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TRAINING OF FAMILY PHYSICIANS

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HEARINGS

BEFORE THE

SUBCOMMITTEE ON PUBLIC HEALTH AND WELFARE

OF THE

COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE HOUSE OF REPRESENTATIVES

NINETY-FIRST CONGRESS

SECOND SESSION

ON

H.R. 15793, H.R. 10264, H.R. 13063, H.R. 19448, and S. 3418

BILLS TO AMEND THE PUBLIC HEALTH SERVICE ACT TO PROVIDE FOR THE MAKING OF GRANTS TO MEDICAL SCHOOLS AND HOSPITALS TO ASSIST THEM IN ESTABLISHING SPECIAL DEPARTMENTS AND PROGRAMS IN THE FIELD OF FAMILY PRACTICE, AND OTHERWISE TO ENCOURAGE AND PROMOTE THE TRAINING OF MEDICAL AND PARAMEDICAL PERSONNEL IN THE FIELD OF FAMILY MEDICINE AND TO ALLEVIATE THE EFFECTS OF MALNUTRITION, AND TO PROVIDE FOR THE ESTABLISHMENT OF A NATIONAL INFORMATION AND RESOURCE CENTER FOR THE HANDICAPPED

(And All Identical Bills)

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American Academy of General Practice:
Coulter, Dr. Norman, member, board of directors.
Kowalewski, Dr. Edward, president.
Miller, Mike, director, Department of Legislation and Public Policy.
Association for Hospital Medical Education:
Hall, Dr. Jack H., president.
Kummer, Theodore G., executive director.
California Academy of General Practice, Dr. Lyle Voge.

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Health, Education, and Welfare Department:

Arneson, Mrs. Kathleen, Special Assistant to Commissioner, Rehabilitation Services Administration, Social and Rehabilitation Service.

Bucher, Dr. Robert, Deputy Director, Bureau of Health Manpower Education, National Institutes of Health.

Burton, Dr. Benjamin, Associate Director, National Institute of Arthritis and Metabolic Diseases, National Institutes of Health.

Endicott, Dr. Kenneth, Director, Bureau of Health Manpower Education, National Institutes of Health, Department of Health, Education, and Welfare.

Marston, Dr. Robert Q., Director, National Institutes of Health.

Student American Medical Association, Peter Andrus, chairman, Standing Committee on Health Affairs.

TRAINING OF FAMILY PHYSICIANS

TUESDAY, SEPTEMBER 29, 1970

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON PUBLIC HEALTH AND WELFARE,
COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE,
Washington, D.C.

The subcommittee met, pursuant to notice at 10 a.m., in room 2325, Rayburn House Office Building, Hon. John Jarman (chairman), presiding.

Mr. JARMAN. The subcommittee will please be in order.

The hearings today are on H.R. 15793 and other bills introduced by our colleague on the committee, Mr. Rooney of Pennsylvania for himself, Dr. Carter, Mr. Hastings, Mr. Friedel, Mr. Murphy of New York, Mr. Kuykendall, and other Members of the House, H.R. 16400 by our colleague on the subcommittee, Mr. Kyros, and other bills relating to the training at medical schools and teaching hospitals of family physicians and of related personnel.

S. 3418, covering the same subject, as well as providing for research into malnutrition, and establishing a National Information and Resource Center for the Handicapped passed the Senate on September 14.

Hearings before this subcommittee and before the full committee on Interstate and Foreign Commerce over the years have demonstrated that we are quite short of personnel necessary to provide high quality medical care for all Americans. Legislation to deal with this problem has been considered and enacted over the years, and a substantial amount of progress has been made. Unfortunately, however, the number of persons serving as family physicians has been steadily declining, and the percentage of graduates of our medical schools who choose service as family physicians as their specialty has been at relatively low levels in recent years. It is the purpose of these bills to stimulate more young physicians to enter this field, and to provide necessary auxiliary manpower in this area.

At this point there will be included in the record the text of the bills and the agency reports thereon.

