100	2
Wheeler	576	1, 000	2
Nevada	109, 889	514, 400	5
Esmeralda	3, 570	600	(1)
Storey	262	700	3
New Mexico	121, 445	1, 035, 500	9
Guadalupe	2, 988	5, 100	2
Harding	2, 134	1, 200	1
North Dakota	69, 280	627, 800	9
Billings	1, 139	1, 200	1
Dunn	1, 992	4, 300	2
La Moure	1, 136	7, 500	7
Oliver	721	1, 800	2
Sargent	853	5, 600	7
Sheridan	989	3, 200	3
Slope	1, 225	1, 300	1
Ohio	41, 014	10, 830, 600	264
Vinton	411	10, 100	25
Oklahoma	68, 984	2, 630, 800	38
Dewey	1, 018	5, 900	6
Oregon	96, 209	2, 185, 400	23
Gilliam	1. 208	2, 500	2
Sherman	830	1, 900	2

See footnote at end of table.

State and county, Dec. 31, 1972	Square miles	Resident population, Dec. 31, 1971	Population per square mile
South Dakota	75, 955	673, 600	9
Aurora	709	4, 500	6
Buffalo	482	1, 900	4
Campbell	782	3, 400	5
Clark	964	5, 000	5
Hanson	430	3, 500	8
Harding	2, 682	2, 000	1
Hyde	863	2, 300	3
Jerauld	527	3, 100	6
Jones	973	1, 700	2
Mellette	1, 306	2, 400	2
Sanborn	570	3, 800	7
Stanley	1, 414	2, 200	2
Sully	1, 004	2, 700	3
Washabaugh	1, 061	1, 700	2
Ziebach	1, 981	2, 700	1
Tennessee	41, 367	4, 016, 800	97
Meigs	191	5, 200	27
Morgan	539	13, 700	25
Union	212	9, 800	46
Texas	262, 970	11, 565, 800	44
Armstrong	907	2, 100	2
Borden	907	900	1
Briscoe	874	2, 500	3
Carson	900	6, 700	7
Concho	1, 004	2, 500	2
Glasscock	863	1, 000	1
Hartley	1, 488	2, 600	2
Hudspeth	4, 554	2, 200	(1)
Irion	1, 073	1, 100	1
Jeff Davis	2, 259	1, 500	1
Kenedy	1, 394	700	1
Kent	880	1, 300	1
King	944	500	1
Kinney	1, 393	2, 000	1
Lipscomb	934	3, 400	4
Loving	648	300	(1)
McMullen	1, 159	1, 300	1
Oldham	1, 478	2, 400	2
Rains	219	4, 000	18
Real	622	2, 200	4
Roberts	899	1, 200	1
San Jacinto	624	6, 500	10
Sherman	916	4, 100	4
Stonewall	926	2, 400	3
Terrell	2, 391	1, 500	1
Utah	82, 381	1, 115, 300	14
Daggett	706	1, 000	1
Piute	754	1, 100	1
Rich	1, 023	1, 800	2
Wayne	2, 486	1, 600	1
Virginia	39, 838	4, 740, 200	119
Charles City	184	5, 900	32
King and Queen	318	7, 000	22
West Virginia	24, 084	1, 755, 000	73
Gilmer	339	7, 300	22
Wisconsin	54, 464	4, 499, 600	83
Florence	487	3, 300	7

[1] Less than 0.5.

Sources: U.S. Bureau of the Census, "County and City Data Book, 1967" (A statistical Abstract Supplement). Washington, D.C.: U.S. Government Printing Office; 1967. Sales and Management, Inc., "Survey of Buying Power," July 1972.

In 1970, there were 132 counties without a physician. In 1963, there were 98 counties without a physician.[2/]

Congressman William Roy, in introducing H.R. 14357, called the National Health Services Manpower Act of 1974, stated:

> Similarly, rural areas have many fewer physicians, on a per capita basis, than do urban areas. Nationwide the ratios are 1.73:1,000 for metropolitan areas and 0.80:1,000 for nonmetropolitan areas. In my home State, Kansas, one 7-county rural area has a 0.54:1,000 ratio, and another 13-county rural area has a 0.51:1,000 ratio. In contrast, the urban Wichita area has a 1.39:1,000 ratio, and in suburban Kansas City, Johnson County has a 1.27:1,000 ratio.

In discussing the drift toward greater manpower shortages in rural areas he stated:

> As there are clear inequities in the supply of physicians to various population groups within the country, the trend in the distribution of physicians is also clear.
>
> In one 1959 survey, the physician/population ratio in New York was 1.87:1,000, while in Mississippi it was 0.72:1,000, a variation of 259 percent. In the same survey in 1969, the ratios were 2.21:1,000 and 0.77:1,000, and the variation had grown to 287 percent. Projections to 1990 indicate that in that year New York will have more than 400 percent more physicians than Mississippi.
>
> The number of physicians in rural areas has also decreased over the past decade. In Kansas, between 1963 and 1970, 50 of the 105 counties lost physicians. All of the 50 counties are rural. This trend can be projected into the future, for in 1970, 20 counties--all rural--had more than 50 percent of their physicians over 60 years of age, and another 20--all rural--had more than 30 percent of their physicians over 60 years of age.

Rural counties with less than 10,000 persons attracted less than one percent of the 1960-65 medical school graduates, although they accounted for 2.5% of the total United States population.

Physician-population ratios, by size of county, 1969. 3/

County classification	Population per non-Federal physician
	Number
Total */	700
Nonmetropolitan:	
Less than 10,000 inhabitants	2,103
10,000-24,999 inhabitants	1,770
25,000-49,999 inhabitants	1,358
50,000 or more inhabitants	990
Metropolitan:	
Potential metropolitan	843
50,000-499,999 inhabitants	768
500,000-999,999 inhabitants	675
1,000,000-4,999,999 inhabitants	542
5,000,000 or more inhabitants	450

*/ Excludes Puerto Rico and possessions.

Shortages of health workers are not restricted to physicians, as is shown in the following table: 4/

Distribution of selected health personnel per 100,000 population, by SMSA and non-SMSA areas, 1966-68

Health personnel	Year	Total		Per 100,000 population	
		SMSA	Non-SMSA	SMSA	Non-SMSA
		Number			
Pharmacists	1966	81,510	23,587	57.4	43.7
Registered nurses	1966	471,202	120,527	332.1	223.0
Dentists	1967	87,481	19,199	61.7	35.5
Physicians, D.O.	1967	8,850	2,387	6.2	4.1
Podiatrists	1968	7,170	800	5.1	1.5
Resident population	1966	141,894,000	54,039,100	---	---

State and county studies support the national data. The physician shortage problem in rural areas in Iowa is described in a report prepared in 1972 . 5/ The following table describes population changes from 1950 to 1970.

P O P U L A T I O N I N F O R M A T I O N

STATE SUMMARY

State Totals	1950	1960	% Change	1970	% Change
Population	2,621,073	2,757,537	5.2	2,825,041	2.4
Percent Rural	52.3	47.0	-5.3	42.8	-4.2
Percent Urban	47.7	53.0	5.3	57.2	4.2
Under Age 15	705,868	857,852	21.5	806,753	-6.0
Percent	26.9	31.1	4.2	28.6	-2.5
Age 65 and Over	272,998	327,685	20.0	350,293	6.9
Percent	10.4	11.9	1.5	12.4	0.5
Places 1,000 & Over	1,406,727	1,627,625	15.7	1,798,226	10.4
Percent	53.7	59.0	5.3	63.7	4.7
Places Less Than 1000	1,214,346	1,129,912	-7.0	1,026,815	-9.1
Percent	46.3	41.0	-5.3	36.3	-4.7

The table above shows a considerable drop in population for places of less than 1000. More striking, however, is the drop in the number of physicians in those same places. In 1971, there were only a third of the number of physicians involved in patient care as in 1950! 6/

PHYSICIAN INFORMATION

STATE SUMMARY

MEDICAL DOCTORS*

Places	1950 Age 70 & Under Patient Care	1950 Age 70 & Under Non-Patient Care	1950 Over Age 70	1950 Total	1971 Age 70 & Under Patient Care	1971 Age 70 & Under Non-Patient Care	1971 Over Age 70	1971 Total	1971 Age 70 & Under Patient Care Gen. Prac.	1971 Age 70 & Under Patient Care Specialists
Population 1,000 or more	1,751	4	352	2,107	1,792	27	107	1,926	708	1,084
Population less than 1,000	245	0	113	358	81	0	14	95	76	5
State Total	1,996	4	465	2,465	1,873	27	121	2,021	784	1,089

*Excluding State Institutions, interns, residents, retired physicians, physicians not practicing

Equally important is the fact that while the number of active physicians in the United States increased from 219,897 in 1950 to 323,203 in 1970 , there was a decline in the number of physicians in Iowa from 1950 to 1971.

Dr. Jerome Schwartz describes the health resources available to people in an eight county rural area in West Virginia:* [7/]

> In 1938 when this eight-county area had 126,000 people, there were at least five doctors in each county--as many as fifteen physicians in three of the counties. Clay County, referred to before, had five physicians, and Doddridge, which has none today, had ten in practice. Population ratios for these eight counties show eighty physicians per 100,000 persons in 1938, sixty-five in 1950, fifty-three in 1960, and twenty-eight today.[13/] This compares to ninety-two physicians per 100,000 for the state of West Virginia as a whole.
>
> These isolated counties have never had many dentists, and as the old dentists die off, few are replaced. In 1958 there were twenty-four dentists in the eight counties, which is more than three times as many as are practicing today in this region. The lack of dental care is one of the most critical health problems of rural people. Interviews of rural residents in one county revealed that over the period of one year less than one-quarter of the families had any member visit a dentist.
>
> Four of the eight counties have hospitals. The counties without hospitals have great difficulty in recruiting young physicians because there are no colleagues to work with or facilities. Outside of funeral vans, emergency vehicles are available in only two of the counties. There are no physical therapists in the entire region and there are only six medical technicians. Even though these areas have many aged persons, there is almost a total lack of skilled nursing care, home health services, rehabilitative care, and extended health care.

---

*It should be noted that Clay County is receiving services of staff supplied by the State Health Department. Two pediatricians hold clinics in Clay twice per week; nurses, dentists, dental hygienists, nutritionists, and laboratory technicians also come from Charleston on a regular basis.

Family planning services are also generally lacking in rural areas although our own Family Planning Project has initiated services in some of these isolated communities.

Public health programs are very narrow and limited in these rural areas. Minimal public health services should include some attention to environmental hazards and sanitation; clinics for prenatal care; vaccinations; healthy child care; home visits to new mothers, the disabled, and the aged; health education on such subjects as safety, nutrition, hygiene, and cigarette smoking; and some screening of school children for eye, dental, and serious health problems. As noted in Table 2-III, the staffs of rural health departments are minimal: sanitarians in only three of the eight counties, only one home health aide, and just nine nurses in the entire area*. Generally, the only functions of the local part-time health officer are to sign official papers, attend meetings, and make himself available for telephone consultation. One county health officer told us he rarely goes to the health department.

The following is a description of health resources in Gilmer County. Glenville, the county seat, is the home of two osteopaths, two general practitioners, and one dentist. However, the two general practitioners, are both over eighty years of age and in poor health; the two osteopaths, both nearly sixty years and aged beyond their years, have exceedingly busy practices. One of them fills in as the physician for Glenville State College since the College has been unable to recruit its own doctor. The dental resident in Glenville is young and conscientious; he handles virtually all the dentistry for Gilmer, as well as caring for residents from neighboring counties. However, he is too busy to serve the schools.

The local health department consists of the health officer who is over eighty years of age and has been paralyzed for several years; a public health nurse, near retirement; and a clerk. The county has not been able to recruit a sanitarian. The entire

*A twenty-five-bed hospital in Grantsville, Calhoun County, and a new hospital which is being built in Weston, Lewis County, to replace the present hospital facility.

county health budget was $19,229 for fiscal 1970. Only 591 dollars was from federal sources; local appropriations covered 71 per cent of the budget.

There is no hospital in Gilmer County; the closest hospitals are up to an hour away from Glenville.* In a county where about half of the families earn less than $3,000 annually and the proportion of welfare cases is higher than the state norm, travel is too expensive for the majority. The county desperately needs transportation to out-of-county hospitals, as well as local emergency care and local practitioners.

To summarize the health problems, I would like to quote this statement by my colleague Lydia Aston, who participated in visits to rural areas:

> There are many such areas in the Appalachian region, and specifically in West Virginia, where because of lack of personal resources, inadequate public support of essential services, and unavailability of health care, significant proportions of the population have gone without any except crisis medical care for many years. In these areas Hill-Burton built hospitals are understaffed and underused. In some of these hospitals entire wings are closed due to a shortage of physicians and nurses. County health departments in the most critical areas provide essentially no services to the county population. Well-child services and prenatal care are generally not offered in the most depressed rural areas. County public health programs in these areas are for all practical purposes phantoms on paper, with part-time health officers who are either too busy as private practitioners or too old to go to the health department routinely.[14]/

LACK OF ACCESS TO SPECIALIZED SERVICES

Specialty services are concentrated in urban areas, sometimes at great distances from people in rural areas. There are nearly three times as many specialists in urban areas as in rural areas per 100,000 people. 8/

--Distribution of physicians per 100,000 population, by SMSA and non-SMSA areas, 1970 1/

Non-Federal physicians	Total		Per 100,000 population	
	SMSA	Non-SMSA	SMSA	Non-SMSA
	Number			
Patient care	217,686	37,341	145.7	69.1
Office-based practice:				
General practice	34,359	16,457	23.0	30.4
Special practice	121,731	16,377	81.5	30.3
Hospital-based practice	61,596	4,507	41.2	8.3
Other professional activity 2/	24,403	1,914	16.3	3.5
Resident population	149,404,900	54,080,000	---	---

1/ A Standard Metropolitan Statistical Area (SMSA), defined at the time of the 1970 Census, generally consisted of a county or group of contiguous counties which contained at least one city of 50,000 inhabitants or more, or twin cities with a combined population of at least 50,000. The SMSA's are basically urban and the non-SMSA's are largely rural.

2/ Includes medical teaching, administration, research, and other health-care related work.

As would be expected, rural people receive far fewer specialty services:

Table 11--Visits per 100 families to selected medical specialists and practitioners, by residence, fiscal 1964 9/

Type of specialist and practitioner	Place of residence		
	SMSA	Outside SMSA	
		Nonfarm	Farm
	Visits per 100 families per year		
Specialists:			
Pediatrician	92.0	46.0	15.1
Obstetrician and/or gynecologist	75.0	44.4	19.2
Ophthalmologist	42.3	28.3	25.6
Otolaryngologist	24.0	17.2	12.0
Orthopedist	23.7	14.3	9.1
Dermatologist	21.5	11.1	7.6
Psychiatrist	9.9	5.3	---
Practitioners:			
Chiropractor	26.4	38.5	64.8
Optometrist	42.1	43.6	45.2
Podiatrist	22.6	10.5	6.9

EMERGENCY MEDICAL SERVICES

The National Academy of Sciences reported in 1966: [10/]

> In 1965, 52 million accidental injuries killed 107,000, temporarily disabled over 10 million and permanently impaired 400,000 American citizens at a cost of approximately $18 billion. This neglected epidemic of modern society is the Nation's most important environmental health problem. It is the leading cause of death in the first half of life's span.

In a statement before the House sub-committee on Public Health and Environment, in March of 1973, a spokesman for the American Medical Association noted:

> Provision of emergency medical services in rural areas and in small communities presents particularly acute problems of accessibility and availability.

Rates of injuries in metropolitan and non-metropolitan areas are roughly equivalent, being 247.2 per 1,000 in metropolitan areas, 255.8 and 225.2 per 1,000 for nonfarm and farm persons, respectively.

According to the National Safety Council, however, in their publication called Accident Facts, the rate of deaths from accidents in rural areas is four times the national average.

The need to move people long distances in rural areas requires highly sophisticated transportation, communication, administrative, and health care systems. In many areas, the rural communities have neither the money, equipment, or trained manpower to operate quality emergency health care systems.

INSUFFICIENT FINANCING OF HEALTH SERVICES

In 1970, 17% of people in rural areas were poor, compared with 10.2% in urban areas. The percentage of poor in rural areas exceeded the percentage of poor in inner cities.

Table--Persons below the low-income level, by residence, 1970 1/

Residence	Total U.S. population	Persons in poverty 1/	Percentage of total population in poverty
	Number		Percent
U.S. total	202,489,000	25,522,000	12.6
Metropolitan areas	130,907,000	13,378,000	10.2
Inside central city	57,290,000	8,165,000	14.3
Outside central city	73,617,000	5,213,000	7.1
Nonmetropolitan	71,580,000	12,142,000	17.0

* The classification of families and unrelated individuals as being below the low-income level is based on the poverty index adopted by a Federal inter-agency committee in 1969. This index is based on a sliding scale of income, adjusted for such factors as family size, sex and age of family head, number of children, and farm or nonfarm residence. To keep the poverty standard constant over time, thresholds are updated annually based on changes in the Consumer Price Index. The low-income threshold for a nonfarm family of four was $3,968 in 1970.

Unless these persons who are poor are eligible for Medicare or Medicaid, they cannot afford health insurance that provides adequate protection. Either they have no health insurance at all, or they have health insurance which provides very limited coverage.

People in rural areas have less health insurance than people in urban areas, as shown in the table below:

Percentage of persons under 65 years old having hospital and surgical insurance coverage, by residence, 1968. 12/

Area of residence	Hospital insurance 1/		Surgical insurance 1/	
	Covered	Not covered	Covered	Not covered
	Percent			
All residences	78.2	20.5	76.6	21.9
SMSA	81.3	17.4	79.6	18.9
Outside SMSA:				
Nonfarm	74.4	24.2	72.9	25.5
Farm	61.9	36.8	59.7	38.8

1/ Includes persons of unknown coverage status.

* Includes persons of unkown coverage status.

Because of the nature of employment in rural areas, few people in rural areas have group health insurance. Only 20% of farmers and farm workers and their families had group health insurance policies in 1973, which means in excess of 2,500,000 farmers, farm workers, and their families are covered by individual policies.

Table--Percentage distribution of all full-time workers and of full-time wage and salary workers in private industry, by group health insurance status and industry division, April 1972.. 13/

Industry division	Total number (in thousands)	Percentage distribution by coverage status			Percentage distribution by industry division		
		Total [1]	Covered	Not covered	Total [1]	Covered	Not covered
				Total			
All full-time workers							
Total	65,527	100	70	29	100	100	100
Agriculture	2,435	100	20	79	4	1	10
Mining	573	100	88	11	1	1	(*)
Construction	4,618	100	58	41	7	6	10
Manufacturing:							
Durable goods	10,981	100	89	10	17	21	6
Nondurable goods	7,318	100	84	16	11	13	6
Transportation	2,601	100	79	21	4	4	3
Communications and public utilities	2,142	100	92	8	3	4	1
Trade:							
Wholesale	2,766	100	75	24	4	4	4
Retail	8,493	100	54	45	13	10	20
Finance, insurance, and real estate	3,843	100	75	24	6	6	5
Services	19,758	100	65	34	30	28	36
				Men			
Total	44,206	100	74	25	100	100	100
Agriculture	2,200	100	21	78	5	1	16
Mining	524	100	88	10	1	1	(*)
Construction	4,382	100	59	41	10	8	16
Manufacturing:							
Durable goods	8,801	100	90	9	20	24	7
Nondurable goods	4,719	100	89	10	11	13	4
Transportation	2,338	100	78	21	5	6	4
Communications and public utilities	1,540	100	92	7	3	4	1
Trade:							
Wholesale	2,253	100	77	23	5	5	4
Retail	5,348	100	61	38	12	10	19
Finance, insurance, and real estate	1,963	100	78	21	4	5	4
Services	10,137	100	74	26	23	23	24
				Women			
Total	21,321	100	61	38	100	100	100
Agriculture	235	100	15	85	1	(*)	2
Mining	49	(*)	(*)	(*)	(*)	(*)	(*)
Construction	236	100	46	54	1	1	2
Manufacturing:							
Durable goods	2,179	100	83	16	10	14	4
Nondurable goods	2,599	100	74	25	12	15	8
Transportation	263	100	80	20	1	2	1
Communications and public utilities	601	100	90	10	3	4	1
Trade:							
Wholesale	513	100	64	36	2	2	2
Retail	3,144	100	43	56	15	10	22
Finance, insurance, and real estate	1,880	100	72	28	9	10	6
Services	9,621	100	56	44	45	41	52

Although individual policies are clearly better than no policy at all, there are dramatic disadvantages to individual policies as compared to group policies. Under group health insurance policies written by commercial companies, for example, over 90 percent of the premiums paid into the insurance companies are returned in payments for health care services. Under individual policies, less than 55 percent is returned in payments for health care services. 14/

—Retentions [1] of private health insurance organizations as a percent of subscription or premium income, 1948–72 [2]

Year	Total	Blue Cross-Blue Shield			Insurance companies			Independent plans [3]			Private group clinic	Dental service corporation
		Total	Blue Cross	Blue Shield	Total	Group policies	Individual policies	Total	Community	Employer-employee-union		
1948	29.7	15.6	14.6	22.0	48.8	30.2	61.7	7.9	(3)	(3)	(3)	(3)
1950	23.2	14.5	12.3	21.6	33.9	23.8	47.4	10.0	(3)	(3)	(3)	(3)
1955	19.8	11.3	8.6	17.6	27.5	16.1	46.9	8.8	(3)	(3)	(3)	(3)
1960	14.5	7.9	7.2	9.6	21.1	9.6	47.1	3.5	(3)	(3)	(3)	(3)
1961	14.7	7.8	6.8	10.3	21.0	10.1	47.1	8.4	(3)	(3)	(3)	(3)
1962	14.4	7.2	5.7	11.0	20.9	9.4	46.3	9.2	(3)	(3)	(3)	(3)
1963	13.3	6.5	5.0	10.3	19.4	8.3	46.0	9.7	(3)	(3)	(3)	(3)
1964	12.8	5.6	3.9	9.7	19.1	8.3	45.5	9.5	(3)	(3)	(3)	(3)
1965	12.7	6.1	4.7	9.9	18.4	6.9	46.3	9.4	8.2	10.2	10.7	6.9
1966	12.5	6.1	4.6	12.0	18.1	6.9	46.9	9.2	8.0	10.2	11.5	6.5
1967	14.0	10.4	8.3	16.5	17.4	6.4	47.3	9.7	8.4	10.8	13.3	6.2
1968	12.1	6.7	3.7	13.8	16.5	6.2	46.4	8.6	6.2	9.7	8.8	17.2
1969	10.8	4.1	2.2	8.9	16.7	5.9	46.2	7.9	6.9	8.2	12.9	10.8
1970	8.4	4.2	2.7	7.8	12.5	3.9	41.9	3.8	4.5	1.8	18.0	14.7
1971	9.9	7.0	5.3	10.9	13.1	2.8	46.2	5.9	5.2	4.3	18.1	20.0
1972	12.7	9.4	8.0	12.8	16.4	6.7	47.4	7.8	8.1	6.1	21.5	13.3

[1] Amounts retained by the organizations for operating expenses, addition to reserves, and profits.

[2] Derived from table 16.

[3] Data by type of plan before 1966 not available.

The dollar costs per enrollee for administration for individual enrollees was almost twice the cost for group enrollees. 15/

Year	Operating expense per enrollee				
	Blue Cross [1]	Blue Shield [1]	Insurance companies		Independent plans
			Group	Individual	
1961	$1.76	$1.79	$5.67	$15.19	$4.38
1962	1.85	1.89	5.95	15.44	5.34
1963	1.95	2.01	6.08	16.20	5.96
1964	2.07	2.12	6.59	17.13	6.14
1965	2.18	2.20	6.77	18.34	4.46
1966	2.43	2.38	7.33	18.01	4.75
1967	2.72	2.61	7.62	18.31	4.85
1968	3.11	3.01	8.58	20.87	5.31
1969	3.63	3.53	9.37	20.70	6.65
1970	4.15	3.91	10.48	21.13	7.82
1971	4.56	4.44	10.82	23.99	8.68
1972	5.06	5.07	13.06	24.48	9.77
Percentage change, 1961-72:					
Total	186.9	183.2	130.2	61.0	123.1
Average annual	10.0	9.9	7.9	4.5	7.6

[1] Duplication due to the fact that some plans are joint Blue Cross and Blue Shield plans and report the same data to both national organizations has not been eliminated.

Source: Derived from the data on gross enrollment and financial experience in the annual articles on private health insurance, *Social Security Bulletin*, February issues.

Because of the level of poverty, and the nature of employment in rural areas, proportionally more people in rural areas have no health insurance, and poor health insurance then in urban areas. Too, proportionally more rural people have individual policies as opposed to group policies than in urban areas. They, therefore, pay more for value received for health insurance than do urban people.