(The text of the bills and reports referred to follow:)

[H.R. 15793, 91st Congress, second session, introduced by Mr. Rooney of Pennsylvania on February 9, 1970;
H.R. 15880, 91st Congress, second session, introduced by Mr. Dulski on February 16, 1970;
H.R. 16192, 91st Congress, second session, introduced by Mr. Henderson on February 26, 1970;
H.R. 16209, 91st Congress, second session, introduced by Mr. Griffin on February 26, 1970;
H.R. 16210, 91st Congress, second session, introduced by Mr. Hathaway on February 26, 1970;
H.R. 16320, 91st Congress, second session, introduced by Mr. Gibbons on March 5, 1970;
H.R. 16359, 91st Congress, second session, introduced by Mr. Rooney of Pennsylvania (for himself, Mr. Addabbo, Mr. Anderson of Illinois, Mr. Biaggi, Mr. Brown of California, Mr. Button, Mr. Carter, Mr. Chappell, Mrs. Chisholm, Mr. Conyers, Mr. Daniels of New Jersey, Mr. Derwinski, Mr. Edwards of California, Mr. Friedel, Mr. Fulton of Pennsylvania, Mr. Fulton of Tennessee, Mr. Gaydos, Mr. Gubser, Mr. Hanley, Mr. Halpern, Mr. Hastings, Mr. Hathaway, Mr. Hawkins, and Mr. Hechler of West Virginia) on March 9, 1970;
H.R. 16360, 91st Congress, second session, introduced by Mr. Rooney of Pennsylvania (for himself, Mr. Helstoski, Mr. Howard, Mr. Hungate, Mr. Kuykendall. Mr. Kyl, Mr. Matsunaga, Mr. McEwen, Mr. Mikva, Mrs. Mink, Mr. Moorhead, Mr. Murphy of New York, Mr. Nix, Mr. Olsen, Mr. Pepper, Mr. Podell, Mr. Pollock, Mr. Rees, Mr. Roybal, Mr. St Germain, Mr. Stanton, Mr. Tunney, and Mr. Whitehurst) on March 9, 1970;
H.R. 16400, 91st Congress, second session, introduced by Mr. Kyros on March 11, 1970;
H.R. 16941, 91st Congress, second session, introduced by Mr. Gray on April 13, 1970;
H.R. 18717, 91st Congress, second session, introduced by Mr. Abbitt on July 30, 1970; and
H.R. 19482, 91st Congress, second session, introduced by Mr. Pickle on September 28,
are identical as follows:]

To amend the Public Health Service Act to provide for the making of grants to medical schools and hospitals to assist them in establishing special departments and programs in the field of family practice, and otherwise to encourage and promote the training of medical and paramedical personnel in the field of family medicine.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That part D of title VII of the Public Health Service Act is amended to read as follows:

"PART D—GRANTS TO PROVIDE PROFESSIONAL AND TECHNICAL TRAINING IN THE FIELD OF FAMILY MEDICINE

"DECLARATION OF PURPOSE

"SEC. 761. It is the purpose of this part to provide for the making of grants to assist—

"(a) public and private nonprofit medical schools—

"(1) to operate, as an integral part of their medical education program, separate and distinct departments devoted to providing teaching and instruction in all phases of family practice;

"(2) to construct such facilities as may be appropriate to carry out a program of training in the field of family medicine whether as a part of a medical school or as separate outpatient or similar facility;

"(3) to operate, or participate in, special training programs for paramedical personnel in the field of family medicine; and

"(4) to operate, or participate in, special training programs to teach and train medical personnel to head departments of family practice or otherwise teach family practice in medical schools.

"(b) public and private nonprivate hospitals which provide training programs for medical students, interns, or residents—

"(1) to operate, as an integral part of their medical

training programs, special professional training programs in the field of family medicine for medical students, interns, or residents;

"(2) to construct such facilities as may be appropriate to carry out a program of training in the field of family medicine whether as a part of a hospital or as a separate outpatient or similar facility;

"(3) to provide financial assistance (in the form of scholarships, fellowships, or stipends) to interns, residents, or other medical personnel who are in need thereof, who are participants in a program of such hospital which provides special training (accredited by a recognized body or bodies approved for such purpose by the Commissioner of Education) in the field of family medicine, and who plan to specialize or work in the practice of family medicine; and

"(4) to operate, or participate in, special training programs for paramedical personnel in the field of family medicine.

"AUTHORIZATION OF APPROPRIATIONS

"SEC. 762. (a) For the purpose of making grants to carry out the purposes of this part, there are authorized to be appropriated $50,000,000 for the fiscal year ending June 30, 1971, $75,000,000 for the fiscal year ending June 30, 1972, and $100,000,000 for the fiscal

year ending June 30, 1973, and for each of the next two succeeding fiscal years.

"(b) Sums appropriated pursuant to subsection (a) for any fiscal year shall remain available for the purpose for which appropriated until the close of the fiscal year which immediately follows such year.

"GRANTS BY SECRETARY

"SEC. 763. (a) From the sums appropriated pursuant to section 762, the Secretary is authorized to make grants, in accordance with the provisions of this part, to carry out the purposes of section 761.

"(b) No grant shall be made under this part unless an application therefor has been submitted to, and approval by, the Secretary. Such application shall be in such form, submitted in such manner, and contain such information as the Secretary shall have prescribed by regulations which have been promulgated by him and published in the Federal Register not later than six months after the date of enactment of this part.

"(c) Grants under this part shall be in such amounts and subject to such limitations and conditions as the Secretary may determine to be proper to carry out the purposes of this part.

"(d) In the case of any application for a grant any part of which is to be used for major construction or remodeling

of any facility, the Secretary shall not approve the part of the grant which is to be so used unless the recipient of such grant enters into appropriate arrangements with the Secretary which will equitably protect the financial interests of the United States in the event such facility ceases to be used for the purpose for which such grant or part thereof was made prior to the expiration of the ten-year period which commences on the date such construction or remodeling is completed.

"(e) Grants made under this part shall be used only for the purpose for which made and may be paid in advance or by way of reimbursement, and in such installments as the Secretary may determine.

"ELIGIBILITY FOR GRANTS

"SEC. 764. (a) In order for any medical school to be eligible for a grant under this part, such school—

"(1) must be a public or other nonprofit school of medicine; and

"(2) must be accredited as a school of medicine by a recognized body or bodies approved for such purpose by the Commissioner of Education, except that the requirement of this clause (2) shall be deemed to be satisfied, if (A) in the case of a school of medicine which by reason of no, or an insufficient, period of operation is not,

at the time of application for a grant under this part, eligible for such accreditation, the Commissioner finds, after consultation with the appropriate accreditation body or bodies, that there is reasonable assurance that the school will meet the accreditation standards of such body or bodies prior to the beginning of the academic year following the normal graduation date of students who are in their first year of instruction at such school during the fiscal year in which the Secretary makes a final determination as to approval of the application.

"(b) In order for any hospital to be eligible for a grant under this part, such hospital—

"(1) must be a public or private nonprofit hospital; and

"(2) must conduct or be prepared to conduct in connection with its other activities (whether or not as an affiliate of a school of medicine) one or more programs of medical training for medical students, interns, or residents, which is accredited by a recognized body or bodies, approved for such purpose by the Commissioner of Education.

"APPROVAL OF GRANTS

"SEC. 765. (a) A grant under this part may be made only if the application thereof is recommended for approval

by the Advisory Council on Family Medicine and is approved by the Secretary upon his determination that—

"(1) the applicant meets the eligibility requirements set forth in section 764;

"(2) the applicant has complied with the requirements of section 763;

"(3) the grant is to be used for one or more of the purposes set forth in section 761;

"(4) it contains such information as the Secretary may require to make the determinations required of him under this section and such assurances as he may find necessary to carry out the purposes of this part;

"(5) it provides for such fiscal control and accounting procedures and reports, and access to the records of the applicant, as the Secretary may require (pursuant to regulations which shall have been promulgated by him and published in the Federal Register) to assure proper disbursement of and accounting for all Federal funds paid to the applicant under this part; and

"(6) the application contains or is supported by adequate assurance that any laborer or mechanic employed by any contractor or subcontractor in the performance of work on the construction of the facility will be paid wages at rates not less than those prevailing on

similar construction in the locality as determined by the Secretary of Labor in accordance with the Davis-Bacon Act, as amended (40 U.S.C. 276a–276a5). The Secretary of Labor shall have, with respect to the labor standards specified in this paragraph, the authority and functions set forth in Reorganization Plan Numbered 14 of 1950 (15 F.R. 3176; 65 Stat. 1267), and section 2 of the Act of June 13, 1934, as amended (40 U.S.C. 276c).