PROBLEMS IN THE QUALITY OF SERVICES

In an article entitled The Small General Hospital by Walter O. Spitzer, the author noted: [16]

> The problems of small general hospitals can be presented succinctly in the form of a diagnosis: The quality of services delivered in or by small community hospitals is below the standard that the present state of knowledge affords. Moreover, whatever inefficiency exists in the delivery of services in any hospital is aggravated in the small community hospital.

Mr. Spitzer cited a study done of 108 small community hospitals in Michigan in which 97 of these hospitals did not meet accreditation standards established by the Joint Commission on Accreditation of Hospitals and the American Osteopathic Association.

Mr. Spitzer cites other evidence of deficiencies in laboratory services, diagnostic techniques, and postoperative complications from surgery.

The Social Security Administration in administering the Medicare Program has long recognized that there were serious deficiencies in small rural hospitals. Initially, approximately 600 hospitals, most of which contained 50 beds or less and were located in rural areas, did not meet the conditions of participation in the Medicare Program. They were given special temporary certification however, because the people living in the hospitals' service areas could not do without care, regardless of the quality. Over eight years later, approximately 225 hospitals continue to exhibit deficiencies which represent potential hazards to patients.[17]

We know very little about the quality of care provided by physicians, regardless of where they practice. One study that did look at the quality of physician care by general practitioners in rural areas in North Carolina in the 1950's found that 44% of the general practitioners studied provided poor or marginal care. 18/

It would be unreasonable to conclude from that study that care rendered in all rural areas by general practitioners, or even by general practitioners in rural North Carolina today is of poor quality. However, there is need for concern for a situation where incoming physicians are not keeping pace with physicians leaving rural areas, and where the age of physicians in rural areas continues to rise. The older physicians become, the longer they are away from any formal training. Given the absence of any requirements to relicense or recertify practicing physicians as to their level of competence and given the greater degree of isolation experienced by rural physicians, the question of quality differentials between urban and rural physicians merits a closer look.

B. COMMENTARY ON THE MAGNITUDE OF THE SHORTAGE OF PHYSICIANS IN RURAL AREAS

In the foregoing data the case is readily made that there is a shortage of physicians in rural areas, in addition to other types of manpower. There is considerable debate, however, as to what the magnitude of the shortage is.

The shortage of physicians is determined by judgements as to the number of physicians that are needed or adequate for the people in rural areas. The following table, developed by the Department of Health, Education, and Welfare illustrates the impact of those judgements on the numbers of physicians required.

NUMBER OF PHYSICIANS REQUIRED TO MEET SPECIFIED PRACTITIONER RATIO CRITERIA ON A COUNTY BASIS

Practitioner/population ratios	Number of counties below criteria	Number of physicians required to meet criteria
1:2,500.....	966	1,841
1:2,000.....	1,396	3,774
1:1,500.....	1,982	9,470
1:1,200.....	2,349	17,679
1:1,000.....	2,591	29,413

Source: Computation from data in Area Resource File, RAS, BHRD, HRA. As can be seen, the ratio selected can have substantial impact on the people's access to care, the cost of care, and the success of any effort to provide a "sufficient" number of physicians.

The approach used above uses alternative ratios of physicians to populations by counties. The difficulty in selecting an appropriate ratio as desirable is based on several factors. One is the difficulty of using county ratios to determine shortages, since county shortages may not necessarily denote shortages of health services within the trade areas. For example, surrounding service areas may allow everyone in a particular county to have excellent access to care without a single doctor in a county. Secondly, there is the difficulty of selecting an appropriate ratio given a number of health delivery factors. For example, does the shortage area encompass an entire medical service area requiring the full range of health services, or does it merely encompass an area whose needs can be met through the provision of primary health care services? If it were the former, far more physicians would be required. How acceptable are the conventional ratios used in urban areas, given the recent evidence on the ability of others such as nurse practitioners and nurse midwives to do many of the tasks that physicians now do? How acceptable are urban ratios given possible differences in utilization patterns in rural areas?

Given these uncertainties, and others, how do the public and private institutions proceed to deal with shortages?

One possible approach to eliminate some of the problems created by the use of counties is the use of health services areas as the basic unit within which shortages would be considered. Such areas could be established around existing or potential medical trade areas at

a size which would allow the placement of sufficient resources to provide the majority of health services needed by that population, and would provide reasonable access to services by the population in the area. For example, there would be a sufficient population base to support specialty services that may require population bases of 30, 50, or even 100 thousand people to support them, such as radiology, dermatology, and neurosurgery.* By drawing health service area boundaries in this manner, the problems of porportions of primary to secondary care are eliminated since almost 100 per cent of these services would be provided within those areas.

The Bureau of the Census has devised units called State Economic Areas, which group 3000 counties into 509 SEA's. These groupings are based on economic interdependency. They are formed within States and do not cross State lines. Given some probable imperfections in both the criteria and the designations, there appears to be value in using SEA's as opposed to counties in determining shortages.

The second factor, in addition to the characteristics of the area, is the determination of how many physicians, as well as other types of health manpower, would be needed in these areas. The two most prevalent approaches

*While population bases to support medical systems are important--geographical dispersion of populations would also have a bearing on the resource to population ratios, since there should be limits as to distance and time between people and services. The Iowa proposal, for example, which is considered later, would set a limit of one hours driving time for most specialty services.

at this time appear to be: (a) the use of the existing national ratio of non-federal physicians providing patient care which is 130 physicians per 100,000 persons or (b) the use of the health maintenance organization ratios, which is presumed to represent a more efficient use of physician time. This ratio, which represents a median figure, is approximately one physician per 1000 persons, or 100 per 100,000. Using these two approaches, it is then necessary to determine how many physicians would be needed to bring the number of physicians up to either of these ratios. The Bureau of Health Resources Development, using rural SEA areas only, found the following:

(a) for the ratio of 130 per 100,000, 43,208 additional physicians would be required;

(b) for the ratio of 100 per 100,000, 19,600 additional physicians would be required.

These data are not intended to suggest that these are the only two ratios appropriate to be used, but merely to establish some order of magnitude of the shortage of physicians in rural areas.

In addition, but to a lesser degree, these data can be misleading in the same way county data can, i.e., people may be able to move easily from one State Economic Area to obtain care. Nor do the data take into account possible public policy decisions which may have an impact on the number of physicians which practice in "doctor-rich" areas. For example, if one area had 50 doctors per 100,000 persons and another area had 150 per 100,00, public policy decisions could conceivably affect both areas, not only the area with the shortage by causing a redistribution between the two areas. This would result in the need for far less physicians to meet the national shortage than would be the case if there were no change in the doctor rich areas.

The Health Resources Administration in the Department of Health, Education, and Welfare is engaged in an analysis of existing program criteria used by the various programs for determining or designating areas with health manpower shortages. This effort is clearly important in developing program consistency among DHEW health programs. Remaining, however, is the task of establishing the criteria which will be used in determining the magnitude and nature of physician and other manpower shortages. Although it is not expected that there will be consensus on any figures developed by technicians in the Department of Health, Education, and Welfare, or by any other institution, it is important that the process proceed with an objective of specifying the health manpower problem in a way all involved institutions, national, state, and local, will find useful.

C. Metropolitan/Non-Metropolitan Variances in Incomes and Workload of Physicians and Dentists

Physicians work longer hours in nonmetropolitan areas than they do in metropolitan areas according to the American Medical Association.

TABLE 16 -- AVERAGE NUMBER OF HOURS PRACTICED PER WEEK BY SPECIALTY AND LOCATION, 1971

Specialty	Total	Location	
		Non-Metropolitan	Metropolitan
Total	53.6 (4064)	56.0	53.2
General Practice	54.1 (847)	57.8	52.5
Internal Medicine	55.2 (771)	54.9	55.3
Surgery	54.6 (1257)	55.2	54.4
Obstetrics-Gynecology	59.1 (296)	61.4	58.8
Pediatrics	54.2 (271)	52.2	54.3
Psychiatry	45.1 (137)	49.5*	45.0
Radiology	48.7 (160)	44.4*	49.8
Anesthesiology	54.4 (153)	44.6*	55.5
Other	41.8 (172)	47.7*	41.1

( ) = Number of observations.
*Based on fewer than 30 observations.

Source: American Medical Association. '73 Profile of Medical Practice. Chicago, 1973. p. 50.

They see considerably more patients.

TABLE 25 -- AVERAGE NUMBER OF TOTAL PATIENTS VISITS PER WEEK BY SPECIALTY AND LOCATION, 1971

Specialty	Total	Location	
		Non-Metropolitan	Metropolitan
Total	135.8 (3860)	175.5	128.2
General Practice	171.5 (836)	199.1	159.7
Internal Medicine	127.2 (755)	155.8	124.3
Surgery	123.4 (1229)	153.0	118.1
Obstetrics-Gynecology	125.6 (299)	140.0	124.0
Pediatrics	163.4 (260)	189.8	161.5
Psychiatry	46.5 (136)	56.8*	46.3
Radiology	199.6 (114)	237.3*	192.2
Anesthesiology	57.8 (105)	29.6*	61.0
Other	160.2 (126)	149.1*	161.3

( ) = Number of observations.
*Based on fewer than 30 observations.

Source: American Medical Association. '73 Profile of Medical Practice. Chicago, 1973. p. 59.

But according to the American Medical Association, they earned less.

TABLE 30 -- AVERAGE NET INCOME BY SPECIALTY AND LOCATION, 1970

Specialty	Total	Location	
		Non-Metropolitan	Metropolitan
Total	$41,789 (2712)	$40,447	$42,047
General Practice	33,859 (597)	35,891	33,024
Internal Medicine	40,251 (495)	34,501	40,753
Surgery	50,701 (822)	48,936	50,984
Obstetrics-Gynecology	47,094 (205)	42,188	47,800
Pediatrics	34,799 (175)	41,846*	34,190
Psychiatry	39,896 (110)	32,276*	40.091
Anesthesiology	39,432 (114)	43,852*	39,084
Other	44,294 (194)	54,731*	42,882

( ) = Number of observations.
*Based on fewer than 30 observations.

Source: American Medical Association. '73 Profile of Medical Practice. Chicago, 1973. p.69.

The pattern for dentists in rural areas is somewhat different. Dentists in small towns saw about the same number of patients as dentists in larger towns did.

Table 59 ■ Average number of patients and patient visits of independent dentists in 1970, by size of city and for five large cities.

City size or city	No. patients		No. patient visits	
	Mean	Median	Mean	Median
Under 2,500	1,688	1,498	3,158	3,425
2,500-25,000	1,514	1,196	3,594	3,357
25,000-100,000	1,556	1,170	3,690	3,495
100,000-1,000,000	1,486	1,003	3,674	3,004
Over 1,000,000	1,165	700	3,211	2,998
All city sizes	1,485	1,004	3,565	3,286
New York	900	499	3,013	2,503
Chicago	1,098	655	3,135	3,550
Los Angeles	1,542	1,300	3,540	3,545
Philadelphia	1,716	725	2,853	2,502
Detroit	1,493	900	3,702	3,400

Source: American Dental Association. The 1971 Survey of Dental Practice. Chicago, 1972. p. 34.

Dentists in smaller towns, however, were more apt to provide longer dental appointments than dentists in larger cities.

Like physicians, dentists in small towns earned less than dentists in larger towns, according to the American Dental Association's 1971 survey.

Table 8 ■ Average income of independent dentists by size of city and average income of independent dentists for five large cities, 1970.

City size or city	% of respondents	Mean net income	Median net income	Mean gross income	Net as % of gross
Under 2,500	4.4	$25,314	$24,300	$46,268	54.7
2,500-25,000	25.5	28,911	27,300	55,180	52.4
25,000-100,000	28.5	32,361	29,600	62,710	51.6
100,000-1,000,000	29.1	31,881	28,900	62,253	51.2
Over 1,000,000	12.5	30,337	27,000	57,657	52.6
All city sizes	100.0	30,770	28,100	59,325	51.9
New York	5.8	30,596	26,000	56,956	53.7
Chicago	2.2	23,338	20,550	45,354	51.5
Los Angeles	1.6	36,350	33,500	77,510	46.9
Philadelphia	1.0	27,120	25,300	45,962	59.0
Detroit	0.9	33,738	31,750	66,376	50.8

Source: American Dental Association. The 1971 Survey of Dental Practice. Chicago, 1972. p. 14.

Like physicians, therefore, it would appear that dentists in small communities work more hours for less money.

Mr. Glen Wilson, Associate Dean for Community Health Services, University of North Carolina at Chapel Hill School of Medicine observes that:

> There is an anomalous situation which we believe deserves attention. There ia great and increasing demand for public action to bring about a better distribution of health personnel, and there is a clearly demonstrated need. The federal government through Medicare and Medicaid is each year paying significant sums of money for physician services across the country. It is difficult to reconcile the current physician payment system with the need for more physicians in rural America. The same physician providing service to the same patient under current Medicare and Medicaid payment guidelines will probably receive twice as much for providing the service in a city as compared to a rural area. If we are indeed concerned with attracting physicians to the smaller communities of America, this inequitable payment mechanism for identical service does not appear consistent with the public policy of improving the distribution of personnel.

The above position might be considered to apply equally to dentists.

Although the previous information does not suggest what is an adequate income for physicians and dentists in rural areas, work slightly longer hours, see more patients, in return for slightly less money.

These data are important when considered alongside of efforts to attract more physicians and dentists to rural areas. Such efforts would conceivably have impact upon the workload of existing physicians and dentists and therefore on their incomes. If fee differentials remained relatively constant between urban and rural areas, the impact would be to widen the income disparity between physicians and dentists in urban and rural areas. If there

is a serious attempt to attract physicians and dentists to rural areas, and if, as is assumed, income is a factor in locating physician and dental practice, some adjustment in fees for rural physicians and dentists would appear to be necessary.

D. A SPECIAL NOTE ON HOSPITALS

As can be shown by the following table, non-metropolitan areas do not have a shortage, but an excess of hospitals and hospital beds, when compared with metropolitan areas. 34/

--Number of hospitals and hospital beds, and hospital beds per 100,000 population, by metropolitan and nonmetropolitan areas, 1970

Hospitals	Metropolitan		Nonmetropolitan		Metropolitan beds	Nonmetropolitan beds
	Hospitals	Beds 1/	Hospitals	Beds 1/		
	Number				Number per 100,000 population	
Total	3,449	1,074,585	3,674	528,546	719.2	977.3
Federal	236	114,874	172	43,465	76.9	80.4
Non-Federal	3,213	959,711	3,502	485,081	642.4	897.0
Psychiatric	357	309,559	162	200,439	207.2	370.6
Tuberculosis	66	13,794	35	5,283	9.2	9.8
Other long term	186	47,486	50	11,834	31.8	21.9
Community 2/	2,604	588,872	3,255	267,525	394.1	494.7
Resident population	149,404,900		54,080,400			

A major share of the reason for the adequacy, and excess of hospitals lies with the Hill-Burton program. In 1946, Congress enacted the Hospital Construction and Survey Act of 1946 (P.L. 79-725). The preamble of the Act sets out its purposes:

> (a) to inventory their existing hospitals ....to survey the need for construction of hospitals and to develop programs for construction of such public and other non-profit hospitals as will, in conjunction with existing facilities, afford the necessary physical facilities for furnishing adequate hospital, clinic, and similar services to all their people; and,
>
> (b) to construct public and nonprofit hospitals in accordance with such programs.

Between 1948 and 1971, the program has been a tremendous benefit to the nation, including rural areas. During that period, the Hill-Burton program provided 3.7 billion dollars to support 10,748 projects costing a total of 12.8 billion dollars.

HILL-BURTON PROJECTS APPROVED, BY TYPE, 1 JULY 1947–30 JUNE 1971 35/

Type of Facility	Total Projects		Inpatient Care Beds Provided		Outpatient and Other Health-Care Facility Projects		Cost		
	Number	Percent	Number	Percent	Number	Percent	Total ($ thousands)	Hill-Burton funds Amount ($ thousands)	Hill-Burton funds Percent
Total	10,748	100.0	470,329	100.0	3,083	100.0	12,765,900	3,717,979	100.0
Short-term hospitals	5,787	53.8	344,453	73.2	131 [a]	4.2	9,322,392	2,635,494	70.9
Long-term care	1,733	16.1	97,358 [b]	20.7	—	—	1,613,808	523,111	14.1
Units in hospitals	1,097	10.2	51,983	11.1	—	—	904,409	312,499	8.4
Nursing homes	528	4.9	37,884	8.1	—	—	571,057	171,648	4.6
Chronic disease hospitals	108	1.0	7,491	1.6	—	—	138,342	38,964	1.0
Mental hospitals	198	1.8	21,034	4.5	—	—	246,734	78,493	2.1
Tuberculosis hospitals	78	.7	7,484	1.6	—	—	75,228	27,661	.7
Outpatient facilities [c]	1,078	10.0	—	—	1,078	35.0	708,952	204,083	5.6
Rehabilitation facilities	552	5.1	—	—	552	17.9	440,019	135,010	3.6
Public health centers	1,281	11.9	—	—	1,281	41.6	289,049	99,689	2.7
State health laboratories	41	.4	—	—	41	1.3	69,718	14,438	.4

[a] Public health centers built in combination with short-term hospitals and not reported as separate projects.

[b] Excludes 7,209 long-term care beds built in conjunction with short-term and other hospital projects, for which funds cannot be separated from total project costs. These beds are reported in the following categories of facilities: general hospitals—7,113 beds, mental hospitals—60 beds, tuberculosis hospitals—36 beds.

[c] Previously designated "diagnostic or treatment centers."

Source: U.S. Department of Health, Education and Welfare, *Hill-Burton Project Register* (Washington, D. C.: U.S. Government Printing Office, 1972), p. 2.

The following table shows how funds provided by Hill-Burton were distributed by community size.

DISTRIBUTION OF HILL-BURTON PROJECTS AND OF POPULATION, BY COMMUNITY SIZE, 1948–71 36/
(in percents)

1960 Community Size	Sample of Short-Term Hospitals Supported, 1948–71			Total Projects, 1968–70			1960 Population [a]
	Total number of projects	Costs met by Hill-Burton funds	Hill-Burton funds	Total number of projects	Hill-Burton funds	Inpatient beds	
Less than							
2,500 and rural	14.9	37.4	7.0	17.1	9.7	9.6	36.0
2,500–4,999	14.1	30.0	9.3	13.2	9.5	9.6	4.2
5,000–9,999	14.4	32.6	12.6	15.1	14.6	14.7	5.5
10,000–24,999	19.8	29.3	22.0	15.2	17.3	17.6	9.8
25,000–49,999	11.6	25.9	16.3	9.9	12.2	12.2	8.3
50,000–99,999	6.9	33.3	9.0	7.3	8.9	9.0	7.7
100,000–249,999	7.4	23.7	10.6	8.0	9.7	9.8	6.5
250,000 and more	10.8	21.1	13.3	14.2	18.1	17.5	22.0
Total	100.0	—	100.0	100.0	100.0	100.0	100.0

[a] 5.5 percent of the population lived in unincorporated parts of urbanized areas. However, 30.1 percent of the population lived in towns smaller than 2,500, did not live in urban fringes, and did not live in unincorporated places with a population density of 1,500 per square mile or more, that is, in rural areas.

Note: Here and in subsequent tables, details may not add to totals due to rounding.

Source: Short-term hospitals data from HEW, *Hill-Burton Project Register;* inferences drawn from a one-fifth sample of hospitals ever supported. Total projects data from HEW, *Hill-Burton Progress Report,* 1 July 1947–30 June 1970, p. 23. Population data from U.S. Bureau of the Census, *Statistical Abstract of the United States, 1972* (Washington, D. C.: U.S. Government Printing Office, 1971), p. 17.

As stated in their booklet on Hill-Burton, Judith and Lester Lave noted that communities between 2500 and 50,000 received about 150% more funds per capita than a proportional allocation would call for, the next three sizes up to 250,000 received 50% more, while communities of 2500 or less received 77% less and communities of more than 250,000 received 39% less. They further noted that smaller communities of more than 2500 probably served the rural populations, and therefore, their share was overstated to that degree.

It is fair to conclude that hospitals generally are favorably distributed between rural and urban areas except for rural communities of 2500 or less people and communities of 250,000 or more. In some cases, rural communities may be close to hospitals, in other cases they may not. It must be kept in mind that hospitals are institutions requiring highly trained personnel, and a great amount of expensive, highly technical equipment. Hospitals of less than 100 beds have had serious problems with accreditation[33a/] which we may assume, is a descriptor of the quality of care rendered in the institution. A 100 bed community hospital requires an estimated 30,000 or more people to support it, using a ratio of 3.3+ beds per 1000 population.* In many cases, therefore, it may be necessary to develop alternatives to hospitals which, in many ways, will serve small rural communities better. Alternatives include an effective emergency service system which can link people who need emergency care quickly and carefully to emergency care centers, as well as ambulatory care programs which have well defined arrangements for support from medical centers.

*3.3 beds per 100,000 population is selected as a hypothetical example, and is not based on any available data.

B. THE HEALTH OF PEOPLE IN RURAL AREAS

The basic measures used by institutions in this country to measure the health of our citizens are:

(1) Mortality data broken down by the characteristics of the people who die and the causes of death. Hopefully, by looking at the causes of death and the characteristics of the people who die, e.g., their age, sex, race, income and place where they live, we will know better where we can best use our resources and to know generally what is happening to us. An example of mortality statistics is infant mortality: [19]

Infant mortality rates and maternal mortality rates, by race and residence, 1968

Item	Metropolitan areas	Nonmetropolitan areas
	Deaths per 1,000 live births	
Infant mortality rates 1/	21.1	23.0
White	18.6	20.2
Negro and other races	32.5	39.3
	Deaths per 100,000 live births	
Maternal mortality rates 2/	23.6	26.4

1/ Number of deaths of infants in first year of life.
2/ Data not available by race.

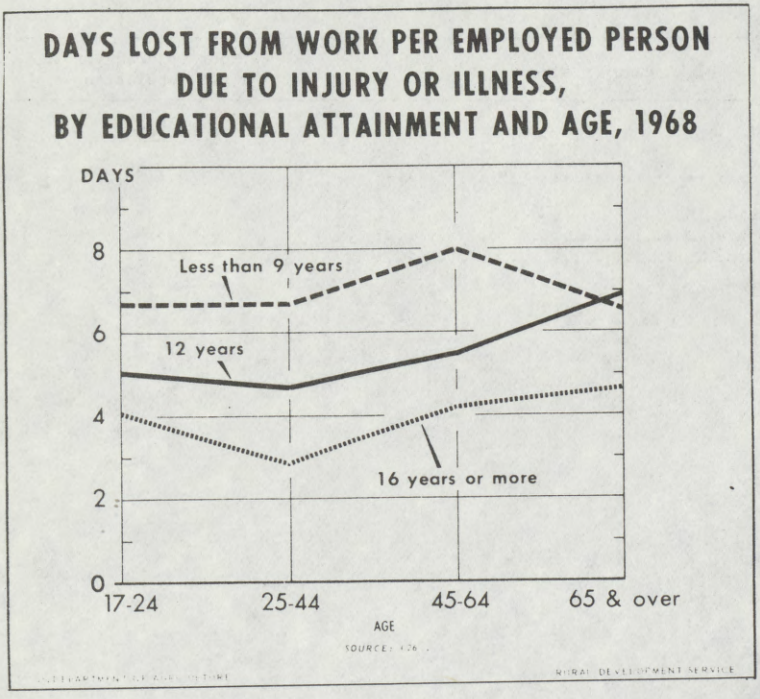
Source: Unpublished data from U.S. Department of Labor, Bureau of Labor Statistics.