"(b) The Secretary shall not approve any grant to—

"(1) a school of medicine to establish or operate a separate department devoted to the teaching of family medicine unless the Secretary is satisfied that—

"(A) such department is (or will be, when established) of equal standing with the other departments within such school which are devoted to the teaching of other medical specialty disciplines;

"(B) such department will, in terms of the subjects offered and the type and quality of instruction provided, be designed to prepare students thereof to meet the standards established for specialists in the specialty of family practice by a recognized body approved by the Commissioner of Education; or

"(2) a hospital to establish or operate a special

program for medical students, interns, or residents in the field of family medicine unless the Secretary is satisfied that such program will, in terms of the type of training provided, be designed to prepare participants therein to meet the standards established for specialists in the field of family medicine by a recognized body approved by the Commissioner of Education.

"(c) The Secretary shall not approve any grant under this part unless the applicant therefor provides assurances satisfactory to the Secretary that funds made available through such grant will be so used as to supplement and, to the extent practical, increase the level of non-Federal funds which would, in the absence of such grant, be made available for the purpose for which such grant is requested.

"PLANNING GRANTS

"SEC. 766. (a) For the purpose of assisting medical schools and hospitals (referred to in section 761) to plan projects for the purpose of carrying out one or more of the purposes set forth in such section, the Secretary is authorized for any fiscal year (prior to the fiscal year which ends June 30, 1975) to make planning grants in such amounts and subject to such conditions as the Secretary may determine to be proper to carry out the purposes of this section.

"(b) From the amounts appropriated in any fiscal year (prior to the fiscal year ending June 30, 1975) pursuant to

section 762 (a), the Secretary may utilize such amounts as he deems necessary (but not in excess of $5,000,000 for any fiscal year) to make the planning grants authorized by subsection (a).

"ADVISORY COUNCIL ON FAMILY MEDICINE

"SEC. 767. (a) The Secretary shall appoint an Advisory Council on Family Medicine (hereinafter in this section referred to as the 'Council'). The Council shall consist of twelve members, four of whom shall be physicians engaged in the practice of family medicine, four of whom shall be physicians engaged in the teaching of family medicine, and four of whom shall be representatives of the general public. Members of the Council shall be individuals who are not otherwise in the regular full-time employ of the United States.

"(b) Each member of the Council shall hold office for a term of four years, except that any member appointed to fill a vacancy prior to the expiration of the term for which his predecessor was appointed shall be appointed for the remainder of such term, and except that the terms of office of the members first taking office shall expire, as designated by the Secretary at the time of appointment, three at the end of the first year, three at the end of the second year, three at the end of the third year, and three at the end of the fourth year, after the date of appointment. A member shall not be eligible to serve continuously for more than two terms.

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"(c) Members of the Council shall be appointed by the Secretary without regard to the provisions of title 5, United States Code, governing appointments in the competitive service. Members of the Council, while attending meetings or conferences thereof or otherwise serving on business of the Council, shall be entitled to receive compensation at rates fixed by the Secretary, but not exceeding $100 per day, including traveltime, and while so serving away from their homes or regular places of business they may be allowed travel expenses, including per diem in lieu of subsistence, as authorized by section 5703 of title 5, United States Code, for persons in Government service employed intermittently.

"(d) The Council shall advise and assist the Secretary in the preparation of regulations for, and as to policy matters arising with respect to, the administration of this title. The Council shall consider all applications for grants under this part and shall make recommendations to the Secretary with respect to approval of applications for grants under this part.