(2) Morbidity Data-this data is broken down by illnesses and injuries by the characteristics of the people effected. This data serves essentially the same use as mortality data. An example of morbidity data is the following: 20/

Persons injured annually per 1,000 population, by area of residence, 1968-69

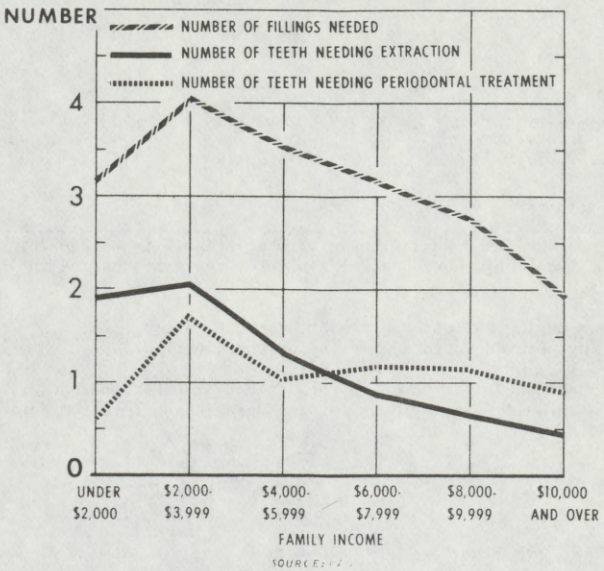
Area of residence	Persons injured per 1,000 population
	Number
SMSA	247.2
Outside SMSA:	
Nonfarm	255.8
Farm	225.2

(3) Data on the effects of morbidity-disability and days of restricted activity. These data are broken down by the characteristics of the people effected, the cause of the disability or restriction on activity, and the magnitude of problem. These data are important because of the obvious economic impact on the family, the community, and both public and private institutions. The following table is an example of this type of data: 21/



(4) Another major indicator used is the amount of unmet need- this is the extent of health care problems not attended to for a given population. These data are useful in determining what resources would be necessary to deal with the problems described and again, to better understand what is happening to us. The following is an example of this kind of data: 22/

NUMBER OF DENTAL CARE NEEDS PER PATIENT, BY FAMILY INCOME, 1965



U.S. Department of Agriculture Rural Development Service

(5) The ability of persons to function- These data attempt to assess the ability of persons to carry out certain functions or tasks. The ability to serve in the armed services is an example: 23/

-Percentage distribution of men 27-34 years old qualifying and not qualifying for military service, by place of origin, 1964 1/

Military experience	Large cities (100,000 or more)	Suburbs of large cities	Cities (25,000-99,999)	Town or small city (less than 25,000)	Rural	
					Non-farm	Farm
	Percent					
Total 2/	100	100	100	100	100	100
Examined	90	87	87	86	84	82
Qualified:						
Served	71	70	67	68	58	55
Did not serve	7	5	4	4	3	6
Rejected	12	13	12	14	23	21
Not examined	10	13	13	14	16	18

Note: Although men had passed their military liability by age 26, those who were 27-34 in 1964 would have been eligible for the draft during the Berlin and Korean crises.

1/ Residence during childhood and adolescence before age 15.
2/ Detail may not add to total because of rounding.

Source: Unpublished data from U.S. Department of Labor, Bureau of Labor Statistics, as provided by National Opinion Research Center from National Sample Survey.

One final statistic used is what might be termed predisposing factors. An example would be smoking. The Surgeon General of the United States reported on the causal relationship of smoking to cancer. Similarly, there have been reports on the effects of overweight and cholesterol levels on heart problems. These data, then, might be useful in predicting the likelihood of morbidity and mortality.

Experts, such as those at the National Center for Health Statistics, are very cautious about using these kinds of data as descriptors of the health of people, although, in fact, that is all we have available to us.

What do all these data tell us about the health of rural people?

The following tables, some of which were displayed earlier, are useful in comparing health levels of rural and urban people: 24/

Table 15--Number of days of restricted activity due to chronic conditions per person, by age and residence, 1968-69

Area of residence	All ages	Under 17 years	17-44 years	45-64 years	65 and over
	Number of days per person per year				
All residences	15.0	9.9	11.8	20.4	34.3
SMSA	15.0	10.7	12.2	20.0	31.7
Outside SMSA:					
Nonfarm	15.4	8.8	11.3	21.9	39.3
Farm	13.1	7.1	9.3	17.4	32.5

Persons injured annually per 1,000 population, by area of residence, 1968-69 25/

Area of residence	Persons injured per 1,000 population
	Number
SMSA	247.2
Outside SMSA:	
Nonfarm	255.8
Farm	225.2

Despite the relatively minor differences in injuries, the rate of deaths from accidents is four times as high for rural areas as it is for urban areas.

Percentage distribution of men 27-34 years old qualifying and not qualifying for military service, by place of origin, 1964. 1/ 26/

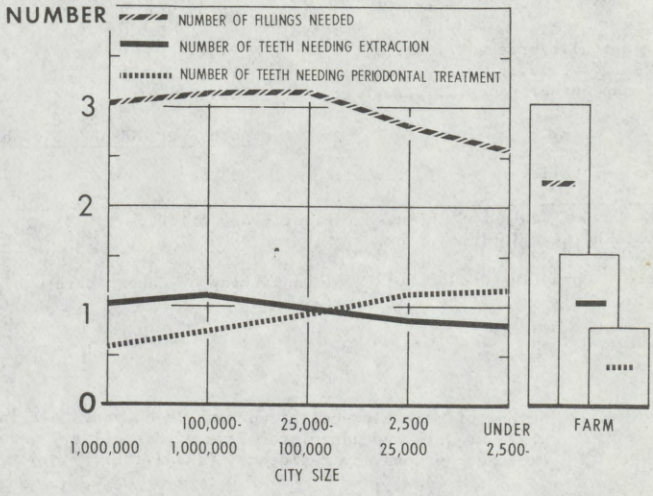
Military experience	Large cities (100,000 or more)	Suburbs of large cities	Cities (25,000-99,999)	Town or small city (less than 25,000)	Rural	
					Nonfarm	Farm
	Percent					
Total 2/	100	100	100	100	100	100
Examined	90	87	87	86	84	82
Qualified:						
Served	71	70	67	68	58	55
Did not serve	7	5	4	4	3	6
Rejected	12	13	12	14	23	21
Not examined	10	13	13	14	16	18

Note: Although men had passed their military liability by age 26, those who were 27-34 in 1964 would have been eligible for the draft during the Berlin and Korean crises.

1/ Residence during childhood and adolescence before age 15.
2/ Detail may not add to total because of rounding.

Source: Unpublished data from U.S. Department of Labor, Bureau of Labor Statistics, as provided by National Opinion Research Center from National Sample Survey.

NUMBER OF DENTAL CARE NEEDS PER PATIENT, BY CITY SIZE, 1965 27/



SOURCE: (2).

U.S. DEPARTMENT OF AGRICULTURE

RURAL DEVELOPMENT SERVICE

Infant mortality rates and maternal mortality rates, by race and residence, 1968. 28/

Item	Metropolitan areas	Nonmetropolitan areas
	Deaths per 1,000 live births	
Infant mortality rates 1/	21.1	23.0
White	18.6	20.2
Negro and other races	32.5	39.3
	Deaths per 100,000 live births	
Maternal mortality rates 2/	23.6	26.4

1/ Number of deaths of infants in first year of life.
2/ Data not available by race.

Source: Unpublished data from U.S. Department of Labor, Bureau of Labor Statistics.

Number of male blue-collar workers 17-64 years old injured while at work and associated days of disability, per 100 employed persons, by residence, fiscal 1967. 29/

Area of residence	Male blue-collar workers injured while at work	Restricted activity days	Bed disability days	Work loss days
	Number per 100 employed persons			
Total	31.1	295.0	75.1	146.8
SMSA	28.5	269.8	72.4	137.1
Outside SMSA	35.9	341.7	80.1	164.7

The above data plus other data show that rural people, proportionally, probably have more health problems than people in urban areas. The probable basis for this determination is (a) the larger percentage of poor people in rural areas, 17% versus 12.6%, (b) the larger percentage of older people, 10.5% versus 8.9%, and (c) the fact that both poor people and old people are sicker and have greater health needs than do the people who are not poor and old.

As can be seen there is a larger percentage of poor people in rural areas. 30/

Persons below the low-income level, by residence, 1970

Residence	Total U.S. population	Persons in poverty 1/	Percentage of total population in poverty
	Number		Percent
U.S. total	202,489,000	25,522,000	12.6
Metropolitan areas	130,907,000	13,378,000	10.2
Inside central city	57,290,000	8,165,000	14.3
Outside central city	73,617,000	5,213,000	7.1
Nonmetropolitan	71,580,000	12,142,000	17.0

1/ The classification of families and unrelated individuals as being below the low-income level is based on the poverty index adopted by a Federal interagency committee in 1969. This index is based on a sliding scale of income, adjusted for such factors as family size, sex and age of family head, number of children, and farm or nonfarm residence. To keep the poverty standard constant over time, thresholds are updated annually based on changes in the Consumer Price Index. The low-income threshold for a nonfarm family of four was $3,968 in 1970.

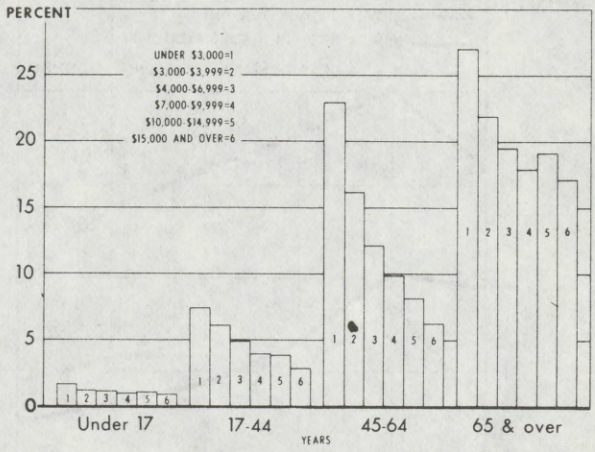
There are proportionally more old people in rural areas: 31/

Total population and percent distribution by age, according to geographic region and place of residence: United States, 1969-70

Geographic region and place of residence	Population in thousands	All ages	Under 17 years	17-44 years	45-64 years	65 years and over
		Percent distribution				
Total	198,636	100.0	33.6	36.2	20.7	9.5
Geographic region						
Northeast	48,900	100.0	32.0	35.7	22.1	10.3
North Central	55,493	100.0	34.6	35.5	20.4	9.6
South	61,402	100.0	34.0	36.7	20.0	9.3
West	32,841	100.0	33.8	37.6	20.2	8.3
Place of residence						
All SMSA	129,756	100.0	33.2	37.1	20.8	8.9
Central city	58,774	100.0	31.3	36.8	21.4	10.5
Outside central city	70,982	100.0	34.8	37.4	20.3	7.6
Large metropolitan areas	50,054	100.0	32.2	37.2	21.6	9.0
Boston	2,583	100.0	30.3	35.5	22.9	11.3
New York SCA	15,987	100.0	30.5	36.5	22.6	10.4
Philadelphia	4,816	100.0	32.7	36.4	22.1	8.9
Chicago SCA	7,898	100.0	35.0	36.0	21.1	7.9
Detroit	4,332	100.0	35.0	37.0	20.7	7.3
Washington	2,854	100.0	35.6	41.5	16.9	6.0
Los Angeles	8,267	100.0	31.7	38.9	21.2	8.1
San Francisco	3,317	100.0	29.1	38.9	22.1	9.8
Other SMSA	79,702	100.0	33.8	37.0	20.3	8.9
Outside SMSA	68,880	100.0	34.4	34.6	20.4	10.5
Nonfarm	60,507	100.0	34.5	35.4	19.7	10.4
Farm	8,373	100.0	33.8	28.7	25.8	11.6

Available data shows that both income and age effect people's health: 32/

PERCENTAGE OF PERSONS WITH LIMITATION OF MAJOR ACTIVITY DUE TO CHRONIC HEALTH CONDITIONS, BY AGE AND FAMILY INCOME, 1968-69 *

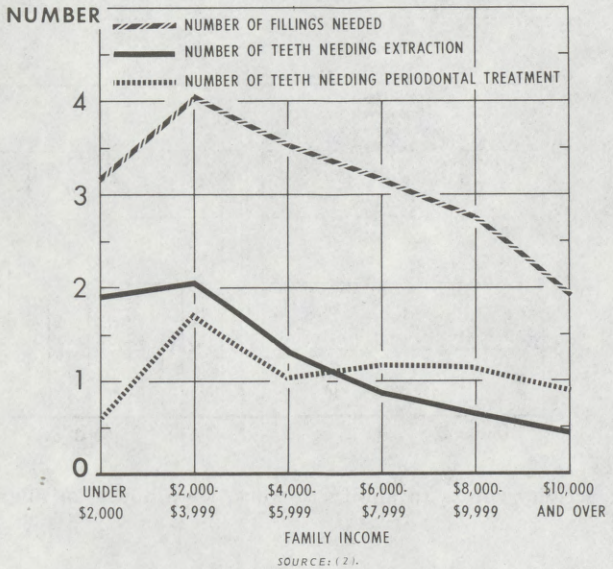


*Major activity refers to ability to work, keep house, or engage in school activities.

U.S. Department of Agriculture Rural Development Service

Poor people have far greater dental needs: 33/

NUMBER OF DENTAL CARE NEEDS PER PATIENT, BY FAMILY INCOME, 1965



SOURCE: (2).

U.S. DEPARTMENT OF AGRICULTURE RURAL DEVELOPMENT SERVICE

With the exception of poor and old people, health levels for people in rural areas is probably little different than the health of people in urban areas. This is true despite the fact that rural people have far poorer access to health services than do people in urban areas. It is possible only to guess at the reasons, but reasons would include greater attention to good health behavior, and good roads and fast automobiles, which enable people to travel large distances to secure health care. The one notable exception to the small overall differences in health status is deaths from accidents, where the death rate from accidents for rural areas is four times as high as for urban areas. Although there are a number of possible reasons for this substantial difference, one probable contribution would be the ability of emergency medical service personnel to get to the scene of the accident, and to move the patient quickly and safely to an emergency medical center.

III. EFFORTS TO PROVIDE BETTER HEALTH SERVICES TO PEOPLE IN RURAL AREAS

A. Federal Health Programs

1. Federal Health Outlays in 1972 for Metropolitan and Non-Metropolitan Areas

In the Fourth Annual Report of the President to the Congress on Government Services to Rural America,* the following federal health outlays are reported for 1972:

Type of Health Program	Federal Outlays For 1972 (Amount)	Percent Metropolitan	Percent Non-Metropolitan
Health Facility Construction	$ 47.6	62.0	38.0
Health (excluding research and training)	962.9	73.7	26.3
Medical Assistance	4,236.6	70.3	29.7
Medicare			
Benefit Payments Under Part A	6,676.0	71.0	29.0
Benefit Payments Under Part B	2,910.5	72.2	27.8
TOTAL	14,833.6	71.2	28.8

The above data does not include expenditures for veterans, which were not identified in the President's Report. Too, 22.7 percent of federal outlays were not included.

On the basis of population alone, federal outlays reported above were equitably distributed in 1972. According to the 1970 Census, 72.8 percent of our population lived in metropolitan areas and 27.2 percent lived in nonmetropolitan areas.

There are, however, proportionately greater numbers of poor and elderly persons in nonmetropolitan areas. In 1970, 47.2 percent of the poor were

---

* Rural Development Service. U.S. Department of Agriculture. Rural Development, Fourth Annual Report of the President to the Congress on Government Services in Rural America. Washington, D. C., 1974.

located in nonmetropolitan areas. (See page 49.) Similarly, 38.5 percent of our population over 65 lived in nonmetropolitan areas in 1970 (see page 50). Given these high percentages of poor and elderly in nonmetropolitan areas, the federal outlays for Medicare and medical assistance through Medicaid are lower than might be expected. For Medicare, most of the difference might be explained by lower medical care prices in nonmetropolitan areas (See section entitled Metropolitan/ Nonmetropolitan Differences in Incomes and Workloads of Physicians and Dentists) since all Medicare beneficiaries are entitled to the same services, regardless of where they live. Regarding medical assistance or Medicaid, part of the unexpected differences in federal outlays might also be explained by differences in medical care prices. The larger amount of the difference, however, appears to be explained by the relatively larger numbers of poor persons eligible for medical assistance in metropolitan areas.* The relatively larger outlays in non-metropolitan areas for health facility construction is consistent with data developed earlier. (See section: A Note on Hospitals.) The majority of the programs listed under the Health category above are designed to provide services to underserved populations, e.g., the poor, Indians, and migrant workers and their families. Given the location of the majority of these three groups in rural areas, the outlays for rural areas would appear to be lower than might be expected.

2. Federal Programs to Provide Health Services to Rural Areas

This section deals with those federally supported programs which are considered to have the greatest actual or potential impact on rural areas. Most programs described are not exclusively for rural areas. An examination of federally supported programs shows that none of the major health programs are designed to attack programs only in rural or urban areas. Because of the nature of the problem they are attacking or the constituency served, however, the program may have a strong rural or urban emphasis. Examples are programs with almost exclusive rural emphasis such as the Migrant Health Program, and the Indian Health Program. Too, both the Health Maintenance Organization Act of 1973 and the Emergency Medical Services Systems Act require a fixed proportion of the appropriation to be spent on rural areas, subject to qualifications.

* Rural Development Service. U.S. Department of Agriculture. Rural Development, Fourth Annual Report of the President to the Congress on Government Services in Rural Areas. Washington, D. C., 1974. p. 31.

THE COMPREHENSIVE HEALTH MANPOWER TRAINING ACT OF 1971

A major, if not the principal, health problem in rural areas, as has been documented earlier, is the shortage of health manpower in rural areas, particularly physicians and dentists. This portion of the report concerns itself briefly with the major provisions of the Act and then considers in greater detail those sections of the Act of particular importance to rural areas.

This legislative authority expired on June 30, 1974, with programs for student assistance extended until June 30, 1975.*

The Act contained the following major provisions:

a. Grants, loan guarantees, and interest subsidies to construct research and teaching facilities.

b. Capitation per student payments to schools of medicine, osteopathy, dentistry, optometry, veterinary medicine, podiatry, and pharmacy replacing the program of institutional formula grants. Capitations were flexibly constructed to encourage the adding of students by existing medical schools, to help new schools to reach a sounder financial footing, and to encourage the conversion of two-year medical schools to four-year medical schools. These flexible capitations regerred to all other eligible institutions except dentistry.

c. Special Project Grants to encourage certain desitable goals such as training new types of personnel, improving the supply and distribution of health personnel and training students likely to practice in rural and other shortage areas.

d. Health Manpower Initiative Awards, againto encourage institutions to conduct activities that would solve such problems as maldistribution of health professionals.

e. A student loan program with foregiveness provisions for students who would agree to serve in medically underserved areas.

*New health manpower legislation is being considered in the 93rd Congress.

f. Student scholarships for students who agree to serve in underserved areas.

The following programs having immediate relevance to rural areas were funded under the Comprehensive Health Manpower Training Act of 1971:

Area Health Education Centers

Area Health Education Centers are intended to provide training for undergraduates and postgraduates in the several health professional disciplines in locations removed from the medical centers at the medical school. They are also intended to use local physicians and other health professionals to help teach, and conversely, to provide continuing education to the practitioners in the areas in and around the area health education centers.

Since 1972, the Department of Health, Education, and Welfare has funded 11 area health education centers in the following areas and for the following amounts. To the left of the school is the project designation: urban (u), rural-urban (r-u), or rural (r).

Designation	School	Years 01	02	03
		($)	($)	($)
1. r-u	Tufts Medical School Boston, Massachusetts	636,901	675,613	1,003,232
2. r	West Virginia Medical School Morgantown, West Virginia	475,486	398,091	728,299
3. r	North Carolina Medical School Chapel Hill, North Carolina	2,617,269	1,581,393	1,834,359
4. r	South Carolina Medical School Charleston, South Carolina	1,152,476	1,696,922	2,025,073
5. r-u	Illinois Medical School Chicago, Illinois	948,291	1,034,721	2,518,750
6. r	Minnesota Medical School Minneapolis, Minnesota	439,333	393,681	784,714
7. r	New Mexico Medical School Albuquerque, New Mexico	638,123	1,063,261	1,091,718
8. r	Texas Medical School Galveston, Texas	1,015,140	805,770	1,175,806
9. r-u	Missouri Medical School Kansas City, Missouri	922,875	1,048,870	1,088,042
10. r	North Dakota Medical School Bismarck, North Dakota	949,643	447,250	524,321
11. r-u	California Medical School at San Francisco San Francisco, California	1,050,644	1,066, 634	1,423,075

The Medex training programs are supported under the Comprehensive Manpower Training Act as part of a broader program to train physicians assistants. Since the program began, the following amounts of money have been obligated:

1.	Fiscal Year 1972	$6,200,000
2.	" 1973	6,200,000
3.	" 1974	6,700,000

During that period, 1407 physicians' assistants have been trained. Of that total, 368 have been Medex.

There are currently eight Medex programs underway around the country. Six of those programs are training people for rural areas.

Medex Programs

Department of Community Medicine
Charles Drew Postgraduate Medical School
Los Angeles, California

Howard University
Washington, D.C.

Dartmouth College of Medicine
Hanover, New Hampshire

University of North Dakota School of Medicine
Grand Forks, North Dakota

Department of Preventive Medicine
University of Washington School of Medicine
Seattle, Washington

School of Medicine
University of Hawaii
Honolulu, Hawaii

Milton Hershey Medical Center
Pennsylvania State University
Hershey, Pennsylvania

College of Allied Health Sciences
University of South Carolina
Charleston, South Carolina

With the exception of the first two, all others are training Medex personnel for rural areas.

Grants for Primary Care

These grants are provided under the Manpower Training Act to accomplish such purposes as improving undergraduate training in primary care, and establishing ambulatory care clinics as teaching centers for ambulatory practice by students. For these purposes the grant awards were made to the following schools:

1. Oregon
2. Utah
3. Nebraska
4. Washington
5. Penn State at Hershey, Pennsylvania
6. Kentucky
7. California at San Fran isco
8. Maharry in Nashville, Tennessee
9. Jefferson Medical College, Philadelphia, Pennsylvania
10. South Carolina
11. George Washington
12. Louisiana State University at Shreveport, Louisiana
13. Mississippi

Seven million dollars has been allocated to these schools through fiscal year 1974.

Preceptorship Training

These grants are intended to provide students with experience in primary care practice, predominantly in rural areas. Students are assigned for periods from 12 days to three months with practitioners.

For the three years this program has been in operation, over 70 grants have been awarded providing experiences for 6800 students, at a cost to the Federal Government of 11.7 million dollars.

Grants for Training in Family Medicine

In the three year period that this program has been in operation, over $33,000,000 in grants have been made to schools to support family practice residency training programs. In the academic year 1974-75 the program will support 1200 first year residents. Monies are not used to pay the full cost of the residents training, but to supplement amounts paid to such residents because of problems experienced in family practice residencies in being fully reimbursed for the services they provide to patients.

Physicians Shortage Area Scholarship Program

This program was authorized under the Comprehensive Health Manpower Training Act of 1971, but appropriations for the program did not become available until this year. Under the program, students are required to provide a year of service for each year of scholarship assistance. Priority is given in the following manner: (a) first priority to poor students from underserved areas who agree to return to the same area, (b) second priority to students who are not poor but who agree to return to the same underserved area from which they came, and (c) any student who was willing to serve in an underserved area. Between June 1 and June 30 of this year over 1000 applications were received and 395 awards were

made. The amount of assistance ranges from $5,000 to $6,667 for all expenses. This program is not as liberal as scholarships offered either by the military under their Armed Services Health Professions Scholarship program or the National Health Service Scholarship program.

Student Loan Programs under the Comprehensive Health Manpower Training Act of 1971

Analysis of both State and Federal loan forgiveness provisions, by which students who receive loans can receive forgiveness of a portion of that loan for practicing in shortage areas shows that they have been a failure. The following is excerpted verbatim from a GAO report entitled Congressional Objectives of Federal Loans and Scholarships to Health Professions Students not Being Met and dated May 24, 1974 stated the following:

Influence of loan-forgiveness provisions on decisions to practice in shortage areas

Almost 94,000 medical and dental students graduated in the United States from 1965 to 1972. About one third of these received HPSAP loans. As of October 1973, 86 physicians and 133 dentists had obtained cancellation of a portion of these loans for practicing in "a designated shortage area."

Further, 167 physicians and dentists that had obtained loan cancellations responded to a GAO questionnaire, and 137 stated that they would have chosen the same location for their practice even if the cancellation provisions had not been available.

Lack of awareness of the availability of cancellation provisions appears to be a major problem. Comments of school officials and graduates aware of this said the program has not provided sufficient incentive to offset aspects of shortage area practice considered undesirable by graduates.

Both physicians and dentists rated considerations, such as personal and family needs and professional development, above the monetary incentives provided by the program.

Nurse Training Act of 1971

The principle activity aimed at direct impact on health professional shortages in rural areas are nurse practitioner programs funded under the Act. In three years since the program began making contract awards, over $12,000,000 has been obligated and by October 1974, over 720 nurse practitioners will have been trained. This does not include special project grants to fund nurse practitioner programs. This information was not available.

Other Programs to Train Nurse Practitioners:

Three separate programs within the Department, in addition to the Nursing Division, are funding training for nurse practitioners. They include the Bureau of Health Services Research, which is funding seven projects where the nurse practitioner will be known as a Primex. The Maternal and Child Health Program are funding pediatric nurse practitioners, while the Regional Medical Programs are also funding programs for nurse practitioners, including the program in Estancia, New Mexico, which is described in a later section.

The Veteran's Administration Medical School Assistance and Health Manpower Training Act of 1972, P.L. 92-541:

This program represents a major federal investment in health manpower by Congress through the Veterans Administration.

This program is a three-part program:

1. To provide support to establish not to exceed eight new medical schools (includes schools of osteopathy).

2. To provide support to medical schools (includes schools of osteopathy) to increase their class sizes.

3. To provide support to allied health schools (include dentistry and nursing) for the same purpose.

To date, one proposal to develop a medical school has been approved:

1. Wright State in Dayton, Ohio.

Four additional sites have received preliminary approval subject to meeting certain requirements:

1. University of South Carolina at Charleston, South Carolina
2. East Tennessee State at Johnson City, Tennessee
3. Texas A and M/Baylor at Temple, Texas and College Station, Texas
4. Marshall University in Huntington, West Virginia

Eleven grants have been made to medical schools to increase their class sizes. Sixty-one grants have been made to allied health schools. Grants are made for one year at a time but grant committments are made up to seven years.

The following shows the grant situation as of this date:

	First Year Grants	Seven Year Committment
New Medical Schools	$17,000,000	$88,000,000*
Existing Medical Schools	4,500,000	40,000,000*
Allied Health Schools	4,300,000	22,000,000*
	$25,800,000	$150,000,000

*Includes the amount of the first year grant.

The National Health Service Corps

The National Health Service Corps was initially established by the Emergency Health Personnel Act of 1970, P.L. 91-623, and changed by the Emergency Health Personnel Act Amendments of 1972, P.L. 92-585.

Under the National Health Services Corps program, physicians and other health professional personnel are assigned to medically underserved areas. By July, 1974, 405 health professionals, most of them doctors, will have been placed in 206 communities in 46 States.

The current criteria for determining medical shortage areas is that the communities must have fewer then one doctor for every 4000 persons.

Physicians and other health professionals commit themselves to service in the Corps at any time after they are licensed to practice or under the National Health Service Scholarship Training Program.

If the student accepts a scholarship, he or she is obligated for one year of service for each year of scholarship assistance. If a physician licensed to practice medicine, he or she is entitled to loan forgiveness of up to 85% of all educational loans obtained for medical school. In addition, new incentives for physicians include bonuses which can bring the incomes of physicians up to $28,000 a year. It is reasonable to expect that most licensed physicians joining the Corps will be recently graduated from medical school.

Since the intention of the Health Services Corps program is not to provide services indefinitely but to make communities receiving assignees self-sufficient a fair measure of the programs success is the retention rate, i.e., how many physicians stay on beyond their service commitment. In 1974, the retention rate is estimated at twenty percent.*

*Statement by Dr. Ed Martin, Director, Health Service Corps, U.S. Department of Health, Education and Welfare.

There is some evidence that medical students are willing to commit themselves to service in return for scholarships. The scholarship program began in December 1973. By June, over 2000 applications were received for 400 scholarships which were eventually awarded for fiscal year 1974. Including those who have applied for consideration for the coming awarded period, a total of 2500 medical students made application.

The National Health Service Corps program has become an important measuring rod for policy makers to determine the extent of medical student and other health professional student interest in serving in underserved areas, the effectiveness of young graduates to serve in rural areas, the communities' responses to this approach, the effectiveness of the Federal Government to manage an effort to redistribute manpower, and the long term impact of such a program on manpower redistribution.

Depending upon the satisfaction of policy makers in Congress and the Administration with the answers to these questions, the National Health Service Corps could be a major,if not the most significant Federal health program for rural areas in this country.

Health Maintenance Organizations

Health Maintenance Organizations agree to provide, or arrange to have provided those services included in the group or individual policy offered by the HMO or on its behalf. This differs from more traditional health insurers in that insurers agree to pay all or part of the medical bills for the services covered in a policy. They do not provide the services or assure their availability.

Health maintenance organizations have existed in this country for a long time. The oldest existing plan, The Ross-Loos Clinic in California began in the 1920's. HMO's now serve over 5,000,000 persons in the United States. Like other forms of health delivery, HMO's are seldom developed or operated in rural areas. However, with the passage of the Health Maintenance Act of 1973, P.L. 93-222, there are specific requirements in that law which place a priority on the establishment of rural HMO's. At least 20 percent of all funds appropriated for HMO's must go toward the development and early operation costs of rural HMO's. Since the law authorizes $275 million over a five-year period, the potential investment in health services for rural areas is considerable. In addition to grants and contracts, the Federal Government can make loans through a revolving fund, which enables the Government to "recycle" loans and thereby increase the real dollars available to HMO's beyond the $275 million authorization.

Grants and contracts are available for feasibility determinations, planning and development. Feasibility support can be up to $50,000. Planning support can be up to $125,000 and development support up to $1,000,000. In addition, loans for the first three years of operations can be made up to $2,500,000. Loan guarantees are available to lenders to for-profit organizations for planning and developmental support and for the first three years of operations.

Qualified HMOs are exempt from certain State laws which would:

(a) Require the services provided by the HMO be approved by the medical society;

(b) Require a certain percentage of physicians to constitute all or a certain percentage of the governing body;

(c) Require a certain percentage of the physicians in the locale to participate in the rendering of services of the HMO;

(d) Direct the HMO to meet requirements as an insurer of health care services in that State regarding initial capitalization and the establishment of financial reserves; and

(e) Prohibit advertising by a professional group in order to enroll members.

Employers who come under the Fair Labor Standards Act of 1938, and who have an average of 25 employees or more during the year must offer their employees the option of joining a qualified (as determined by the Department of Health, Education, and Welfare) HMO.

This summer, the Group Health Association of America sponsored a conference on rural HMO's, inviting interested sponsors and national experts to discuss the prognosis for rural HMO's as a result of the Act. The consensus of most of the participants was that (a) there were serious obstacles to developing rural HMO's, notably the economic base and the scarcity of health manpower and (b) the Act itself creates barriers to HMO development. Of particular impact were the requirements for a very extensive health services "package" which many individuals and groups could not afford, and the further requirement that the majority of services had to be prepaid by the individual or groups who received services from the HMO.

Despite these obstacles, the HMO program is supporting rural HMO's. It is estimated that over twenty percent of the initial 47 grantees and approximately fifteen percent of the initial $5,000,000 for grants will go to rural health maintenance organizations.

FAMILY HEALTH CENTERS

The Family Health Centers Program was established to provide health services to people in health service scarcity areas. The program is in its fourth year and has the following appropriations history:

1972	1973	1974	1975
$10,000,000	$13,000,000	$13,000,000	$13,000,000 (est.)

Family health centers provide ambulatory health services to the entire communities in which they are located, but with Federal subsidies provided for low income persons who are not eligible for Medicare or Medicaid. The Federal subsidies apply principally to ambulatory services, and do not apply to drugs, dentistry, or hospitalization.

Payments for services are required eventually to be principally on a prepaid basis, as opposed to fee for service and sliding payment schedules are allowed for poor people.

Currently there are 32 operational programs, of which 17 are classified by the Department of Health, Education, and Welfare as rural and two are classified as rural/urban.

There are currently four major DHEW programs to build comprehensive health service systems:

CHC Projects by Geographic Category

(Fiscal Year 1973)

Program Component	Total No. of Projects	Urban		Rural		Urban/Rural	
		No. of Projects	% of Total	No. of Projects	% of Total	No. of Projects	% of Total
1. Neighborhood Health Centers	104	77	74	21	20	6	6
2. Family Health Centers	39	17	44	21	54	1	2
3. Community Health Networks	14	13	93	--	--	1	7
4. Health Maintenance Organizations	107	50	47	20	19	37	35
	264	157	59	62	23	45	17

The family health center program, as a percentage of its total program, has funded the greatest share of rural programs.

In terms of program progress, the family health center program appears to have done a creditable job in getting projects to the operational stage. Through fiscal year 1974, appropriations totalled $36 million, and 32 projects are operational.

Family health centers have a number of characteristics of health maintenance organizations, while retaining some of the characteristics of neighborhood health centers and community health networks. For example, family health centers are required to enter into contracts with employed groups and to seek contracts with Medicare and Medicaid, in addition to serving poor people in their service areas. To be eligible for Federal support, however, they are required to be located in an underserved area, which is also true of neighborhood health centers and community health networks.

Although there is no data to show marketing patterns, it appears that many family health center managers are strongly emphasizing marketing to employed groups, because of the administrative flexibility, payment levels, predictability of funding, and growth potential. At the same time, they are required to give appropriate (but unspecified) attention to the needs of the poor in their communities. Because the local Boards of family health centers have representation from underserved groups, and because the family health centers are located in underserved areas, these two factors will probably act as forces to prevent too little attention to the poor.

Although the possibility of deemphasizing solicitation of poor people to be patients in FHC's is undesirable, the FHC design which encourages marketing to middle and upper income groups as well as low income groups would appear to be desirable. FHC's will have to offer services which are competitive with other health policies in their communities regarding both price and quality. This pressure to lower costs and maintain high quality will benefit the low income persons and the Federal FHC program as well as middle and upper income persons holding policies for services in the Family Health Center.

Finally, it is important to emphasize that, to date, almost 60% of projects funded have been in rural and rural/urban areas. Too, it appears to have gotten off to a good start with 32 operational projects, although it is far too early to tell how effective the total program or the individual projects are. Because family health centers have many of the generic qualities of health maintenance organizations with their documented efficiencies, and because the Family Health Center Program appears

to provide greater administrative flexibility in tailoring the program to the community, the expansion of family health centers might be seriously considered by those interested in expanding rural health maintenance programs.

THE MIGRANT HEALTH PROGRAM

Public Law 87-692 dated September 25, 1962, amended the Public Health Service Act to provide medical services to migratory workers.

The Department of Health, Education, and Welfare estimates that there are approximately 1,000,000 migrants and dependents, and approximately 2,000,000 seasonal farm workers and dependents.

These two groups represent the eligible population for health services. The migrant health program financed under the Federal legislation operated at the following levels in 1973 and 1974:

	Years	
	1973	1974
Appropriations	$23,750,000	$23,750,007
Projects	114	103
Number of Persons Receiving Services	338,000	355,000

In 1975, appropriations are estimated at $24 million, the number of projects at 98, and the number of persons receiving services at 390,000.

The Federal migrant health program approaches the provision of health services to migrant health workers in several ways:

(a) Funds to develop or expand clinics to provide health services to migrant workers;

(b) Payments to local organizations who buy health services or otherwise arrange for health from local sources as health departments, State agencies, local doctors and hospitals, and other resources;

(c) Arrangements to pay for services directly by the Federal government;

(d) Using health insurers to pay providers of service, with payment arrangements to the health insurers.

The mobility of migrant health workers creates special problems in providing health services to migrants, since health histories are important in making diagnoses and providing treatment, and in avoiding over diagnoses and treatment. Since migrant workers and their families move with the harvest, they must use new health practitioners each place they go. Unless there is a well functioning information system for moving health histories with the workers, health practitioners must begin anew when migrant families become ill, or are screened for illness.

In a statement on the floor of the Senate in February of 1973, Senator Edward Kennedy documented the illness among migrant families. Infant mortality is 25% higher among migrant infants, mortality rates for tuberculosis and infectious diseases is two and one half times higher, and the average life expectancy for migrant workers is under 60, while the average life expectancy of people in the United States is over 70. Hospitalization for accidents is 50% higher than the national rate.

Federal programs are supplemented by State and local programs and by other Federal programs. Because of the limited amount of information available, according to DHEW officials, it is difficult to determine just how much money and effort is devoted to meeting the health service needs of migrant workers.

An example of a clinic established through the Migrant Health Program is the Clinica de Salubridad de Campesinos in Imperial County, California. There, a building was renovated and staffed by full time physicians. Specialists fly in from San Diego. The clinic is located at a home base for migrants. In fiscal year 1974, they received $800,000 to support the migrant health services program.

In Dade County, Florida, an organization called Community Health of South Dade, Inc. operates a series of clinics for migrants throughout the County. The Federal Migrant Health Program supports one of these clinics, and provided $858,000 in fiscal year 1974 to support the program. Like the program in Imperial County, California, it operates in a migrant home base area.

Arrangements were made with Texas Blue Cross and Blue Shield, whereby it issues insurance cards to migrant workers and their families for a prescribed set of health benefits. These cards entitle them to care in the same manner any person carrying a Blue Cross/Blue Shield card would be entitled. The Federal Migrant Health Program is also considering undertaking a similar program in Florida, to commence this fall.

The development of clinics with Federal dollar support, and the assignment of insurance cards to migrant families represent two ends of the spectrum of involvement in health services. Both are necessary because of the variations in situations, and because the migrant health program is still young. Clinics most commonly are necessary where there are no health providers to take care of migrants, or are unwilling to do so. The advantage of the health insurance approach is that it accomodates to the mobility of migrants, and puts them into the "mainstream" of health services arrangements.

In between these two arrangements are such approaches as that employed in Pennsylvania, where the Pennsylvania Health Department arranges with The Geisinger Medical Center, a nationally known medical center, to provide medical services to migrants working around the center.

In addition to these approaches, the approaches, the Migrant Health Program is engaged in a hospital demonstration program, to determine the needs for hospitalization for migrants. In 1974 the program was working with 9 hospitals, and in 1975, it will be working with 13 hospitals. Hospitalization is a special problem for migrants because migrant workers do not have hospitalization coverage, or when they do, it is inadequate. Migrants, therefore, either have to pay cash for hospitalization or the money has to come from other sources, including being absorbed by the local hospitals.

The poor quality of available data makes it difficult to speculate on the magnitude of the health problems of migrants. It is difficult to determine the size of the population of migrants as an essential baseline. It is difficult to determine the size of the Federal, State, and local expenditures of dollars and manpower for migrants. It would appear, however, to be little questioned that migrants are sicker and get poorer care than the general population. It would appear, too, that migrant health programs are not reaching a large number of migrants.

The migrant health program is responsible for providing medical care for a highly mobile population, with a far less predictable flow than had previously been assumed. Migrants do not follow predictable "streams" but

may move into different streams depending upon economic advantage. According to the DHEW officials, most migrant health dollar support for clinics has gone to home base clinics, where there would be the greatest opportunity to attend to the health of migrants. To a large extent, therefore, health services must be purchased or otherwise arranged for the migrant and his family, as they move from harvest area to harvest area. Since these harvest areas would be expected to be rural, there is a good possibility that these areas have health manpower shortages. Migrants would be the direct beneficiaries, therefore, of other programs designed to increase doctors and other health workers in the areas where migrants help to harvest. The use of migrant health program dollars to increase the number of doctors and other health workers would probably be marginally effective, other than to improve the economic base to support them.

THE VETERANS' ADMINISTRATION HEALTH PROGRAMS

The Veterans' Administration Program provides health care to veterans, and in some cases, dependents of veterans, in VA facilities throughout the United States. As of April 30, 1973, the VA operated 97,075 hospital beds in 176 locations, providing treatment for over 1,000,000 patients yearly. In 1975, the VA health system will provide almost 15 million outpatient services. The VA health program has an annual budget of over 3 billion dollars, and employs over 170,000 people to operate the program.

In addition to its hospitals, the VA operates over 11,000 domiciliary beds and over 6,600 nursing home beds. Where VA facilities are not available for the services for veterans and dependents, the VA purchases care from community facilities, including hospitals and nursing homes. In 1975, the VA estimates it will purchase over 100 million dollars worth of services from non-VA facilities.

Regarding eligibility, the Veterans' Administration, on June 30, 1972, estimated approximately 29.2 million veterans and family members of living veterans and survivors of deceased veterans were eligible. Thus, approximately 30 million people, or 15% of the total population of the United States, are potential recipients of veterans health benefits.

The Veterans' Administration program, along with Medicare, Medicaid, and Indian Health Programs, represent the major Federal investments in health services for people in both rural and urban areas.

In addition to its service programs, the VA is involved in medical research and medical manpower training. The VA estimates that VA hospitals

and clinics will serve as training sites for 68,725 persons in 1975. Currently, 106 VA hospitals have training and service agreements with 89 medical schools and cooperative arrangements exist with 57 dental schools, 314 nursing schools, and 900 universities, colleges and junior colleges, and technical level educational programs and institutions. In addition, through the passage of the Veterans Administration Medical School Assistance and Health Manpower Act of 1972, the VA is actively engaged in the development of new medical schools. (See page 64).

Unlike other health manpower legislation, there are no special provisions directed to training or service in rural areas.

There is no question that the Veterans Administration program directly benefits people in rural communities through its role as a major employer and a provider of health care to rural veterans. The VA system, however, cannot be viewed as a community health resource beyond veterans and the small number of dependents who might qualify for service in VA hospitals, since legislation and regulations regarding the VA program, exclude all but veterans and certain dependents.

To assure greater access to veterans and certain dependents, VA facilities are located throughout the United States, with many of the facilities in small towns in rural areas. The following table shows the location of these facilities.

VA HOSPITALS

	Operating beds, Apr. 30, 1973			
		Bed section		
	Total	Psychiatric	Surgical	Medical
ALL VA HOSPITALS				
TOTAL	97,075	32,172	19,549	45,354
Psychiatric hospitals—Total [1]	27,428	17,534	417	9,477
General hospitals—Total [1]	69,647	14,638	19,132	35,877
VA PSYCHIATRIC HOSPITALS				
TOTAL	27,428	17,534	417	9,477
American Lake, Wash	720	532	--------	188
Battle Creek, Mich	1,240	1,057	--------	183
Bedford, Mass.*	975	642	49	284
Brecksville, Ohio	899	698	--------	201
Brockton, Mass.*	837	563	21	253
Canandaigua, N.Y.*	1,109	634	15	460
Chillicothe, Ohio	1,500	949	25	526
Coatesville, Pa.*	1,473	1,022	25	426
Downey, Ill	2,048	1,323	42	683
Fort Lyon, Colo	600	435	--------	165
Fort Meade, S. Dak	420	240	20	160
Knoxville, Iowa	728	347	--------	381
Los Angeles, Calif. (Brentwood)*	470	440	--------	30
Lyons, N.J.*	1,572	1,017	30	525
Marion, Ind	1,335	570	--------	765
Montrose, N.Y.*	1,476	1,167	12	297
Murfreesboro, Tenn	912	346	--------	566
Northampton, Mass.*	735	477	28	230
Perry Point, Md.*	1,075	576	15	484
Pittsburgh, Pa	951	632	8	311
Roseburg, Oreg	436	218	20	198
Salisbury, N.C	917	647	40	230
Sheridan, Wyo	413	252	--------	161
St. Cloud, Minn	1,020	561	14	445
Tomah, Wis	800	387	--------	413
Topeka, Kans	890	512	53	325
Tuscaloosa, Ala	777	540	--------	237
Waco, Tex	1,100	750	--------	350

	Operating beds, Apr. 30, 1973			
		Bed section		
	Total	Psychiatric	Surgical	Medical
VA General Hospitals				
TOTAL	69,647	14,638	19,132	35,877
Albany, N.Y.*	877	161	220	496
Albuquerque, N. Mex.*	442	73	146	223
Alexandria, La.*	435	--------	151	284
Allen Park, Mich.*	704	15	206	483
Altoona, Pa	170	--------	45	125
Amarillo, Tex	146	--------	62	84
Ann Arbor, Mich.*	430	76	168	186
Atlanta, Ga.*	510	56	224	230
Augusta, Ga.*[3]	1,318	707	151	460
Baltimore, Md.*	291	14	109	168
Batavia, N.Y.*	241	--------	44	197
Bath, N.Y.*	182	11	31	140
Bay Pines, Fla	698	151	151	396
Beckley, W. Va	168	--------	50	118
Big Spring, Tex	225	--------	66	159
Biloxi, Miss.*[3]	874	506	84	284
Birmingham, Ala.*	483	--------	267	216
Boise, Idaho	172	--------	77	95
Bonham, Tex	71	15	26	30
Boston, Mass.*	855	109	262	484
Bronx, N.Y.*	1,018	112	321	585
Brooklyn, N.Y.*	1,000	124	295	581
Buffalo, N.Y.*	888	134	207	547
Butler, Pa	396	--------	--------	396
Castle Point, N.Y	258	--------	67	191
Charleston S.C.*	403	55	166	182
Cheyenne, Wyo	127	--------	49	78
Chicago, Ill. (West Side)*	545	84	192	269
Chicago, Ill. (Research)*	533	28	232	273
Cincinnati, Ohio*	460	78	199	183
Clarksburg, W. Va.*	212	25	90	97
Cleveland, Ohio*	786	40	292	454
Columbia, Mo.*	246	30	103	113
Columbia, S.C	428	34	179	215
Dallas, Tex.*	731	122	292	317
Danville, Ill	1,355	753	104	498
Dayton, Ohio*	858	200	197	461
Denver, Colo.*	439	76	180	183
Des Moines, Iowa*	362	--------	160	202
Dublin, Ga	500	--------	104	396
Durham, N.C.*	501	81	216	204
East Orange, N.J.*	1,098	270	248	580
Erie, Pa	134	--------	42	92
Fargo, N. Dak	224	--------	72	152

VA hospitals and domiciliaries	Operating beds, Apr. 30, 1973			
		Bed section		
	Total	Psychiatric	Surgical	Medical
VA General Hospitals—Continued				
Fayetteville, Ark.	230	--	78	152
Fayetteville, N.C.	386	39	110	237
Fort Harrison, Mont.	160	--	58	102
Fort Howard, Md.*	237	--	--	237
Fort Wayne, Ind.	178	--	67	111
Fresno, Calif.	275	35	107	133
Gainesville, Fla.*	480	90	207	183
Grand Island, Nebr.	172	--	44	128
Grand Junction, Colo.*	103	--	39	64
Hampton, Va.	420	70	89	261
Hines, Ill.*	1,527	240	470	817
Hot Springs, S. Dak.	232	44	37	151
Houston, Tex.*	1,252	377	272	603
Huntington, W. Va.	180	--	60	120
Indianapolis, Ind.* [3] [13]	665	78	195	392
Iowa City, Iowa *	411	63	180	168
Iron Mountain, Mich.	234	--	95	139
Jackson, Miss.*	498	70	188	240
Kansas City, Mo.*	479	63	215	201
Kerrville, Tex.	310	--	84	226
Lake City, Fla.	431	--	103	328
Leavenworth, Kans.*	569	171	116	282
Lebanon, Pa.	876	600	31	245
Lexington, Ky.*	875	414	91	370
Lincoln, Nebr.*	211	60	86	65
Little Rock, Ark.* [3]	1,610	799	247	564
Livermore, Calif.	191	--	69	122
Long Beach, Calif.*	1,607	150	274	1,183
Los Angeles, Calif.* (WADS.)	762	--	254	508
Louisville, Ky.*	420	49	204	167
Madison, Wis.*	388	20	145	223
Manchester, N.H.*	150	--	56	94
Marion, Ill.	136	--	26	110
Marlin, Tex.	222	--	--	222
Martinez, Calif.	498	70	178	250
Martinsburg, W. Va.*	691	--	146	545
Memphis, Tenn.*	923	180	208	535
Miami, Fla.*	790	164	228	398
Miles City, Mont.	92	--	42	50
Minneapolis, Minn.*	871	107	374	390
Montgomery, Ala.	243	--	90	153
Mountain Home, Tenn.	500	73	138	289
Muskogee, Okla.	236	--	101	135
Nashville, Tenn.*	503	50	211	242
Newington, Conn.*	190	24	90	76

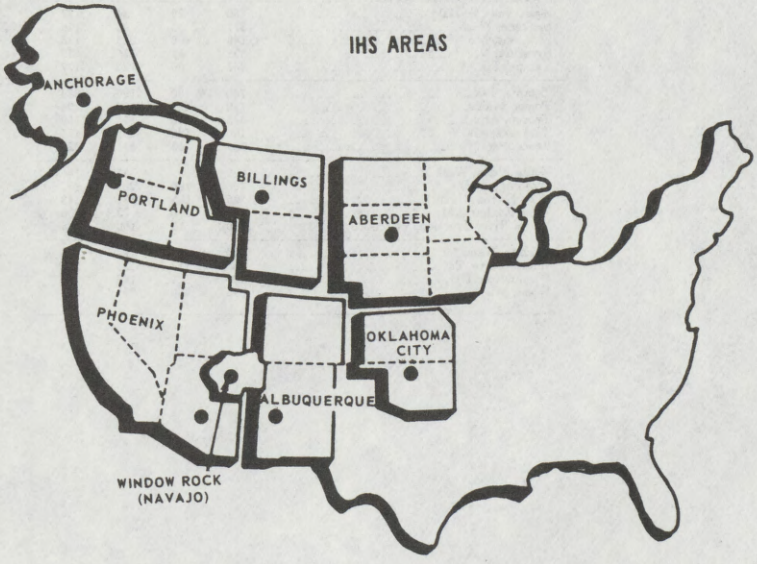
	Operating beds, Apr. 30, 1973			
		Bed section		
	Total	Psychiatric	Surgical	Medical
VA General Hospitals—Continued				
New Orleans, La.*	581	62	221	298
New York, N.Y.*	1,030	183	361	486
Northport, N.Y.*	1,110	400	120	590
Oklahoma City, Okla.*	463	100	158	205
Omaha, Nebr.*	479	88	135	256
Oteen, N.C.	537	30	147	360
Palo Alto, Calif.* [3]	1,433	1,117	144	172
Philadelphia, Pa.*	475	38	181	256
Phoenix, Ariz.	219	38	81	100
Pittsburgh, Pa.* [3] [8]	749	31	302	416
Poplar Bluff, Mo.	179	----	79	100
Portland, Oreg.*	528	30	197	301
Prescott, Ariz.	217	15	40	162
Providence, R.I.*	353	39	90	224
Reno, Nev.*	177	----	90	87
Richmond, Va.*	819	16	198	605
Saginaw, Mich.	198	----	88	110
Salem, Va.*	1,144	707	80	357
Salt Lake City, Utah*	573	199	145	229
San Diego, Calif.*	586	89	214	283
San Francisco, Calif.*	352	----	197	155
San Juan, P.R.*	688	240	153	295
Seattle, Wash.*	354	66	130	158
Sepulveda, Calif.*	920	321	195	404
Shreveport, La.*	464	74	138	252
Sioux Falls, S. Dak.	250	29	84	137
Spokane, Wash.	211	----	95	116
St. Louis, Mo.* [3]	1,149	468	246	435
Syracuse, N.Y.*	398	91	175	132
Tampa, Fla.* [7]	367	60	130	177
Temple, Tex.	740	160	196	384
Togus, Maine	799	493	100	206
Tucson, Ariz.*	315	38	118	159
Tuskegee, Ala.	1,106	524	107	475
Vancouver, Wash.	384	40	117	227
Walla Walla, Wash.	209	----	43	166
Washington, D.C.*	708	180	201	327
West Haven, Conn.*	725	105	177	443
West Roxbury, Mass.*	279	----	73	206
White River Junction, Vt.*	200	15	100	85
Wichita, Kans.*	200	----	96	104
Wilkes-Barre, Pa.	500	112	121	267
Wilmington, Del.	336	----	148	188
Wood, Wis.*	935	200	271	464

THE INDIAN HEALTH SERVICE

Public Law 83-568 dated August 5, 1954 transferred the "maintenance and operation of hospital and health facilities for Indians to the Public Health Service..." from the Bureau of Indian Affairs. It is now operated by one of the successor agencies of the Public Health Service, the Health Services Administration. The Indian Health Service operated within this agency.