"DEFINITIONS

"SEC. 768. For purposes of this part—

"(1) the term 'nonprofit' as applied to any hospital or school of medicine means a school of medicine or hospital which is owned and operated by one or more

nonprofit corporations or associations, no part of the net earnings of which inures, or may lawfully inure, to the benefit of any private shareholder or individual;

"(2) the term 'family medicine' means those certain principles and techniques and that certain body of medical, scientific, administrative, and other knowledge and training, which especially equip and prepare a physician to engage in the practice of family medicine;

"(3) the term 'practice of family medicine' and the term 'practice', when used in connection with the term 'family medicine', mean the practice of medicine by a physician (licensed to practice medicine and surgery by the State in which he practices his profession) who specializes in providing to families (and members thereof) comprehensive, continuing, professional care and treatment of the type necessary or appropriate for their general health maintenance; and

"(4) the term 'construction' includes construction of new buildings, acquisition, expansion, remodeling, and alteration of existing buildings, and initial equipment of any such buildings, including architects' fees, but excluding the cost of acquisition of land or offsite improvements."

[H.R. 10264, 91st Congress, first session, introduced by Mr. Rooney of Pennsylvania on April 17, 1969; and
H.R. 14386, 91st Congress, first session, introduced by Mr. Zwach on October 16, 1969,
are identical as follows:]

A BILL

To amend the Public Health Service Act to provide grants to develop training in family medicine.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That part D of title VII of the Public Health Service Act is amended to read as follows:

"PART D.—GRANTS FOR FAMILY MEDICINE TRAINING

"AUTHORIZATION OF GRANTS

"SEC. 761. There are authorized to be appropriated $110,000,000 for the fiscal year ending June 30, 1970, and $160,000,000 for the fiscal year ending June 30, 1971, for grants to medical schools to assist in meeting the costs of special projects to plan, develop, or establish new programs

or modifications of existing programs of education in the field of family medicine.

"ADMINISTRATIVE PROVISIONS

"SEC. 762. (a) The Secretary shall by regulation prescribe the time and manner in which applications may be made for grants under this part.

"(b) To be eligible for a grant under this part, the applicant must be (1) a public or other nonprofit school of medicine, and (2) accredited by a recognized body or bodies approved for such purpose by the Commissioner of Education, except that the requirement of this clause (2) shall be deemed to be satisfied if, in the case of a school which by reason of no, or an insufficient, period of operation is not, at the time of application for a grant under this part, eligible for such accreditation, the Commissioner finds, after consultation with the appropriate accreditation body or bodies, that there is reasonable assurance that the school will meet the accreditation standards of such body or bodies prior to the beginning of the academic year following the normal graduation date of students who are in their first year of instruction at such school during the fiscal year in which the Secretary makes a final determination as to approval of the application.

"(c) A grant under this part may be made only if the application therefor—

"(1) is approved by the Secretary upon his determination that the applicant meets the eligibility conditions set forth in subsection (b) of this section;

"(2) contains or is supported by assurances satisfactory to the Secretary that the applicant will expend in carrying out its functions as a school of medicine during the fiscal year for which such grant is sought, an amount of funds (other than funds for construction as determined by the Secretary) from non-Federal sources which are at least as great as the average amount of funds expended by such applicant for such purpose (excluding expenditures of a nonrecurring nature) in the three fiscal years immediately preceding the fiscal year for which such grant is sought;

"(3) contains such additional information as the Secretary may require to make the determination required of him under this subsection and such assurances as he may find necessary to carry out the purposes of this part; and

"(4) provides for such fiscal control and accounting procedures and reports, and access to the records of the applicant, as the Secretary may require to assure proper disbursement of and accounting for Federal funds paid to the applicant under this part.

"(d) In determining priority of projects, applications for

which are filed under this part, the Secretary shall give consideration to—

"(1) the extent to which the project will increase enrollment of full-time students receiving the training for which grants are authorized under this part; and

"(2) the extent to which the project may result in curriculum improvement or improved methods of training or will help to reduce the period of required training without adversely affecting the quality thereof."