The Indian Health Service provides health services to 444,000 Indians and 54,000 Alaska natives. The Indian Health program is principally a program for Indians on and near reservations, and for Alaska natives in remote villages.

The Indian Health Service program is a rural program. It is entirely Federally operated. It has eight area offices, each with responsibility for Indian Health programs within its jurisdiction:



The Indian Health Service health system is large, employing 7700 full time people, with 51 hospitals, 83 health centers, and over 300 health stations. In addition to its direct service delivery capacity, IHS estimates it will purchase over $45 million worth of health services, including services from 594 general and special hospitals. More than half of the people currently employed by IHS are of Indian descent.

Although there remain substantial health problems among the Indians and Alaska natives, the growth in resources devoted to building the capacity of the Indian Health Service is impressive. Appropriations have grown from $24.5 million in fiscal year 1955 to an estimated $280 million in 1975, almost a twelvefold increase. Too, progress in dealing with the most serious health problems among the Indians has been impressive. In six years, infant deaths have declined from 62.5 thousand live births to 23.8 per thousand:*

Infant deaths for every 1,000 live births are compared below.

Year	Indians	U.S. total population
1955	62.5	26.4
1967	32.2	22.4
1971	23.8	19.2 (provisional)

In 1972, the infant death rate declined to 20.9 for 1000 live births.

*GAO Report. Progress and Problems in Providing Health Services. B164031(2). March 11, 1973. p. 11.

The general health status of the Indians receiving health services from the Indian Health Service has improved dramatically for infectious diseases and diabetes. Other diseases showed little change, while cirrhosis of the liver increased almost threefold. The following table highlights this information, as well as providing comparisons between Indian health and the total United States population: *

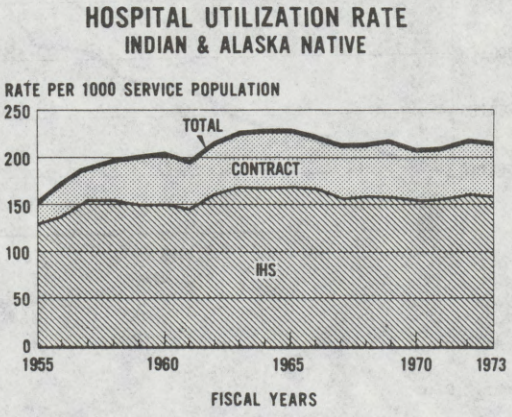
Cause of death	Indian deaths per 100,000 population 1955 (note a)	Indian deaths per 100,000 population 1971	Percent of increase or decrease(-) in Indian death rate since 1955	Ratio of Indian deaths to U.S. total population deaths 1971
Accidents	156.2	157.1	1	2.9
Heart diseases	135.2	142.0	5	0.4
Malignant neoplasm	62.1	62.5	1	0.4
Cirrhosis of liver	16.0	45.6	185	2.9
Cerebrovascular disease	46.1	42.8	-7	0.4
Influenza and pneumonia	92.2	38.6	-58	1.4
Certain diseases of early infancy	70.5	29.6	-58	1.5
Diabetes mellitus	14.1	23.0	63	1.3
Homicide	15.0	20.6	37	2.4
Suicide	9.4	18.7	99	1.7
Congenital malformations	17.9	10.9	-39	1.5
Tuberculosis	55.5	7.8	-86	3.7
Enteritis and other diarrheal diseases	39.5	4.4	-89	4.0

[a]Average 3-year total (1954-56).

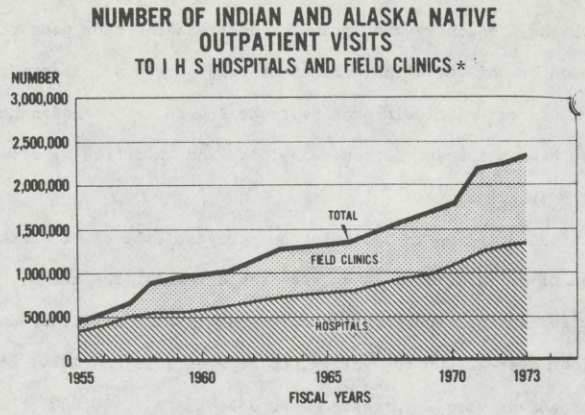
*Op. Cit.

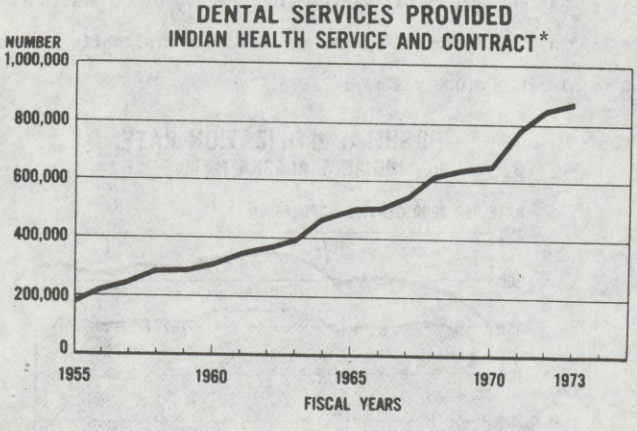
Because the Indians served by the Indian Health Service live in rural areas, and frequently must travel long distances over poor roads, and are without readily available means of transportation, access to health services is a difficult problem to deal with. The Indian health service must have a transportation capability and an active visiting health worker program.

Despite the problems in achieving an acceptable level of access (in addition to defining what is an acceptable level), the use of services by Indians has increased sharply since 1955. Hospital admissions increased from over 42,000 to over 74,000 between 1955 and 1974, and hospital outpatient visits increased from 355,000 to 1,400,000. Total hospital outpatient and clinic visits exceeded 2,000,000 visits in 1973. Between 1955 and 1973, dental visits increased from slightly less than 200,000 to almost 900,000 visits in 1973.**



**U.S. Congress. Subcommittee of the Committee on Appropriations. Hearings on Indian Health. Part 1. U.S. Govt. Print. Off., 1974. 974 p.


NUMBER OF INDIAN AND ALASKA NATIVE
OUTPATIENT VISITS
TO I H S HOSPITALS AND FIELD CLINICS *
NUMBER
3,000,000
2,500,000
2,000,000
1,500,000
1,000,000
500,000
0
TOTAL
FIELD CLINICS
HOSPITALS
1955
1960
1965
1970
1973
FISCAL YEARS


DENTAL SERVICES PROVIDED
INDIAN HEALTH SERVICE AND CONTRACT*
NUMBER
1,000,000
800,000
600,000
400,000
200,000
0
1955
1960
1965
1970
1973
FISCAL YEARS

**Op. Cit.

What the data suggest is: using services use as a measure of access, and the population served of 498,000 the Indians Health Service has been able to provide a substantial increase in the number of services provided which is comparable to or better than the access to services of the United States population as a whole.

Whereas 9% of the total United States population used inpatient hospital services in 1970,** over 20% of the Indian population served by the Indian Health Service used inpatient hospital services.** Based on 1970 data, dental use by Indians appears to be slightly less than the general population, but based on a sharp increase since 1970, may have surpassed use by the general population.** Although the data on outpatient and clinic visits may not be comparable, it would appear that the Indian population served by the Indian Health Service and the general U.S. population receive comparable levels of outpatient and clinic services. Although, these data would need substantially more refinement, the conclusion can be made that the Indian Health Service has made great progress toward achieving parity of health care access between the Indian population served by them and the general United States population. The data also appear to support the conclusion that access by this same Indian population is superior to that of most other rural populations.

*Health Services and Mental Health Administration; DHEW. Health Services Use, National Trends and Vocations, 1953-1971, DHEW Pub. (HSM) 73-3004. Oct., 1972. 57 p. p. 12, 17, 26.

**repeat footnote from page 89.

**U.S. Congress. Subcommittee of the Committee on Appropriations. Hearings on Indian Health. Part 1. U.S. Govt. Print. Off., 1974.

PROGRAM ACCOMPLISHMENTS **

	Percent decrease
Health Improvement—calendar year 1955–1972:	
Death rates:	
Infants	67
Under 28 days	58
28 days to 11 months	72
Maternal	54
Influenza and pneumonia	58
Certain diseases of early infancy	66
Tuberculosis, all forms	85
Gastritis, et cetera	81
Congenital malformations	52
Incidence rates:	
New active tuberculosis cases	61
Trachoma	64
Increased use of service—fiscal year 1955–1973:	
Hospital admissions	104
Women provided family planning services	79
Outpatient visits	412
Dental services	379

Parenthetically, it would be misleading to attribute improvements in health to health services alone, or to the sanitation or health education programs of the Indian Health Service. Without being able to quantify IHS accomplishments precisely, it is useful to consider why the organization has been able to accomplish as much as it has. There appear to be several reasons: (1) the investment in IHS programs; (2) infectious diseases are much more amenable to elimination or reduction than degenerative or chronic diseases; (3) the integration and coordination of resources for both public health and personal health services results in greater responsiveness to identified problems; (4) the absence of a private system of care in the IHS service areas and the consequent resistance that develops, such as those experienced by health maintenance organizations in rural areas; (5) the absence of financial barriers to care of the IHS population; and (6) the management approach to health problems. The latter point needs some elaboration. From the beginning of the Public Health Service assumption of responsibility in 1955, it sought to look at the health problems of the community in terms of disease, not merely access and quality. By developing a total community profile of the level of health in the Indian community, they were able to design programs to attack these

**Op. Cit.

diseases, and to establish priorities for the use of their resources. Although the circumstances were and are unique, the attention to the level of health has undoubtedly been a factor in improving the management of the Indian Health Service and keeping the Indian community, Congress, and others abreast of progress, and lack of progress, in IHS programs.

EMERGENCY MEDICAL SERVICES*

Both the Administration and Congress have placed a very high priority on the establishment of emergency medical services systems. Prior to the passage of the Emergency Medical Services Systems Act by Congress in 1973, the following activities were undertaken by the Administration:

Contracts for $15.7 million were let for demonstrations of emergency medical service systems which are now underway in the following areas:

1. The City of Jacksonville, Florida, for a seven-county area in Northeastern Florida.
2. The State of Illinois Public Health Department for a Statewide Project.
3. The Ohio Valley Health Services Foundation for a seven-county area in Southern Ohio.
4. The Arkansas Health Services Foundation for a Statewide Project.
5. The San Diego County Health Department for a three county area in Southern California.

The Health Services Research and Development Center has invested over $800,000 in developments of emergency health services models and systems.

As of July 1, 1972, the Regional Medical Programs had invested $10.8 million in 63 programs with primary emphasis on emergency medical services.

Grants and contracts allocated by the Bureau of Community Health Services for health maintenance organizations, family and neighborhoood health centers, and other service programs include provisions for emergency medical services for their patients.

* U.S. Congress. House. Committee on Interstate and Foreign Commerce. Hearings on Emergency Medical Services Act of 1973. Washington, U.S. Govt. Print. Off., March 15, 1973, p. 83.

The National Institutes of Health support a number of programs including support for Trauma Centers, trauma research grants, and training fellowships.

Funds for the Bureau of Health Manpower Education were used by training institutions to train emergency health services personnel.

The Food and Drug Administration transmitted information to the estimated 600 poison control centers on poisons and household products.

It also transmitted the results of its findings on the potential dangers of medical devices and other products in hospitals to 110 emergency rooms and collects and analyzes information on product related injuries in these emergency rooms.

Under both Medicare and Medicaid, emergency services are available to beneficiaries.

The Office of Education, through the Manpower Development and Training Act, provides assistance to train personnel, including those providing emergency medical services.

Under the National Highway Safety Act of 1966, States are required to improve emergency medical services within the State. Particular emphasis is placed on the training and licensing of ambulance drivers and rescue workers.

New Legislation

On November 6, 1973, P.L. 93-154, the Emergency Medical Services System Act was enacted. The Law provides grants and contracts to State and local governments, other public entities or any non-profit entities for: (a) Studying the feasibility of establishing and operating an emergency medical care system; (b) Planning for the establishment of

an emergency medical care system. (c) Establishment and operation of an emergency medical care system; (d) Expansion and improvement of emergency medical care systems, and, (e) Research in emergency medical techniques, methods, devices, and delivery.

Emergency medical care systems shall: (a) Be adequately staffed; (b) Have a central communications system; (c) Adequate transportation vehicles; (d) Provide for adequate training and continuing education, and; (e) "Provide other enumerated criteria for services."

The Secretary of Health, Education, and Welfare is directed to determine if there are legal barriers to the operation of effective emergency medical care systems and report his findings to Congress.

The Secretary of HEW may enter into contracts with training institutions to assist in meeting the cost of training programs in the techniques and methods of providing emergency medical services.

The law authorizes the following amounts to be appropriated: (a) $30,000,000 for 1974; (b) $60,000,000 for 1975; and (c) $70,000,000 for 1976.

In fiscal year 1974, the Emergency Medical Services Program received $27,000,000 through a supplemental appropriation. With this amount of money, 85 grants were made to entities throughout the United States, totalling $17,000,000. In addition, grants for research totalling $3,400,000 and training for $6,600,000 were also made.

The following grants were awarded in June, 1974:*

*Information provided by Emergency Medical Services Program. U.S. Department of Health, Education and Welfare.

APPLICANT	AMOUNT APPROVED	SECTION
Vermont Dept. of Health Attn: C. Earl Gettinger, Jr. 115 Colchester Avenue Burlington, Vermont 05401	$45,000	1202
Regional Planning Comm. Attn: Wade E. Pierce 115 Main Street Nashua, New Hampshire 03060	45,000	1202
Comm. on Hospital & Health Care Attn: James D. Whitten 340 Capitol Avenue Hartford, Conn. 06115	135,000	1202
Dept. of Public Health Attn: William J. Bicknell State of Massachusetts 600 Washington Street Boston, Massachusetts 02111	1,520,000 368,891	1203
City of Portland Attn: John E. Menario 389 Congress Street Portland, Maine 04111	189,000	1204
New York State Bureau of Emerg. Health Services Attn: Robert J. Huszar 28 Essex Street Albany , New York 12206	44,408	1202
University of Rochester Attn: Christopher Parnall River Campus Station Rochester, New York 14627	43,969	1202
Lake Area Emergency Medical Servs. Attn: Allan L. Korn 2929 Main Street Buffalo, New York 14214	45,000	1202
Westchester County Health Dept. Attn: Jack J. Goldman 148 Martin Avenue White Plains, New York 10601	45,000	1202

APPLICANT	AMOUNT APPROVED	SECTION
Region VI Planning & Development Council Inc. Attn: John D. Anthony 201 Deveny Bldg. Fairmont, West Va. 26554	$45,000	1202
Philadelphia CHP Council, Inc. Attn: David Schlosser 1616 Walnut Street Philadelphia, Pa. 19103	45,000	1202
Newriver Valley Planning District Commission Attn: Gordon N. Dixon 1612 Wadsworth Street Radford, Va. 24141	27,742	1202
Health Planning Council of the Eastern Shore Attn: Robert O. Pickard P.O. Box 776 Cambridge, Md. 21613	40,625	1202
Bel-O-Mar Interstate Planning Commission Attn: George Doughty P.O. Box 2086 Wheeling, West Va. 26003	38,100	1202
Medical Society of the District of Columbia Attn: Clifton R. Gruver 2007 "I" Street, NW Washington, D. C. 20006	45,000	1202
West Alabama Health Planning Council Attn: Elizabeth W. Cleino P.O. Box 1488 Tuscaloosa, Alabama 35401	40,708	1202
Florida Div. of Health Dept of Health & Rehabilitation Services Attn: Henry Huntley P.O. Box 210 Jacksonville, Florida 32201	45,000	1202
Georgia-Tennessee Regional Health Commission Attn: Clifford F. Anderson 410 James Bldg. Chatanooga, Tennessee 34702	45,000	1202

APPLICANT	AMOUNT APPROVED	SECTION
Kentucky Bureau for Health Services, Dept of Human Resources Attn: Dale H. Farabee 275 E. Main Street Frankfort, Kentucky 40601	$45,000	1202
Mississippi State Board of Health Attn: Alton B. Cobb P.O. Box 1700 Jackson, Mississippi 39205	45,000	1202
Albermarle Human Resources Development Commission Attn: James Lewis 100 E. Queen Street P.O. Box 589 Edenton, North Carolina 27932	37,835	1202
South Carolina Dept. of Health & Environmental Control Attn: Lachlan Hyatt 2600 Bull Street Columbia, So. Carolina 29201	45,000	1202
South Eastern Air Ambulance District Attn: Richard Clark 305 Second Avenue Hattiesberg, Mississippi 39401	451,995	1202
Metro Emergency Medical Servs. Attn: Thomas E. Allen 1221 Life of Georgia Tower Atlanta, Georgia 30308	213,458	1202
Bureau for Health Servs. Dept. for Human Resources 275 E. Main Street Frankfort, Kentucky 40601	2,296,530	1202
City of Jacksonville Attn: Hans G. Tanzler, Jr. 107 Market Street Jacksonville, Florida 32202	52,808	1202

APPLICANT	AMOUNT APPROVED	SECTION
Health Planning Assoc. of the Central Ohio River Valley Attn: James F. Sandmann 222 East Central Parkway Cincinnati, Ohio 45202	$43,870	1202
CHP Grand Rapids Attn: Philip E. Van Heest 515 Commerce Bldg. 5 Logan, N.W. Grand Rapids, Michigan 49502	44,953	1202
CHP Northwest Illinois Attn: Mrs. Jean Adams 304 N. Main Street Rockford, Illinois 61101	40,360	1202
Region XI - CHP Attn: David H. Johnson 2530 Sandcrest Blvd. Columbus, Indiana 47201	45,000	1202
CHP of Southeastern Michigan Attn: Terence Carroll 1300 Book Bldg. 1249 Washington Blvd. Detroit, Michigan 48226	45,000	1202
Seven County CHP Council Attn: Robert C. Linstrom 201 E. Liberty Street Room 217 Wooster, Ohio 44691	44,232	1202
North Central Michigan CHP Council Attn: Victor J. Sztengel 1515 Howard Street Petoskey, Michigan 49770	44,660	1202
Macomb County Board of Commissioners Attn: John J. Zoccola Court Bldg. Mt. Clemens, Michigan 48043	200,000	1203
Ohio Department of Health Attn: John W. Cashman 450 E. Town Street Columbus, Ohio 43216	1,200,000	1203

APPLICANT	AMOUNT APPROVED	SECTION
City of Port Huron Attn: Douglas DeFrain 201 McMorran Blvd. Port Huron, Michigan 48060	$52,500	1204
Charity Hospital of Louisiana Attn: Isadore Brickman 1532 Tulane Avenue New Orleans, Louisiana 70140	40,286	1202
Oklahoma State Health Department Attn: H. P. Capozzi N.E. 10th and Stonewall Streets Oklahoma City, Okla 73105	65,000	1202
Texas State Health Dept. Attn: Fratis L. Duff 1100 W. 49th Street Austin, Texas 78756	94,714	1202
Brazos Valley Development Council Attn: Pamela Stewart P.O. Drawer 4128 Bryan, Texas 77801	163,084	1203
West Texas Health System Attn: O. Brandon Hull 1215 Avenue K Lubbock, Texas 79401	144,315	1203
Alamo Area Council of Governments Attn: Al J. Notgon 400 Three Americas Bldg. San Antonio, Texas 78291	332,896	1204
Nebraska State Dept of Health Attn: Henry D. Smith Lincoln Bldg. 1003 "O" Street Lincoln, Nebraska 68508	44,997	1202
Omaha-Council Bluffs Metro. Area Planning Agency Attn: James G. Harvell 7000 West Center Road, Suite 200 Omaha, Nebraska 68106	42,450	1202

APPLICANT	AMOUNT APPROVED	SECTION
Mid-Americal Regional Council (MARC) Attn: Richard F. Davis Suite 300, 20 West 9th Street Kansas City, Missouri 64105	$ 35,325	1202
Alliance for Regional Community Health, Inc. 915 Olive Street St. Louis, Missouri 63101	45,000	1202
Mid-Missouri Areawide CHP Agency Attn: Norbert A. Proulx 319 Eastgate Bldg. Columbia, Missouri 65201	44,120	1202
South Dakota Dept of Health Attn: Franklyn T. Krogman State Office Bldg #2 Pierre, So. Dakota 57501	50,888	1202
Colorado Dept. of Health Attn: Edward Dreyfus 4210 E. 11th Avenue Denver, Colorado 80220	76,123	1202
Missoula County Health Dept. Attn: Kit G. Johnson Executive Board Missoula, Montana 59801	15,000	1202
First Planning & Development District Attn: Lowell D. Richards 401 First Avenue NE Watertown, So. Dakota 57201	23,388	1202
Fourth Planning & Development District Attn: J. C. Wright 310 S. Lincoln Street Aberdeen, So. Dakota 57401	16,000	1202
St. Vincent's Hospital Attn: Sister Michel Pantenburg P.O. Box 2505 Billings, Montana 59103	21,540	1202

APPLICANT	AMOUNT APPROVED	SECTION
Roosevelt County Board of Commissioners Attn: Dee R. Mattley P.O. Box 712 Poplar, Montana 59255	$ 9,000	1202
District 10 Regional Planning Commission Attn: Randy Belisle 107 S. Cascade P.O. Box 341 Montrose, Colorado 81401	237,150	1203
Division of Health Dept of Social Services Attn: Lyman J. Olsen 44 Medical Drive Salt Lake City, Utah 84113	643,974	1203
Colorado West Area Council of Government, Reg. II Attn: David S. Meyer Box 1771 Grand Junction, Colorado 81501	206,871	1204
Teton County Teton County Courthouse Attn: Bud Olson Choteau, Montana 59422	26,324	1204
Hill County Board of Commissioners Attn: Dan Morse Hill County Courthouse Havre, Montana 59501	27,710	1204
North Dakota State Health Dept. Attn: State Capitol Bismarch, North Dakota 58501	467,781	1204
Bay Area CHP Attn: Donald B. Ardell 16 California Street Suite 302 San Francisco, Calif 94111	67,400	1202

APPLICANT	AMOUNT APPROVED	SECTION
Inland Counties Attn: John H. Traband Suite 100, 606 E. Mill Street San Bernardino, Calif. 92408	$ 38,800	1202
No. San Joaquin CHP Attn: Arthur Herliky 510 E. Magnolia Street Stockton, Calif. 95202	44,561	1202
Northern Arizona Council of Government Attn: Leon H. Berger P.O. Box 57 Flagstaff, Arizona 86001	31,556	1202
Sacramento Attn: James T. Harrison 717 K. Street Sacramento, Calif 95814	44,175	1202
Norcoa Attn: Victor A. Biswell Gary De Salvatore P.O. Box 126 730 5th Street Eureka, Calif 95501	31,795	1202
City & County of Honolulu Attn: Frank F. Fasi 1455 S. Beretania Street Honolulu, Hawaii 96814	558,028 189,126	1203
City of San Francisco Attn: Francis J. Curry 101 Grove Street San Francisco, California 94102	212,808 168,398	1203
San Diego County Attn: Frank Panarisi 1600 Pacific Highway San Diego, California 92101	345,883	1204

CRS-105

APPLICANT	AMOUNT APPROVED	SECTION
Navaho Health Authority Attn: Irvin E. Hendryson P.O. Box 643 Window Rock, Arizona 86515	$518,585	1204
Los Angeles County Attn: Liston A. Witherill Dept. of Health Services 1100 N. Mission Road Los Angeles, Calif. 90033	2,129,642	1204
Alameda County Health Attn: David Odell Health Services Agency 499 Fifth Street Oakland, Calif. 94607	666,500	1203
Oregon State Health Division Attn: Norman H. Silver P.O. Box 231 Portland, Oregon 97207	23,100	1202
Lower Columbia CHP Council Attn: Mrs. Betty J. Mage 2000 Fort Vancouver Way P.O. Box 425 Vancouver, Washington 98660	23,660	1202
Gig Harbor-Key Peninsula Health Clinic Attn: Jeanne M. Broadsack Longbranch Church Parsonage Longbranch, Washington 98351	26,490	1202
East Oregon Assoc. Of Counties Attn: C. E. Lassen 116 E. Main, Room 15 Pendleton, Oregon 97801	18,050	1202
Lane Council of Governments Attn: Robert Chave 135 Sixth Avenue E. Eugene, Oregon 97401	20,120	1202
Central Oregon Inter-Governmental Council Attn: Tom Mack Russell C. Reek 1253 N. Canal Blvd. Redmond, Oregon 97756	217,223	1203

CRS-106

APPLICANT	AMOUNT APPROVED	SECTION
Kitsap County Attn: Gene Lobe 614 Division Street Port Orchard, Washington 98366	$ 148,100	1203
Umpque County Attn: Richard Reynolds 205 E. Jackson Street Roseburg, Oregon 97470	132,112	1203
Thurston County Attn: Dennis J. Delahunt 11th and Capitol Way Olympia, Washington 98501	50,718	1203
City of Ocean Shores Attn: Robert M. Ford Fire Department P.O. Box 1274 Ocean Shores, Washington 98551	36,072	1203
Washington State Health Department Attn: John A. Beare P.O. Box 1788 Olympia, Washington 98101	302,009 225,109	1203
Cowlitz-Wahkiakum Governmental Conference Attn: James F. Berry Courthouse, Room 201 Kelso, Washington 98626	24,400	1203
Wheeler County Attn: Andrew F. Leckie Wheeler County Courthouse Fossil, Oregon 97830	30,000	1203

MEDICARE AND MEDICAID

There are two major governmental health service financing programs now in effect in the United States; they are Medicare and Medicaid. Eligibility in Medicare is derived from worker's payments and payments made on their behalf by employers, of social security taxes. Medicaid eligibility is determined by the States and their local jurisdictions based on the guidelines established under Title XIX of the Social Security Act. Both programs are described below in greater detail. Both programs cover substantial numbers of persons in rural areas, and result in substantial payments to providers in rural areas.

Medicare

Medicare is a federally administered program providing hospital and medical insurance protection for over 23 million people--those 65 and older, people under age 65 who have been receiving cash benefits under the social security or railroad retirement programs because they are disabled, and certain chronic kidney disease patients under 65.

The medicare program is under the overall direction of the Secretary of Health, Education, and Welfare. Within the Department, the Bureau of Health Insurance of the Social Security Administration is responsible for policy and administrative control of the program, with much of the day-to-day operational activities carried on by commercial insurance companies and Blue Cross-Blue Shield plans. These organizations have the responsibility for reviewing claims for benefits and making payments. In fiscal year 1973, these organizations processed

over 19 million bills from hospitals and other participating facilities and over 58 million bills for physicians' and other medical services.

Over $9 billion in medicare benefits were paid in fiscal year 1973, approximately 12 percent of the Nation's total health care bill. In each State, health officials assist the Federal Government in determining whether facilities that wish to provide services to medicare beneficiaries meet the conditions for participation in the medicare program. These conditions relate to the quality of patient care and various health and safety requirements. There are over 16,000 health care facilities--hospitals, skilled nursing facilities, and home health agencies participating in medicare.

Description of Program

The medicare program consists of two parts--the hospital insurance plan (part A) and the supplementary medical insurance plan (part B). Hospital insurance benefits include: (a) inpatient hospital services for up to 90 days in a benefit period, plus a lifetime reserve of 60 additional days of hospital care after the 90 days have been exhausted; (b) posthospital extended care in a skilled nursing facility for up to 100 days in a benefit period; and (c) posthospital home health services for as many as 100 home health visits. A benefit period begins with the first day an individual is furnished inpatient hospital or skilled nursing facility services, and does not end until he has not been an inpatient in either a hospital or a skilled nursing facility for 60 consecutive days.

Supplementary medicare insurance benefits (part B) include: (a) physicians' and surgeons' services, certain nonroutine services of podiatrists, limited services provided by chiropractors, and the services of independently practicing physical therapists; (b) certain other medical and health services such as diagnostic services, diagnostic X-ray tests, laboratory tests and other diagnostic services, X-ray, radium and radioactive isotope therapy, ambulance services, and additional medical supplies, appliances, equipment, and prostheses; (c) outpatient hospital services; (d) home health services (with no requirement of prior hospitalization) for 100 visits during a calendar year; and (e) outpatient physical and speech therapy services furnished by approved providers.

Both the hospital insurance and medical insurance plans contain limitations on program benefits in the form of deductible and coinsurance amounts for which the beneficiary is responsible. The most important of these are a variable deductible--now $84--with respect to part A hospital services and a $60 deductible and 20-percent coinsurance amount with respect to most part B services.[25/]

Hospital insurance (part A) coverage is available to: (a) all people 65 and over who are entitled to receive social security cash benefits or railroad retirement benefits; (b) social security beneficiaries under age 65 who have been entitled to social security or railroad retirement benefits for at least 24 consecutive months on the basis of a disability; (c) otherwise ineligible persons, 65 and older, who elect

to enroll in the hospital insurance program and to pay the full cost of their coverage ($33 a month now, increasing in the future as costs increase); (d) almost all people under 65 who suffer from chronic kidney disease; and (e) those who were 65 or nearly that age when the program was enacted in 1965 but who were not eligible for cash benefits.

Supplementary medical insurance is available to all hospital insurance beneficiaries and to all other people 65 and over, except recent immigrants.

Payment of medicare benefits is on the basis of (1) reasonable cost in the case of hospitals and other institutional providers and (2) reasonable charges in the case of physicians and other non-institutional suppliers of services.

The hospital insurance part of the program is financed primarly through social security payroll contributions paid by employees, employers, and self-employed people covered under social security. The contribution rates are the same for self-employed persons, employees, and employers, and are paid on annual earnings up to the same limit that applies to contributions for the cash benefit program--$13,200 in 1974. Hospital insurance benefits for the present aged who qualify on the basis of the special transitional insured status provision are financed from general revenues. Hospital insurance benefits for aged persons not otherwise eligible are financed through monthly premiums (currently $33, increasing to $36 beginning July 1974) paid by those who voluntarily enroll in the hospital insurance program.

The supplementary medical insurance (SMI) part of the program, in which participation is voluntary, is financed from premiums paid by aged, disabled, and chronic renal disease enrollees and from Federal funds. Under the law the Secretary of Health, Education, and Welfare is required to review the monthly premium rate and to promulgate in December of each year the rate to be in effect for the following fiscal year. Increases in the rate are to be directly related to the expected increase in program costs. The current monthly premium rate is $6.30: the rate promulgated by the Secretary for fiscal year 1975 is $6.70. (The premium rate cannot be increased in the future by a proportion higher than the proportionate increase in cash social security benefits resulting from a general benefit increase.)

Of the 21.7 million people age 65 and older in the United States, 21.2 million, almost 98 percent now have hospital insurance protection. About 20.8 million--nearly 96% of the total aged population--are also enrolled in in the supplementary medical insurance program. On January 1, 1974, 1.8 million disability beneficiaries were enrolled in the hospital insurance program and 1.7 million in the Supplementary Medical Insurance program. Nine thousand other persons suffering from chronic kidney disease are also enrolled in the medicare program.

Medicaid

In 1965, a new medical assistance (medicaid) program was enacted as part of the Social Security Amendments of 1965 (P.L. 89-97), which also enacted medicare). The medicaid program had these features:

1. It substituted a single program of medical assistance for the vendor payments under the categorical cash assistance and medical assistance for the aged programs, with a requirement that beginning in January 1970, Federal sharing in vendor payments would be provided only under the medicaid program;

2. It offered all States a higher rate of Federal matching for vendor payments for medical care;

3. It required each State to cover all persons receiving cash assistance;

4. It permitted States to include medically needy aged, blind, disabled, and dependent children and their families at the option of the State; and

5. It required that States include inpatient and outpatient hospital services, other laboratory and X-ray services, and permitted other forms of health care at State option.

Six States began operation of their medicaid programs in January 1966, the earliest possible date. California began its program in March 1966, with New York initiating medicaid in May. By the end of 1966, 26 States had plans in operation. Another 11 began their medicaid programs during 1967. All States, with the exception of Arizona, now have medicaid programs in operation.

Increasing congressional concern with the rapidly escalating costs of the medicaid program as well as with the quality of care provided recipients led to an extensive review of the entire program. In October 1972, legislation was enacted (P.L. 92-603) which contained a substantial number of amendments designed to control costs, strengthen program administration, and improve the delivery and review of services. Cost control amendments included provisions limiting Federal participation for capital expenditures not approved by planning agencies, establishing limitations on prevailing charge levels, repealing the "maintenance of effort" and comprehensive goal requirements, and instituting mandatory and optional patient cost-sharing requirements, Amendments designed to improve program administration included provisions increasing Federal matching for installation and operation of management

information systems, establishing penalties for fraudulent acts and false reporting, and assigning responsibility for the establishment and maintenance of health standards to the State health agency.

Public Law 92-603 also included several provisions directed toward expanding the scope and improving the delivery of services. Amendments were included which mandated the provision of family planning services at 90 percent Federal matching, included institutional mental health care for children as an optional service, and facilitated a State's ability to contract with health maintenance and related organizations. Penalty provisions were included for States which failed to provide the required EPSDT or family planning services.

Public Law 92-603 also established a supplemental security income program (SSI) which, effective January 1, 1974 replaced Federal State welfare programs for aged, blind, and disabled individuals. States were permitted (and in certain cases required) to establish programs supplementing the basic Federal payment. Medicaid eligibility determinations for these individuals could no longer be tied to eligibility under the old Federal State cash assistance programs. Subsequent legislation (P.L. 93-66 and P.L. 93-233) specified the requirements for mandatory and optional coverage. Aged, blind, or disabled individuals on the medicaid and welfare rolls in December 1973 were generally protected against a loss in medicaid eligibility. A State was provided certain options (generally based on its previous coverage levels) in determining the extent of coverage for other persons receiving Federal SSI benefits and or State supplementary payments.

PROFESSIONAL STANDARDS REVIEW ORGANIZATIONS (PSRO's)

Professional Standards Review Organizations were established by Congress with the passage of the Social Security Amendments, P.L. 92-603 to review care rendered to persons entitled to care under Medicare and Medicaid. These review organizations are made up of the physicians in the region serving the Medicare and Medicaid beneficiaries. PSRO's are responsible for reviewing not only physician services but all services to which Medicare and Medicaid beneficiaries are entitled. PSRO's are charged with the responsibility of reviewing the necessity of care rendered, and when care is rendered on an inpatient basis, to determine if that care can be rendered on an outpatient basis, or in an inpatient facility which is less expensive.

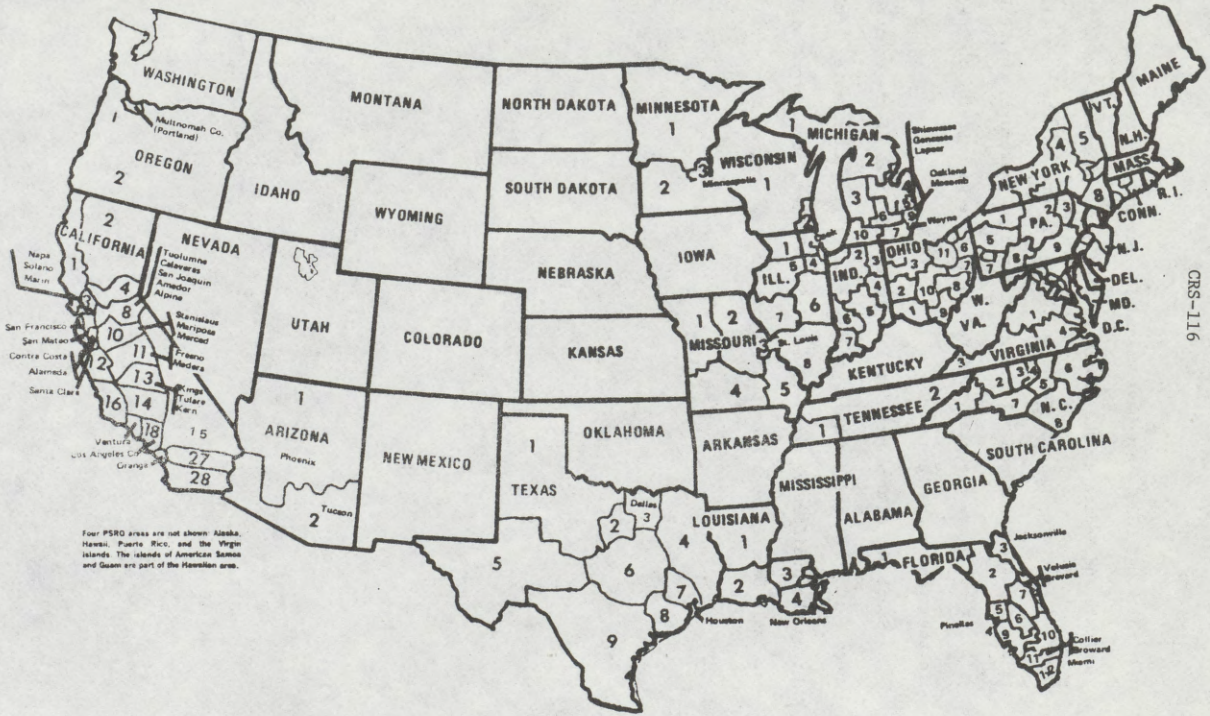
The genesis of the development of PSRO's was the allegations by experts in the medical care field that there was unnecessary and inappropriate services rendered to Medicare and Medicaid beneficiaries, and the demonstrated success of certain PSRO prototypes in Colorado, New Mexico, Utah and in Sacramento and San Joaquin Counties in California in reducing unnecessary and inappropriate care.

PSRO's serve regions within States or may be Statewide. In March of 1974, the Secretary of Health, Education, and Welfare announced the final designation of all PSRO areas in the United States. The Department is now engaged in contracting with PSRO's for planning and operations. As of May 1, 1974, 131 applications had been received for planning and operational activities.

Although PSRO's now have responsibility only to review care for Medicare and Medicaid, the aforementioned prototypes were frequently engaged in reviewing care rendered to subscribers and their families under private insurance policies. It appears, therefore, that PSRO's will probably oversee care rendered to a large majority of the people in the area in the future.

Since the PSRO program will apply to all areas of the country, the people in rural areas should greatly benefit from this review activity. Given the qualitative problems mentioned earlier, rural areas will probably benefit more from an effective review program than urban areas.

PSRO AREAS



CRS-116

HEALTH PLANNING

The Federal government has appropriated about $150 million since 1966 to establish and support comprehensive health planning (CHP) agencies at both State and regional levels. Currently, all States have a health planning agency, and approximately 70% of the population is covered by 218 areawide (regional) CHP agencies. The program represents an effort through State and community planning to overcome fragmentation in health programs and organizations, bridge gaps in health care coverage, increase coordination of services at State and local levels, eliminate duplication in facilities and services, improve the use of scarce manpower, and moderate the rapidly rising costs of health care.

The comprehensive health planning (CHP) legislation was enacted in 1966 (P.L. 89-749) as a partial response to the widely felt concern over inadequacies in the Nation's health care delivery system in meeting the health needs of the population. While $42.1 billion was being spent on health care and services nationwide, rural areas and the urban ghetto were badly underserved, health care costs were rising faster than the overall cost of living, and poor organization and management of the health care system resulted in inefficient and ineffective use of scarce health resources. The CHP legislation was designed to assist States and local communities to develop planning processes to produce comprehensive health plans for meeting their current and future health needs. The program's ultimate objective was to promote the development of a health care system in which quality health care would be available, accessible, and affordable to all persons.

The comprehensive health planning program is carried out by agencies established at both State and regional levels. Section 314(a) of the Public Health Service Act authorizes formula grants to States based on relative population and per capita income for statewide health planning. To qualify for a grant, a State must submit and have approved by the Department of Health, Education, and Welfare (HEW) a program plan which designates a single State agency, the "314(a) agency," to administer the program, and outlines a work program for achieving comprehensive health planning. The State planning mechanism must include a health planning council to advise the State agency with a majority of its membership composed of "consumers of health."

Section 314(b) authorizes project grants up to 75% of approved operating costs to public and private nonprofit agencies (the "314(b) agencies)" for areawide (regional) health planning. If the agency is nongovernmental, it must include local government representation and, under HEW regulations, a majority of the members of the agency's governing body ("Council") must be the consumers rather than providers of health care.

Both the State and area wide agencies have as their overall responsibility the development of a comprehensive plan or series of plans containing short- and long-range recommendations in a priority order for meeting identified health needs and objectives through coordinated public, private, and voluntary actions. The plans become the focus for carrying out CHP operational functions such as:

(1) Promoting coordination among public voluntary and private health agencies.

(2) Assisting health agencies and organizations in planning and implementing specialized or short-term health services.

(3) Reviewing and commenting on health services projects and plans proposed by other health agencies when requested or required under Federal law or regulations.

(4) Reviewing and approving health facility construction proposals when authorized by State "certificate of need" legislation or under authority of Section 1122 of the Social Security Act.

Individual accomplishments by various planning agencies are cited in hearings, reports, and other studies. They include such achievements as forestalling unnecessary hospital and nursing home construction, stimulating the establishment of health manpower training programs, encouraging activities to correct local environmental health hazards, and spurring the development of needed services for the poor and minority groups. Perhaps most significantly, the areawide CHP agencies have involved substantial segments of the citizenry in health planning efforts and have raised community consciousness concerning health problems.

Critics of the program claim that instances of real accomplishment are the exception rather than the rule, and that health planning has had little or no impact on the major problems besetting the health care system.

Although the basic importance of plan development is generally accepted, a recent Government Accounting Office report concluded that:

> ...nationally, few states and areawide agencies had actually prepared comprehensive health plans. A private health consultant's report stated, however,

> that most CHP agencies were developing such plans, though little agreement existed as to the nature, purpose or content of the plan document. On the basis of information provided by private consultants' studies and our interviews with HEW officials, it appears that the prepared plans are not comprehensive in scope and are so general they cannot be used in making decisions or recommendations. ("Comprehensive Health Planning as Carried Out by State and Areawide Agencies in Three States," B-164031(2), April 18, 1974).

Rural areas are less apt to have comprehensive health planning agencies and probably little to do, if they did since planning agency activity most frequently is concerned with reallocating resources between one service or another, e.g., Ob-Gyn services versus geriatric services, or constraining community forces who want to build hospitals or add hospital beds. That level of activity or those types of considerations are not apt to exist in rural areas.

There are a number of forces at work, however, that may make it important and possible for rural people to engage in meaningful planning, including the potential strengthening of health care purchasing power through national health insurance, and more effective ways of getting health resources to rural areas. Should these two things happen, for example, more planning would have to be done in rural areas, which would necessitate an expanded planning process.

APPALACHIAN REGIONAL DEVELOPMENT PROGRAM

The Applachian Regional Development Act was passed in 1965. The Program is administered by the Appalachian Regional Develop Commission, which is made up of a Federal Representative, who serves as co-chairman of the Commission and the 13 States which have Appalachian counties within their borders. The program resulted from the recommendations of the President's Appalachian Regional Committee chaired by Franklin D. Roosevelt, Jr.

The first priority of the Commission was the development of roads and 80 percent of the funds for the Commission went into roads in the first five years. The second priority was the development of growth centers within Appalachia to redress the rural-urban imbalance. The health programs, while not the highest priority, have nevertheless received substantial amounts of money. Health programs along with child development programs are funded under Section 202 of the Act. The Commission has established three priority areas for Section 202 funding: (a) Area Demonstration Programs which are now operated in 12 of the 13 Appalachia States, (b) Health planning and (c) Primary care. Demonstration areas were established because it was decided by a special ad hoc health advisory committee that there were insufficient resources to do everything everywhere and the money would be better spent by concentrating on a fixed number of areas.

In 1973, an estimated $45 million was spent on health and child development, $50 million in 1974, and an estimated $50 million in 1975. The program was initially scheduled to expire in June, 1971 but was extended for an additional four years.

OTHER FEDERAL RESOURCES AVAILABLE TO RURAL AREAS

Department of Health Education and Welfare

There are over forty programs within the Health Services Administration and the Health Resources Administration of the Department of Health, Education, and Welfare which offer potential support to rural areas and rural residents. These programs are listed in the Catalog of Federal Domestic Assistance prepared by the Office of Management and Budget. Some are discussed in the previous section. Others are summarized below.

Comprehensive Public Health Service Formula Grants

Objectives: To assist States in establishing and maintaining adequate community, mental and environmental public health services, including training of personnel for State and local public health work.

Budget Authority: 1974 $90,000,000

Crippled Children's Services

Objectives: This program provides financial support to States (1) to extend and improve (especially in rural areas and in areas suffering from severe economic distress) medical and related services to crippled children and children suffering from conditions that lead to crippling, and (2) for special projects of regional or national significance which may contribute to the advancement of services for crippled children.

Budget Authority: 1974 $64,900,000

Family Planning Projects

Objectives: to provide educational, comprehensive medical, and social services necessary to enable individuals freely to determine the number and spacing of their children, and to help reduce maternal and infant mortality.

Budget Authority: 1974 $100,615,000

Health Facilities Construction Grants (Hill-Burton Program)

Objectives: To assist the States in planning for and providing hospitals, public health centers, State health laboratories, out-patient facilities, emergency rooms, neighborhood health centers, long-term care facilities, chronic disease hospitals and long-term units of hospitals, rehabilitation facilities, and other related health facilities.

Budget Authority: 1974 $198,800,000

Health Service Development Grants

Objectives: To support a full range of public health services to meet special needs at the community level, especially health problems of regional and national significance; develop and support, for an initial period, new programs of health services, included related training; and development of comprehensive health centers.

Budget Authority: $229,300,000*

*Includes migrant health program.

Health Service Research and Development Grants and Contracts

Objectives: To support research, development, demonstration, and evaluation designed to improve health services. Priorities are given improve availability and quality of services, and to control costs.

Budget Authority: 1974 $51,000,000 of which $15,000,000 was earmarked for emergency health services.

Maternal and Child Health Services

Objectives: To provide financial support (1) to States to extend and improve services (especially to rural areas and in areas suffering from severe economic distress) for reducing infant mortality and improvement of the health of mothers and children, and (2) for special projects of regional or national significance which may contribute to the advancement of maternal and child health services.

Budget Authority: 1974 $265,900,000

Mental Health-Community Assistance Grants for Narcotic Addiction and Drug Abuse

Objectives: To reach, treat, and rehabilitate narcotic addicts, drug abusers, and drug dependent persons through a wide range of community-based services in order to restore them to health as useful members of society; to develop innovative and effective methods for delivery of services; to assess local needs and obtain local financial and professional assistance and support for community programs for narcotic addict services; to collect, prepare and disseminate information.

Budget Authority: 1974 $175,800,000

Community Mental Health Centers

Objectives: To provide funds to finance building of public and other nonprofit community mental health centers; to improve organization and allocation of mental health services; and to provide modern treatment and care within the geographical community of the consumer. To meet a portion of compensation costs of professional and technical personnel in initial operation of the center; to develop community programs by obtaining local support and community involvement in comprehensive mental health services.

Budget Authority: 1974 $188,800,000

Community Assistance Grants for Comprehensive Alcoholism Services

Objectives: To prevent and control alcoholism through community based programs of comprehensive services under proper medical auspices on a coordinated basis.

Budget Authority: 1974 $67,000,000

Direct Grants for Special Alcoholism Projects

Objectives: To prevent and control alcoholism through the development of specialized training programs and/or materials relating to the provision of public health services for the prevention and treatment of alcoholism; to conduct surveys and field trials to evaluate the adequacy of programs and demonstrations of new and effective means of delivering services.

Budget Authority: 1974 $15,300,000

Health Facilities Construction Loans and Loan Guarantees

Objectives: To assist States in the planning for and provision of hospitals, public health centers, State health laboratories, outpatient facilities, emergency rooms, neighborhood health centers, long-term facilities and long-term units in hospitals, rehabilitation centers and other related health facilities.

Budget Authority: 1974 $2,000,000

Alcoholism Formula Grants

Objectives: To assist States to plan, establish, maintain, coordinate, and evaluate, effective prevention, treatment, and rehabilitation programs to deal with alcohol abuse and alcoholism.

Budget Authority: 1974 $45,600,000

Department of Defense

Under the Civilian Health and Medical Program for the Uniformed Services (CHAMPUS), both military retirees and dependents are entitled to care at Federal government expense at civilian or military facilities.

Department of Transportation

Under the National Highway Safety Act of 1966, the Department of Transportation is actively engaged in standards development for State emergency medical services programs, with strong emphasis on training and licensing ambulance drivers and attendants.

This does not exhaust the list because of the large number of programs in which health services might be a larger component, such as agricultural programs, economic development, and educational programs.

NATIONAL HEALTH INSURANCE

There were a dozen major national health insurance proposals before the Ninety-Third Congress. All of these bills attempt to expand access to health services to the American people, and make access more equitable between all citizens of this country. The principal means of expanding access is through greater participation of the Federal government in helping to pay medical bills, providing varying degrees of relief and limitations on liabilities for both the States and their jurisdictions and the people themselves. Greater equity is attempted by providing a greater amount of help for the poor and near poor, and development of standardized benefits or services in the health plans offered.

The means of achieving better and more equitable access to health services varies widely between bills, however, principally regarding methods of financing and the administration of the program. Regarding financing, differences center around how much of the health bill will be paid by the employer, the individual, the States and their jurisdictions, and the Federal government. Differences regarding Federal government financing have further distilled into differences of financing through social security taxes and general financing, and the extent of each. The issue regarding administration revolves around the extent of participation of the public and the private sector, and the extent of State as well as Federal government participation.

The effect these bills will have on rural areas and rural people is difficult to assess. There is some support for the proposition that improved financing will make it more attractive for health professionals to locate in rural areas, although there is no conclusive evidence supporting this proposition. Clearly, although financing alone may not be sufficient to attract physicians to rural areas, it is essential that physicians and other workers be assured adequate incomes. National health insurance, regardless of the final bill that is passed, would probably make such assurance possible for all rural areas.

Too, all of the proposals would have the effect of expanding coverage to persons who do not now have health insurance because they are too poor to purchase it. The several proposals would appear to provide some relief for individual policyholders who pay extremely high administrative cost for their health insurance, when compared to group policyholders.

42-617 O - 75 - 10

B. STATE ACTIVITIES TO IMPROVE HEALTH SERVICES IN RURAL AREAS

There is some evidence that States have become increasingly active in dealing with physician and other health manpower shortages and maldistribution.

To attract physicians to rural areas, thirteen States have loan forgiveness programs, whereby all or part of the medical school loans are forgiven in return for service of some specified period of time in rural, underserved areas. Such programs have only been marginally effective. Three States have abandoned these programs, and for all programs, it was found that 38% of the physicians who received these loans elected to pay them back rather than serve in a rural area.[37/]

A recent analysis by the Department of Health, Education, and Welfare cited 33 States with legislation providing for the delegation of physician activities to physician assistants. Given the shortage of physicians in rural areas, such legislation can be viewed as of great potential benefit to rural communities.[38/]

Some States, such as North Carolina, have adopted ambitious programs to provide services to rural areas. The State of North Carolina recently appropriated $28.5 million to support the Area Health Education Program, described in a later section.[39/] In 1973, the North Carolina legislature passed a bill to create an Office of Rural Health Services. This office has set a goal of establishing 15 rural primary care health centers.[40/]

For the academic year 1971-72, the States appropriated $275 million for medical schools.[41/] To assure greater attention to rural Illinois, the Illinois State legislature appropriated monies in the

in the late 1960's for a new three year school based at Southern Illinois University and using a Medical Center in Springfield. Heavy emphasis is placed on primary care, and selection objectives include selecting students who come from rural communities in Illinois in the hope they will return to rural communities to practice. There is heavy emphasis on preparing physicians for careers in primary care.

It is expected that State legislatures increasingly will insist that medical, dental, nursing, and other health professional schools assume greater responsibility for correcting the problems of health manpower shortages in rural areas as a condition of financial support.

Some States have assumed leadership in developing statewide systems for emergency medical service systems, including Arkansas, Kentucky, and Maryland.

Many States are becoming increasingly interested in concepts of regionalization with the intent of developing intraregional health systems and interregional linkages. The concept which is being considered for the State of Iowa is discussed in a later section.

Given progress to date, however, there is serious question that the States will do very much without Federal funds. With few exceptions, State initiatives have occurred with substantial infusions of Federal money, and expectations of more to come. This is true regarding health manpower training, where the Federal investment is over three times the total states investment. It is also true in the development of facilities, health centers, emergency medical service systems, and health planning agencies. To the States has

fallen the responsibility of "rationalizing" Federal investments through the States' administrative structures.

C. THE ROLE OF HEALTH PROFESSIONAL SCHOOLS IN PROVIDING AND IMPROVING HEALTH SERVICES IN RURAL AREAS

Medical Schools are training students in the primary care specialities of family practice, medicine and pediatrics, to an increasing extent. Nursing schools are training nurse practitioners. (See the Section on Federal Programs). Schools of Osteopathy are making substantial contributions in training physicians in primary care who are willing to practice in rural areas. While it is clear that progress is being made, it is also clear that what is being done is not nearly enough. The nature of rural practice, with widely scattered population, cannot support a medical system which relies heavily on specialists. It is therefore, as important to rural areas that a substantial shift in emphasis to general from specialized practice occur, as it is to develop mechanisms to get doctors and other health professionals into rural areas. Both issues are tied together.

The question needs to be considered as to how this acceleration of training of physicians in primary care and training and exposure for practice in rural areas should be financed. In the academic year 1971-72, the Federal Government provided $871,585,000 to medical schools for teaching, research, and multipurpose programs. The total budgets of those same institutions, including all sources of money was $1,942,780,000.[42/] Although it is clear that (a) there is too much emphasis on the training of specialists and (b) there is insufficient effort to improve the health services in rural areas, it is not clear whether this will require substantial infusions of additional money or reprogramming of existing resources, or both.

In addition to the training responsibilities of health professional schools, but particularly medical schools, is their responsibility to help create an atmosphere for medical practice in rural areas, to provide assistance in building these practices, and to participate, with the communities, and other institutions, in the provision of care, if necessary. Such activities could include helping to recruit physicians to rural areas, providing administrative and medical assistance in setting up practices, developing consultation arrangements with rural practitioners, continuing education programs, and very importantly, arrangements to provide coverage for local physicians who need to get away occasionally for a number of reasons.

THE SPECIAL CASE OF SCHOOLS TO TRAIN OSTEOPATHIC PHYSICIANS

According to the American Association of Colleges of Osteopathic Medicine there are currently over 13,000 practicing osteopathic physicians in the United States. According to Dr. Myron S. Magen, Dean of the Michigan State University School of Osteopathy, over 90% of the 616 students who graduated from Osteopathic Schools in 1974 will engage in family practice in rural areas.[43] This is consistent with the type and location of all osteopathic physicians, who tend to engage in family practice in rural areas.[44]

The Kirksville College of Osteopathic Medicine in Kirksville, Missouri operates 12 clinics in rural Missouri, which provide service to the residents of those communities and serve as training centers for undergraduate students at the Kirksville College of Osteopathic Medicine.[45]

Not only do Osteopaths practice in rural areas, but beginning in academic year 1974-75, the new Greenbriar College of Osteopathic Medicine and Surgery is accepting its first class of over twenty students in Lewisburg, West Virginia. Lewisburg is a medically underserved area.[46]

Although the curriculum of allopathic and osteopathic schools and the care philosophies of these two types of physicians may differ, the licensure requirements for allopathic and osteopathic physicians are the same for the majority of States.

Although there is little available evidence to support the contention, there appears to be greater emphasis on the part of Colleges of Osteopathic Medicine on clinical training experiences in rural areas, and a proportionally greater number of students from rural areas than is the case in allopathic schools.[47]

The behavior of the osteopathic profession suggests several potential options which could cause a more favorable distribution of medical services toward rural areas. One option would be the expansion of the training capacities of osteopathic colleges to secure a greater number of rural practitioners, after a more extensive analysis of the factors which might cause the student of osteopathic medicine to practice in rural areas. The second option would be the transfer of those conditions which are determined to cause students to practice in rural areas to allopathic schools. The third option would be to do both.

An examination of available data shows the following:[48]

Students Enrolled

	Osteopathic Schools		Allopathic Schools	
	Schools	Students	Schools	Students
1961-62	6	1944	86	30,288
1972-73	7	2579	112	47,546
Percent Increase	16	32.6	30.2	57
Numerical Increase	1	635	26	17,258

These data show that, in both absolute and relative terms, allopathic schools have increased to a greater extent, both for the number of schools and the number of students.

Regarding the transfer of the admissions and training practices, this has been accomplished to some extent in a number of allopathic schools, both through State and Federal incentives. Funds have been provided under the Comprehensive Health Manpower Training Act of 1971 for scholarships to students from underserved areas, and for schools developing training experiences for undergraduate health professions students, including allopathic and osteopathic students, as well as support for residency training in rural areas. Legislation being considered by both the House and Senate during the current Congress would strengthen provisions in both areas of admissions of students from rural areas and training experiences in rural areas.

D. MODELS FOR DELIVERING RURAL HEALTH SERVICES

This section is not intended to analyze all the methods of delivering care in rural areas. It is a selection of programs which either have demonstrated their ability to provide good services over a long period of time or programs which are attempting to deal with some of the more pressing problems in rural areas, e.g. manpower shortages and poor emergency health service systems.

The description of the proposal prepared by MacQueen and Eldridge was included because it describes how a State might respond to manpower shortage problems, and because both its planning assumptions and plan for implementation appeared to be realistic.

Medical Group Practice, an Approach to Delivering Health Services in Rural Communities

Like health maintenance organizations, medical clinics and medical centers are not new ideas. Many clinics began in the late nineteenth century, often inspired by the success of the Mayo brothers, who established their famous clinic in rural Rochester, Minnesota. Roemer et al, in their article on group practice had the following to say: 50/

> Of the several major mechanisms being used to organize the delivery of health services in the world, one of the few to originate in the United States was group medical practice. The hospital, the health insurance program, the public health agency, the visiting nurse association, the rural health center -- these and many other social patterns were started by European nations and eventually spread elsewhere. The organization of teams of private physicians, however, for integrated provision of various components of medical care was an American innovation which, in diverse forms, has now been adopted in many

> other countries. The pioneering demonstration of the idea is usually credited to the Mayo brothers, who started their now famous clinic in a small Minnesota town (Rochester) in 1887.[25]

In 1972, 17.6 percent of all non-Federal physicians were in group practice - and 10.7 percent of all physicians were in multi-specialty group practice.[51] Many of the multi-specialty clinics serve very large geographical areas, sometimes serving a radius of 250 miles. Because of the nature of their services, a majority of which are specialized, people in rural areas use these clinics either on direct referral or through a doctor in their community.

Medical clinics, or medical group practices offer a number of advantages for physicians who may be inclined to work in rural areas. Because there are a group of physicians, regular hours are possible, vacations can be both scheduled and liberal, and continuing education benefits are provided away from the clinic. Physicians have access to their peers for consultation. Affiliations with teaching and research institutions can be arranged. Solo practitioners frequently have to practice without these advantages.

Many of these clinics have not only survived over time, but have grown in size and range of services. Many have adopted innovative approaches to reaching surrounding areas, and have become part of larger regional systems.

In a recent study done by the Association of American Medical Clinics, a random sample of 18 clinics in rural and semi-rural areas was selected to determine the extent of change over time in the number of doctors belonging to each clinic and the numbers of support personnel employed by the clinics. The purpose of the study was to test the hypostheses that clinics in rural areas and semi-rural areas have not only survived, but grown, and

to determine the extent to which the numbers of support personnel have increased. Eighteen clinics were randomly selected. The size of the clinics studied ranged from 8 to 74 physicians in 1974. The dates of founding ranged from 1927 for the Hitchcock Clinic in Hanover, New Hampshire to 1969 for the Medical Arts Clinic of Ardmore. Of the 18 clinics selected, only one showed a decline (one physician) in the number of doctors and only a slight increase in the number of supporting personnel. One other showed no growth, and that particular clinic, the Medical Arts Clinic of Ardmore, was founded in 1969. Comparing the number of physicians and the number of supporting personnel on the staffs of these clinics at their founding and the numbers of physicians and supporting personnel in 1974, the increase was 194% for physicians and 290% for support personnel.

CLINIC	YEAR FOUNDED	ORIGINAL STAFF #M.D.'s - AHP*	RATIO	1974 #M.D.'s -AHP*	RATIO
1. Bryan Med. Group, Inc.	1966	8 - 15	1.9	12 - 29	2.4
2. Daniel Boone Clinic	1963	20 - 33	1.7	22 - 51	2.3
3. Southern Monterey Clinic	1970	8 - 37	4.6	9 - 38	2.0
4. Elko Clinic	1949	5 - 8	1.6	8 - 17	2.1
5. Dodge City Clinic	1950	3 - 7	2.3	10 - 58	5.8
6. Ferguson Medical Group	1959	4 - 5	1.3	13 - 30	2.3
7. F. Hood Craddock Memorial Clinic	1940	13 - 50	3.8	11 - 51	4.6
8. Morgan-Haugh Professional Service	1946	5 - 14	2.8	8 - 27	3.4
9. Trover Clinic	1953	5 - 9	1.8	63 - 239	4.1
10. Medical Arts Clinic of Ardmore	1969	8 - 30	3.8	8 - 30	3.8
11. Houma Medical & Surgical Clinic	1968	16 - 55	3.4	27 - 111	4.1
12. Medical Associates of Clinton	1964	4 - 14	3.5	17 - 44	2.6
13. Southern Clinic	1929	2 - 3	1.5	15 - 57	3.8
14. Wausau Medical Center	1962	12 - 35	2.9	44 - 158	3.6
15. Davis Clinic, Indiana	1949	3 - 2	.66	19 - 57	3.0
16. Rugeley & Blasingame Clinic Assoc.	1942	4 - 10	2.5	17 - 58	3.4
17. Hitchcock Clinic	1927	5 - 10	2.0	74 - 118	1.6
18. Myers Clinic	1928	4 - 5	1.3	14 - 82	4.9
		133 342	2.57	391 1337	3.68

1. Increase in Physicians 258
2. Percentage Increase in Physicians 194%
3. Increase in Support Personnel 995
4. Percentage Increase in Support Personnel 291%

*AHP=Allied Health Personnel.

CRS-141

In analyzing growth from 1960 to the present for 10 clinics in the sample for which data were available, we find the following:

Clinic	1960 M.D.'s - AHP's	1974 M.D.'s - AHP's
Elko Clinic	5 - 17	8 - 17
Dodge City Clinic	7 - 20	10 - 58
F. Hood Craddock Memorial Clinic	9 - 20	11 - 51
Morgan-Haugh Professional Service	7 - 19	8 - 27
Trover Clinic	16 - 36	63 - 239
Southern Clinic	9 - 30	15 - 57
Davis Clinic	11 - 35	19 - 57
Rugeley and Blasingame Clinic Assoc.	9 - 24	17 - 58
Hitchcock Clinic	65 - 145	74 - 118
Myers Clinic	9 - 45	14 - 82
Totals	147 407	239 764

Percent Increase	
Physicians	63%
Support Personnel	88%

As can be seen, all the clinics sampled showed substantial growth between 1960 and 1974. These clinics were located in communities with populations ranging from 5000 to 25,000 people.

In their article on group practice, Roemer et al, in seeking to identify the socioenvironmental factors contributing to group practice, they note the following: [52]

Examining first the socioenvironmental factors and their simple correlations with the strength of group practice, one finds that the strongest correlation is with the state's year of entry into the United States--that is, the more recently established states tend to have more group practice. A glance at Table 2 shows the meaning of this finding: the highest 10 states, in rank order of group practice strength, include newcomers like Alaska and Hawaii (1959) or North and South Dakota (1889), while of the lowest 10, most are among the 13 original British colonies which declared themselves a nation in 1776.

We believe that this measure can be taken as a reflection of traditionalism, in contrast to innovativeness. Group medical practice, as we noted, has been a departure from conventional patterns of medical work. Older communities become encrusted with traditions which inhibit change, in more recently settled places, new ideas can take root more easily. Moreover, such places lack established networks of medical referal among specialists and institutions.

Close behind in the simple social correlations is population density--that is, the less densely populated states tend to have more group practice. Here also, the interpretation would seem to be straightforward. For one thing, newly settled areas are almost by definition thinly settled. We recall the origins of the Mayo Clinic in Minnesota, a state adjacent to the very thinly settled northern prairies of the Dakotas. Perhaps most saliently, the multispecialty clinics, which contain 68 per cent of group practice doctors (32 per cent being in single-specialty clinics), provide an economically viable form for settlement of specialists in rural regions. In such thinly settled areas, the isolated specialist would have a hard time attracting enough private patients. But a team of specialists (also general practitioners) refer patients to

each other and by their greater visibility can attract patients from many miles around. A Federal study of multispecialty group practices by counties in 1950, in fact, found the proportions of total private physicians in group practice to be as follows:

Type of County	Percentage
Metropolitan	4.6
Adjacent	5.0
Isolated	12.6

The following are examples of clinics in rural areas:

The Geisinger Medical Center in Danville, Pennsylvania, located in north central Pennsylvania, services a 12-county area containing over a million people. Like Marshfield, it is built around a large 83-member physician group. It differs, however, in that the Center is operated by a community board, owns and operates a hospital, and has a very active research and training program. As of 1972, the Geisinger Medical Center had 82 full time specialists, and 70 physicians in training. Over 1,200 people worked at the Center. Physical facilities included a 382-bed hospital and outpatient facilities to handle over 210,000 outpatient visits a year. Like Marshfield, the Geisinger Clinic also provides total care to families, as well as specialty services. It, too, offers a Health Maintenance Plan to interested individuals and families.

The Hunterton Medical Center, named after a semi-rural county between New York and Philadelphia, was started in 1953. It currently has a 152-bed hospital, and a six-story diagnostic and treatment center staffed by 33 full-time specialists. Although it provides some primary care, its

principal function is to provide specialty services for people who refer themselves or are referred by the family doctor. In the summer of 1970, however, the Hunterton Medical Center agreed to staff and operate a small clinic in the town of Lambertville, which had less than 5,000 people in it. The town was without a doctor, and had been unsuccessful in recruiting one. The clinic is staffed by two doctors, and two nurses, and receives its support services from the Hunterton Medical Center, including laboratory and X-Ray services. The Center plans to use the clinic as a site for its newly established family residency program. Like the Geisinger Medical Center, the Hunterton Medical Center is a non-profit corporation operated by a community board of directors.

The Marshfield Clinic in Marshfield, Wisconsin, with over 100 physicians, serves several hundred thousand people - some of whom travel 250 miles or more for the specialty services provided. Marshfield, itself, is a community of less than 20,000 people, yet is is able to attract physicians and other skilled health workers. In addition to the specialty service it offers, it also delivers a substantial amount of primary care, and provides total care to individuals and families around the Clinic. The Clinic, working with Blue Cross, now offers a Health Maintenance Plan to those individuals and families who elect this type of health coverage. It has initiated a number of other innovative approaches to serving rural areas, including the establishment of support and referral arrangements with family practititoners in surrounding communities. Support arrangements for example, include EKG telephone hook-ups between the local doctor's office and the Cardiology Department in the Clinic.

42-617 O - 75 - 11

The fact that so many quality clinics have started and grown is a point that needs to be considered in determining approaches to dealing with the problems of providing health services to rural people. Policy makers need to consider whether this form of delivering care is doing an effective job, and whether existing clinics or groups should be encouraged to expand their operations or whether new group practices should be financed with government assistance in rural areas. A caveat regarding such an approach would be to accept the assumption that medical group practice development will, by itself, attract physicians. Such a program would have to be coordinated with other efforts to attract physicians to rural areas.

THE NORTH CAROLINA AREA HEALTH EDUCATION PROGRAM

When a physician receives his training, he has access to his professors, to his peers, and to sophisticated diagnostic and treatment resources. When a physician practices alone in a rural area, he frequently is without any of these resources. One of the most hopeful approaches to dealing with professional isolation is being tried in North Carolina, where the University of North Carolina is working with community hospitals to increase the numbers and better distribute health manpower, both to rural areas and to underserved areas in the State's cities. Funding for the program is roughly 40 percent Federal, 30 percent State, and 30 percent local. The program is designed to support local physicians through continuing education, and joint participation in practice with the local physicians by physicians from the faculty at the Medical School. Faculty physicians, as a group, will spend 30 days a month in local physicians' offices seeing patients referred by these physicians. The program will train medical, dental, pharmacy, nursing and public health students in community hospitals. In the 1972-73 academic year, there were 22 full-time medical faculty in affiliated community hospitals and 250 medical school rotations. Local universities, community colleges and technical institutes have developed understandings with the University of North Carolina to train associate degree nurses, licensed practical nurses, and other personnel in the area. Each of the affiliated hospitals is providing training to smaller community hospitals in their areas. UNC faculty and local universities will train nurse practitioners to deliver primary care.

Residency programs in Ob-Gyn, medicine, and pediatrics include training in the community hospitals. All family practice residents received training in rural eastern Carolina effective July 1, 1973. The Governor and the State Legislature both have given this approach their strong endorsement and commitment of future support.

THE WAMI PROJECT

The WAMI (Washington, Alaska, Montana and Idaho) project is designed to use the educational institutions of each of the four States, using the Washington University Medical School as the principal resource, and to offer extensive undergraduate experience in providing ambulatory health care. The Department of Health, Education, and Welfare, under the Health Manpower Training Act provided $5,414,389 over a three-year period to the University of Washington for this program. The program provides for the training of 10 students from each State, each of whom receive their initial training in an institution in their State for about six months. They then receive training at the University of Washington for approximately 2-1/2 years, and their final training in community clinic units in their respective States. In addition, this program is integrated with a family practice residency program, also using the aforementioned community clinics. The Department of Health, Education, and Welfare has provided approximately $300,000 over the last three years of the residency project. The total program is an attempt to provide family practice experience to residents of the four States, to involve the respective States in the educational process, and hopefully improve the abilities of the States, particularly the three without medical schools, to attract family practice physicians back to the State from which they came, and with training in family practice.

THE MICHIGAN STATE COLLEGE OF HUMAN MEDICINE PROJECT

This project will use training modules capable of training 10 students in each module, where the students will receive the major part of their training in rural areas. The first students will begin this program this fall, and are scheduled to go to the Upper Peninsula, which is a rural area in northern Michigan, in January of next year. To a large extent, faculty will travel to the training sites. The State has provided $200,000 over the past two years and $500,000 for 1974. The Department of Health, Education, and Welfare has provided $922,995 to the project.

MEDEX[53/]

In April, 1969, the University of Washington Medical School, in cooperation with the Washington State Medical Association's Education and Research Foundation, began its first program to prepare the now-familiar MEDEX for practice. The program was designed to train former medical corpsmen in civilian medical procedures so that they might extend the services of physicians. MEDEX was conceived not simply as a training program, but as a training and deployment program, filling specific existing openings in needy areas and relying heavily on participating physicians who request and help prepare trainee-corpsmen.

The purpose of the MEDEX program was to develop an extension of the physician, trained by and for a specific physician, who would work under his supervision and be available to help him 20 hours a day -- a model of non-physicians extending primary care, transferable to rural or urban settings. MEDEX trainees would spend three months in training at the University, then move to the office of a physician who would act as preceptor and employ him after 12 months of on-the-job training. Participating physicians, all in general practice, were familiar with the experience of military corpsmen, and had expressed a need for help in their medical practice. Special attention is paid to the selection of corpsmen, the matching of MEDEX and preceptors, psychological adaptation to the civilian medical scene, and the development of the MEDEX's self-image, identity and status. Based upon present experience, these areas are critical to the utilization of former military corpsmen in civilian settings.

THE NURSE PRACTITIONER[54/]

Hope Medical Center, Estancia, New Mexico

Hope Medical Center is a pilot program in rural medical care, under the sponsorship of the University of New Mexico School of Medicine, with funds from the Regional Medical Program, the Sears Foundation, and the National Center for Health Service Research and Development (HSMHA) DHEW. The project was designed to recruit and train a nurse, who would staff a clinic and provide firstline care for the community under the supervision of physicians at the Medical School.

Planning for the project involved these preliminary steps:

(1) A comprehensive survey of the health status of residents was made.

(2) A design for nurse preparation, including some instruction in nurse midwifery, was developed by heads of various departments of the Medical School. A panel of physicians determined the scope of practice for the nurse, relative to providing care, health maintenance, services in selected illnesses, and emergency care. It was agreed that at no time would the nurse make a decision that might be considered medical diagnosis, but she would make observations for the supervising physicians to consider. In selected instances, pre-determined standing orders would be instituted.

(3) The respective medical and nursing practice acts were reviewed with the attorney general of the State to determine that the scope of planned practice was consistent with current requirements.

The nurse selected to staff the clinic came from a nearby town and had worked with the physician who previously served Estancia. She received approximately seven months training at the Medical School in the mechanics of medical observation and treatment, including seeing some patients under physician supervision in the emergency room during the last month. She began seeing patients in Estancia in February 1969.

Estancia is the county seat of Torrance County; county population is about 5,000, Estancia about 800. Approximately 40 percent of the people are Spanish-American; with a number on welfare; and the majority have only grade school education. The principal employment is agriculture. The nearest physician resides 23 miles west of Estancia, and the nearest hospital, in a neighboring county, is supported by county taxes and reluctant to accept non-resident patients. Torrance County has limited funds for care of the needy, but some laboratory services and prenatal, well-baby and planned parenthood clinics are provided by the county health department.

Hope Medical Center was originally built for a family physician with consultation from the Sears-Roebuck Foundation's Community Medical Assistance Plan. However, it had not been staffed for several years. It was equipped with X-ray and laboratory facilities. Under the new plan, the nurse practitioner covers the center four and one-half days a week from 8:30 a.m. to 5:00 p.m.; on Wednesday morning she is in Albuquerque, making rounds at the medical school, discussing any problems with physicians there, and collecting reading materials, all part of her continuing education.

The nurse practitioner performs physical examinations, X-rays, suturing, splinting, taking samples for laboratory examination, and prescribing. X-rays are bused into Albuquerque to the Medical School; EKGs are transmitted to the school directly by telephone and read there; lab work is done either by the health department or more generally by a specially-trained lab aide; prescriptions are countersigned by a physician from the medical school.

There is a direct telephone line between the center and the medical school, and a physician is always available there for telephone consultation. Two physicians from the medical school also visit the center weekly, a pediatrician on Fridays and a physician dealing with adult diseases on Tuesdays. The community has been urged to call the supervisory physicians directly on nights and weekends.

After three years in operation, the clinic has added a second nurse practitioner to provide relief for the first and to extend clinic services to families in the community. The clinic has not yet met its goal of being self-supporting on a fee-for-service basis. Currently, fees are based on a unit system, at approximately two-thirds of cost; roughly one-third of the patients are on Medicaid or Medicare and the rest are billed directly. Few patients have private insurance.

The clinic experience does demonstrate the possibility of using indigenous personnel, with planned training, to offer first-line care under physician supervision.

(Note: The clinic is no longer directed by the medical school. It is now affiliated with a medical group in Albuquerque, which provides the physician back-up).

EMERGENCY MEDICAL SERVICE SYSTEMS

The City of Jacksonville, Florida, for a Seven-County CHP (B) Area in Northeastern Florida

Present Capabilities

The City of Jacksonville has an advanced rescue ambulance service that has gained national recognition. The service is provided by the Jacksonville Fire Department Rescue Service using well-equipped modular vehicles, highly trained personnel and good communications. Air transportation of the injured is available. The health manpower and hospital complex in Jacksonville is the largest in the New Orleans-Atlanta-Miami triangle. All medical specialties are represented. Jacksonville and Gainesville have good hospitals and good training facilities.

At present, citizens of the counties surrounding Jacksonville cannot receive care comparable to that available in the city. Some counties have only two physicians; other counties face a loss of physicians in the coming year. Each county does have a community hospital but these hospitals are incapable of treating major trauma or critical and unusual illnesses. The six county hospital emergency departments are inadequate. With the exception of the City of Jacksonville, no ambulance service in the entire region now meets the requirements in equipment, training, and personnel required by the National Highway Traffic Safety Administration of HEW.

Future Capabilities

Local ambulance services will be upgraded. Local community hospital emergency departments will be upgraded. Ambulance attendants will be

trained to an 80-hour level in first aid and CPR. Ambulances will be equipped in accordance with the requirements of the American College of Surgeons. All firemen and law enforcement officers will be trained in first aid and CPR. If patients cannot be treated at community hospitals, they will be stabilized and evacuated to Jacksonville or Gainesville by military helicopter or by an intensive care ambulance.

The City of Jacksonville, acting with the advice and help of the Jacksonville Area Health Planning Council and other professional organizations, will provide direction, leadership, technical advice, and consultation to the seven counties in carrying out the project activities. The same high quality emergency medical care available to the citizens of Jacksonville will be available to the citizens of the seven counties.

The State of Illinois Public Health Department for a Statewide Project

Present Capabilities

In 1971 the State of Illinois established a Trauma Care System -- a system for the orderly handling of patients with serious injuries through the best possible use of existing facilities and medical technology. The system called for the creation of 40 Trauma Centers in the State of three types: Regional, Areawide, and Local. The purpose of the Trauma Care System is to get a seriously ill or injured person to the medical care he needs in the shortest amount of time, and to keep him alive in the meantime. The Trauma care program is well launched but it is not completed. Principal accomplishments include establishment of trauma centers, a communications network, and a transportation system including use of helicopters.

Consumer and public information programs have been extensively and effectively undertaken. The citizens of Illinois have been informed of the deficiencies, expectations and achievements of the Trauma Care Program. This community interest is now being channeled into effective use through involvement in community emergency service councils.

Future Capabilities

Using the experience gained in developing the Trauma Care Network, the State is now ready to effect a total systems approach to emergency and critical care medicine on a Statewide basis. The entire health community of the State has learned much about and developed a great interest in the development of emergency care systems.

Emergency service councils will be developed Statewide. The councils, composed of professional leaders and community participants, will plan for the provision of total emergency care. Emphasis will be on using existing resources effectively -- not on building new facilities.

Developing a comprehensive communications system will be a priority project. Radio communication will be possible between hospitals and ground or air vehicles. Physicians in Regional Centers will be able to monitor an ambulance operating out of a local trauma center. A RED (Regional Emergency Dialing) telephone number has been established. Nine hundred and eleven systems will be installed in many communities. Stickers listing RED, fire

and police numbers will be distributed in communities.

Training programs will be undertaken for communications personnel. A central emergency medical control center will be established in each region and areawide community. Outlying Critical Care Units will be established. Well-equipped ambulances will be purchased. Critical care nurse and EMT-A training will be conducted. Residencies for emergency physicians will be established. An Outreach Community Care Bus will be used as a mobile classroom for health personnel training.

The Ohio Valley Health Services Foundation for a Seven CHP (B) Area in Southeastern Ohio

Present Capabilities

The care provided victims of a medical emergency in the Ohio seven-county health demonstration areas has been, and is, quite haphazard. No ambulances in the area meet Federal standards; none have radio communications with hospitals. Only 5% of the ambulance attendants have received 72 hours of training. The areas have only 68% of the physicians it needs and hospital emergency departments are inadequately manned and equipped.

Future Capabilities

The area will develop a coordinated ambulance system. The vehicles will be equipped with life-saving equipment. A communications system permitting hospital-vehicle communication will be installed. Training courses for Emergency Medical Technicians -- Ambulance (EMT-A) will be conducted throughout the community college system.

Full-time emergency department services will be maintained at emergency departments of regional hospitals. RED equipment and facilities will be upgraded. Physicians will be recruited and placed in the emergency departments.

Training courses will also be established for other medical personnel such as nurses and laboratory technicians.

Education programs will be established to inform consumers that emergency medical services exist and to teach them how to use the system.

The Arkansas Health Services Foundation for a Statewide Project

Present Capabilities

There are 101 general hospitals in the State; only 11 have as many as 200 beds while 39 have fewer than 50 beds. University Hospital is the only class 1 emergency medical facility in the State. Each of the CHP districts does have at least one well equipped community hospital with a competent staff representing practically every medical specialty. The State has 1,706 full-time non-Federal practicing physicians for a population of 1,923,295; however, the ratio ranges from 1/428 in the southwest to 1/3,000 in some rural areas. There is a severe shortage of nurses and trained EMT-A's. Arkansas has major problems in the recruitment, training, and distribution of all types of health care personnel. Rural ambulance services, if they exist at all, are usually inadequate. The health manpower situation is worsened because 50% of the citizens have not been graduated from high school.

Future Capabilities

Specific program objectives to establish a comprehensive emergency medical services system include: developing a State plan, developing two sub-regional pilot areas; instituting a State-wide coordinated training program; completing the hospital emergency radio net (HERN) and cross-band with the State Police network, and obtaining necessary State legislation to support the Highway Safety Act of 1966.

To provide a State-wide emergency ambulance service that will provide adequate and efficient transportation to all sick and injured, smaller hospital-based ambulance services will be used as satellite operations of larger Regional Hospital based services. Major emergency care hospitals will serve as the base of operations for communication and coordination of ambulance services in the surrounding counties. The communications system will be expanded to connect helicopter and ambulance personnel at the accident site, central dispatcher, receiving trauma center and emergency physicians. Training courses will be conducted State-wide for physicians and EMT-A's. An associate degree program for EMT-A's will be developed.

APPALACHIAN REGIONAL HOSPITAL SYSTEM - 55/
THE WILLIAMSON APPALACHIAN REGIONAL HOSPITAL SYSTEM

The Appalachian Regional Hospital System was originally established in the early 1950's by the United Mine Workers of America through its Health and Welfare Trust Fund to provide services to mine workers and their families, in addition to serving the entire communities in which they were located. In the 1960's, the management of the 10 hospitals was assumed by the United Presbyterian Church, U.S.A. These hospitals have provided inpatient services, but more importantly, have sponsored, underwritten, and in many cases operated other services, including medical services, dental services, extended care, and home health services.

One of the hospitals in the chain of ARH centers is the Williamson Appalachian Regional Hospital, serving an area with 182,000 people in a coal mining region which includes parts of both West Virginia and Kentucky. The hospital is located in South Williamson, Kentucky.

Since 1967, the Williamson Appalachian Regional Hospital has accomplished the following:

(1) Established a hospital-based home care program which, by 1973, was serving an average of 100 patients a day. In addition to services at the hospital, it established a home care program in Inez, Kentucky, which serves part of two counties. In what is described by the hospital as the centralization of support services and the decentralization of patient care, the Inez facility receives its support from the hospital.

(2) By 1970, underwrote the building of a medical clinic adjacent to the hospital to house 25 physicians who would practice as a group, together with other health workers. The clinic is called the Highlands Clinic.

(3) Underwrote the establishment of two outreach stations at Delbarton and Crum-Hermit, West Virginia. These stations are each staffed with one group physician, one nurse practitioner, and a clinical pharmacist. The Crum-Hermit facility also provides dental services. The hospital built the stations and leased them to the Highlands Clinic doctors.

(4) Provides laboratory services to a physician group in Phelps, Kentucky.

(5) Is constructing a fifty-bed extended care facility to be operated by the hospital.

The Appalachian Regional Hospital system attempts to provide six levels of care throughout its system, and built around its individual hospitals. They include intensive care, intermediate (acute) care, extended care, home care, ambulatory care, and self care. The Williamson ARH, in a period of seven years, developed or expanded three of those six elements.

The operations of clinics and medical centers described above are not unique in the ARH system, although they by no means exist in sufficient numbers to serve all rural areas. The operations that do exist have successfully coped with some of the problems of rural areas, certainly in the areas of quality and availability of specialty services. Too, in many cases, they are exploring ways in which primary care for rural people,

closer to where people live, can be provided. Perhaps as important as their successes, their thrusts, and their impressive array of services, technology and manpower, is the ability of medical service institutions which already have a nucleus of high quality physicians and management skills, to expand their services and service areas. Finally, a comment must be made on the financial and technical base for the Appalachian Regional Hospital System. Each year the United Mine Workers Welfare and Retirement fund pays over $100,000,000 for health services for mine workers, retired mine workers, and dependents of both. Funds from the UMW fund were used to establish the hospital system, and through various mechanisms, to underwrite the development and operations of physicians group practices. Through their professional staff, working with local communities, physicians were recruited as well as other health professionals. Although control of clinics is vested in communities, surveillance of clinic activities has been maintained by the Trust fund because of the fund's responsibilities to pay for health services of the mine workers, retired mine workers, and the dependents of both groups.

Medical Care Foundations*

Medical Care Foundations are corporations formed most generally by local medical societies to deal with matters of cost containment and quality assurance of physician and other health services, particularly as these two factors relate to health insurance. For example, a foundation will frequently review physicians' claims for insurance companies, on a reimburseable basis.

*Harrington, Donald C., M.C., Clinical Dissection of Medical Practice and Medical Economics. Presented at the Louisville Area Conference on the Delivery of Health Care held at the Health Sciences Center, University of Louisville on October 16, 1971. p. 25-32.

The Boards of Directors are made up exclusively or primarily of physicians, and physicians in the covered areas agree to participate in the Foundation activities and to abide by its rules.

As described by Dr. Donald Harrington, president of the American Association of Medical Care Foundations, the Foundations perform three functions:*

(1) Develop minimum standards for health care coverage "...which means the contract wording that produces a medical care program for the people...";*

(2) Arrangements with health insurers on methods and levels of reimbursement; and,

(3) Quality assurance or peer review.

In addition, where physicians agree to act as health insurers, either for physician services, or a broader range of services including hospital services, the Foundation and its members put themselves at "risk" that they will collectively hold costs within the predicted limits for physician services, and in some cases, for a broader range of services.

Foundations for medical care create structure and processes which have produced improvements in cost controls and quality assurance. In addition, their existence creates accountability in an organization for any performance that might be agreed upon between the purchaser of the services and the Foundation. In certain rural areas where there is substantial dispersion of people and their doctors, Foundations may offer a promising method of coordinating medical services for those areas.

*Harrington, Donald C. M.D., Op. Cit. p. 26.

A PROPOSED ORGANIZATIONAL STRUCTURE FOR PROVIDING HEALTH SERVICES AND MEDICAL CARE IN THE STATE OF IOWA

This is the title of a document prepared by John C. MacQueen, M.D. and Eber Eldridge, Ph.D. in 1972.[56/]

The proposal describes how a statewide health system might work. The justification for the proposal appears to be the results of a study of physicians in Iowa by the authors, which showed there were fewer physicians in 1971 in the State than there were in 1950, and that major losses in physicians occurred in small communities of less than 1,000. The authors stated further justification in the report:

It is a paradox of the day that in spite of the availability of this information, there is not an acceptable answer to the question "What should be done to make modern health services and medical care available?" The current answer to this question is a series of uncoordinated proposals -- increase manpower, create emergency medical care systems, train new types of health providers, design varying types of health facilities. These various proposals are important and may solve parts of the whole problem; but they do not insure the development of an improved, coordinated health system.

The authors developed the following set of principles to be used in designing the health system:

> A health care system should be based on the concept that "health is a right."
>
> A health care system should insure that health services are accessible.
>
> A health care system should provide comprehensive health services.

A health care system should be designed to provide profitable and attractive working conditions for health providers.

A health care system must be designed to function in cooperation with the existing social, economic and governmental systems of the community.

A health care system must include a subsystem concerned with the payment for services that make health care available.

The system is proposed to assure access to everyone in the State (assuming equal ability to pay for services), while developing layers of health care, concentrating the most sophisticated services in centralized areas.

THE HEALTH SERVICES AND MEDICAL CARE PROVIDED IN A STRATIFIED HEALTH SYSTEM

TERTIARY MEDICAL CARE AND HEALTH SERVICES -------- FOR A STATE OR MULTIPLE COUNTY REGION

(Provided in a Medical Center or University Teaching Center)

Quality specialty care in a personalized fashion:

1. Specialized medical, diagnostic and therapeutic services for unusual and complicated cases.
2. Specialized surgical care for unusual and complicated cases (neurosurgery, organ transplants, etc.)
3. Specialized dental care for unusual and complicated oral disease and surgery.
4. Emergency medical care.
5. Part of a comprehensive health care system.

SECONDARY MEDICAL CARE AND HEALTH SERVICES -------- FOR A REGION

(Provided in a Regional Health Center)

Quality secondary and referral care in an available and personalized fashion:

1. Medical and surgical diagnostic services for complicated problems.
2. Surgical care and medical care for complicated problems.
3. Services for major surgical and medical emergency problems.
4. Specialty dental care--orthodontics, endodontics, peridontics.
5. Emergency medical care.
6. Part of a comprehensive health care system.

PRIMARY MEDICAL CARE AND HEALTH SERVICES --------- FOR AN AREA

(Provided in an Area Health Center)

Quality primary care and health services in an available, personalized, and continuous fashion:

1. Preventive services, case-finding services, and diagnosis and treatment for usual and uncomplicated illness and disease.
2. Minor surgery and medical care for uncomplicated problems.
3. Home care programs--nursing services.
4. Preventive, diagnostic and restorative dental services.
5. Part of a comprehensive health care system.
6. (In large Area Health Centers, services for surgical and medical problems not requiring specialized personnel and equipment.)

(Provided in a Community Health Center,
related to an Area Health Center)

Quality primary medical care and health services in an available, personalized, and continuous fashion:

1. Preventive services, case-finding services, and diagnosis and treatment for usual and uncomplicated illness and disease.
2. Supervision of home care health services.
3. Part of a comprehensive health care system.

Area or primary health centers would provide care to between 6,000 and 14,000 and cover a radius not in excess of 18 miles. Services would include those identified in the pyramid above. To the extent practical, health professionals would work in proximity to each other, with the physicians functioning as a group, sharing facilities, equipment and personnel.

Regional or secondary health centers would serve a population of approximately 150,000. They would provide the services described in the pyramid above and would contain a large hospital. In addition, the regional center would provide primary care for the people who would live near it.

The third layer, called tertiary care centers, would cover the entire State, or multiple regions, and would serve approximately 1,500,000 people, handling referrals from both the area health centers, in a few instances, and from the regional medical centers. These medical centers would serve as teaching centers for all types of health care personnel, and would develop area health education centers similar to those described in the section under major Federal programs. Both the area and regional centers would serve as training sites for health professionals, as well.

The implementation of the proposal is described by the authors:

"It is proposed that regional health planning councils assume the responsibility for monitoring the implementation of this system. It is recommended that each council study the section of this report that describes their health region and the sites for health centers. If the council determines that the units are not appropriately placed, they

should assume the responsibility for redesigning the health service areas and health centers in their region. Once established, this would become the operating plan for the health services in that region."

The authors are also fully aware of the obstacles to creating such a plan but use as justification the diminishing availability of physician care and their contention that "there is ample evidence that the entire region's hope for attracting young physicians and other health providers lies in the development of a regional plan that: (1) creates groups or clusters of health providers, and (2) is related to a State plan for continuing education."

Although there is little question concerning the need for training health personnel to work in rural areas, and the need to develop mechanisms such as the national health service corps to assign physicians to rural areas, the likelihood of retention of those physicians, as well as other health personnel, will be enhanced by a system of support for the health provider and his family. The ability to implement such a plan, given the existence of a large number of physicians, other health personnel, and health institutions already engaged in delivering medical care, will depend upon the ability of the implementers to accommodate, to some degree, the needs of the health providers that are already there.

FOOTNOTES

1/ U.S. Congress. House. Committee on Ways and Means. National Health Insurance Resource Book. Washington, U.S. Govt. Print. Off., 1974, p. 5.

2/ American Medical Association. Health Care Delivery in Rural Areas. Chicago, 1972. p. 6.

3/ Rural Development Service. USDA. Health Services in Rural America. Bulletin No. 362. Washington, p. 8.

4/ Ibid., p. 10.

5/ MacQueen, John C., M.D.; Eldridge, Eber, Ph.D.. A Proposed Organization Structure for Providing Health Services and Medical Care in the State of Iowa, p. 43.

6/ Ibid., p. 47.

7/ Schwartz, Jerome L. Dr. P.H. Rural Health Problems of Isolated Appalachian Counties, p. 29-44. Article appearing in Rural and Appalachian Health edited by Robert Nolan, M.D., M.P.H., J.D. and Jerome L. Schwartz, M.B.A., Dr. Ph.D. Springfield, Ill. Charles C. Thomas. 1973, 249 p.

8/ Rural Development Service. USDA. Health Care in Rural America. Bulletin No. 362. Washington, p. 10. 1974.

9/ Ibid., p. 13.

10/ U.S. Congress. House. Committee on Interstate and Foreign Commerce. Hearings on Emergency Medical Services Act of 1973. Washington, U.S. Govt. Print. Off., March 15, 1973, p. 83.

11/ Rural Development Service. USDA. Health Care in Rural America. Bulletin No. 362. Washington, p. 2.

12/ Ibid., p. 23.

13/ Kolodrubetz, Walter W. Group Health Insurance Coverage of Full Time Employees, 1972. Social Security Bulletin, v. 37, p. 19.

14/ Mueller, Marjorie Smith. Private Health Insurance in 1972--Health Services Enrollment and Finances. Social Security Bulletin, v. 37, March 1974, p. 37.

15/ Ibid.

16/ Spitzer, Walter O. The Small General Hospital, Problems and Solutions. Milbank Fund Quarterly, Oct. 1970.

17/ Data Provided by DHEW official.

18/ Peterson, Osler L., M.D. An Analytical Study of North Carolina General Practice--1953-54. Journal of Medical Education. Part 2, v. 31, no. 12.

19/ Rural Development Service. USDA. Health Services in Rural America. Bulletin No. 362. Washington, p. 17.

20/ Ibid., p. 19.

21/ Ibid., p. 4.

22/ Ibid., p. 16.

23/ Ibid., p. 19.

24/ Ibid., p. 17.

25/ Ibid., p. 19.

26/ Ibid., p. 19.

27/ Ibid., p. 14.

28/ Ibid., p. 17.

29/ Ibid., p. 20.

30/ Ibid., p. 2.

31/ National Center for Health Statistics. USDHEW. Health Characteristics by Geographic Region, Large Metropolitan Areas, and Other Places of Residence. United States, 1969-70. Series 10, No. 86. Washington, U.S. Govt. Print. Off., 1974. p. 3.

32/ Rural Development Service. USDA. Health Services in Rural America. Bulletin No. 362. Washington, p. 3.

33/ Ibid., p. 16.

33a/ Spitzer, Walter D. The Small General Hospital, Problems and Solutions. Milbank Fund Quarterly, Oct. 1970.

34/ Ibid., p. 15

35/ Lave, Judith R. and Lester B. Lave. The Hospital Construction Act. An Evaluation of the Hill-Burton Program, 1948-1973. The American Enterprise Institute for Public Policy Research. Washington, May 1974, p. 14.

36/ Ibid., p. 20.

37/ Mason, Henry R. Effectiveness of Studies and Programs Tied to a Service Commitment. Journal of Medical Education, v. 46, no. 7, July 1971, p. 575-583.

38/ Health Resources Administration. USDHEW. Developments in Health Manpower Licensure. DHEW Pub. (HRA) 74-3101, Washington, D. C., June 1973, p. 11.

39/ Information provided by Glenn Wilson, Associate Dean, University of North Carolina Medical School, Chapel Hill, North Carolina.

40/ Ibid.

41/ U.S. Congress. House. Committee on Ways and Means. National Health Insurance Resource Book. Washington, U.S. Govt. Print. Off., 1974, p. 153.

42/ Ibid.

43/ Testimony before the Subcommittee on Public Health and Environment of the House Committee on Interstate and Foreign Commerce on May 22, 1974.

44/ Testimony of Bob Oliver, Ph. D., Director, American Association of Colleges of Osteopathic Medicine before the Subcommittee of House of the Senate Committee on Labor and Public Welfare on June 26, 1974.

45/ Information provided by the American Association of Colleges of Osteopathic Medicine.

46/ Ibid.

47/ Ibid.

48/ U.S. Congress. House. Committee on Ways and Means. National Health Insurance Resource Book, U.S. Govt. Print. Off., 1974, pp. 144, 158.

49/ DHEW, BHRD, HRA. The Supply of Health Manpower. Profiles and Projections to 1990. Prepublication Edition. Feb. 1974, p. 51.

50/ Roemer, Milton, et al. The Ecology of Group Medical Practice in the United States. Medical Care., v. XII, Aug. 1974, pp. 627-637.

51/ Ibid.

52/ Ibid.

53/ American Medical Association. Health Care Delivery in Rural Areas. Chicago, July, 1972.

54/ Ibid.

55/ Goedeke, Walter. Alleviating Needs in Appalachia. Hospitals, v. 46, May 1, 1973. Chicago. pp. 40-44.

56/ MacQueen, John, C., M.C.; Edridge, Eber, Ph.d. A Proposed Organizational Structure for Providing Health Services and Medical Care in the State of Iowa.

○