[H.R. 13063, 91st Congress, first session, introduced by Mr. Rooney of Pennsylvania (for himself, Mr. Olsen, Mr. Rogers of Colorado, Mr. Helstoski, Mr. Podell, Mr. Reuss, Mr. Hungate, Mrs. Mink, Mr. Carter, Mr. Perkins, Mr. Rees, Mr. Roybal, Mr. Gaydos, Mr. Wyman, Mr. Pepper, Mr. Murphy of New York, Mr. Stanton, Mr. Matsunaga, Mr. Scheuer, Mr. Mikva, Mrs. Chisholm, Mr. Fulton of Pennsylvania, Mr. Heckler of West Virginia, Mr. Andrews of North Dakota, and Mr. Donohue) on July 23, 1969;

H.R. 13064, 91st Congress, first session, introduced by Mr. Rooney of Pennsylvania (for himself, Mr. Biaggi, Mr. Fish, Mr. Patten, Mr. Rosenthal, Mr. Anderson of California, Mr. Philbin, Mr. Derwinski, Mr. Dent, Mr. Wolff, Mr. Hanley, Mr. Kluczynski, Mr. Kuykendall, Mr. Gubser, Mr. Daniels of New Jersey, Mr. Brown of California, Mr. Conyers, and Mr. Biester) on July 23, 1969; and

H.R. 18716, 91st Congress, second session, introduced by Mr. Abbitt, on July 30, 1970,

are identical as follows:]

A BILL

To amend the Public Health Service Act to provide grants to develop training in family medicine.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That part D of title VII of the Public Health Service Act is amended to read as follows:

"PART D—GRANTS FOR FAMILY MEDICINE TRAINING

"AUTHORIZATION OF GRANTS

"SEC. 761. There are authorized to be appropriated $50,000,000 for the fiscal year ending June 30, 1970, and $110,000,000 for the fiscal year ending June 30, 1971, and $160,000,000 for the fiscal year ending June 30, 1972, for grants to medical schools to assist in meeting the costs of special projects to plan, develop, or establish new programs or modifications of existing programs of education in the field of family medicine, and including the development and equipment of appropriate facilities.

"ADMINISTRATIVE PROVISIONS

"SEC. 762. (a) The Secretary shall by regulation prescribe the time and manner in which applications may be made for grants under this part.

"(b) To be eligible for a grant under this part, the applicant must be (1) a public or other nonprofit school of medicine, and (2) accredited by a recognized body or bodies approved for such purpose by the Commissioner of Education, except that the requirement of this clause (2) shall be deemed to be satisfied if, in the case of a school which by reason of no, or an insufficient, period of operation is not, at the time of application for a grant under this part, eligible for such accreditation, the Commissioner finds, after consultation with the appropriate accreditation body or bodies, that

there is reasonable assurance that the school will meet the accreditation standards of such body or bodies prior to the beginning of the academic year following the normal graduation date of students who are in their first year of instruction at such school during the fiscal year in which the Secretary makes a final determination as to approval of the application.

"(c) A grant under this part may be made only if the application therefor—

"(1) is approved by the Secretary upon his determination that the applicant meets the eligibility conditions set forth in subsection (b) of this section;

"(2) contains or is supported by assurances satisfactory to the Secretary that the applicant will expend in carrying out its functions as a school of medicine during the fiscal year for which such grant is sought, an amount of funds (other than funds for construction as determined by the Secretary) from non-Federal sources which are at least as great as the average amount of funds expended by such applicant for such purpose (excluding expenditures of a nonrecurring nature) in the three fiscal years immediately preceding the fiscal year for which such grant is sought;

"(3) contains such additional information as the Secretary may require to make the determination required of him under this subsection and such assurances

as he may find necessary to carry out the purposes of this part; and

"(4) provides for such fiscal control and accounting procedures and reports, and access to the records of the applicant, as the Secretary may require to assure proper disbursement of and accounting for Federal funds paid to the applicant under this part.

"(d) In determining priority of projects, applications for which are filed under this part, the Secretary shall give consideration to—

"(1) the extent to which the project will increase enrollment of full-time students receiving the training for which grants are authorized under this part; and

"(2) the extent to which the project may result in curriculum improvement or improved methods of training or will help to reduce the period of required training without adversely affecting the quality thereof."

[H.R. 19448, 91st Congress, second session, introduced by Mr. Burton of Utah on September 24, 1970]

A BILL

To amend title VII of the Public Health Service Act by providing for the establishment of a family physician scholarship and fellowship program.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Family Physician Scholarship and Fellowship Program Act".

SEC. 2. Title VII of the Public Health Service Act is amended by adding at the end thereof the following new part:

"PART H—FAMILY PHYSICIAN SCHOLARSHIP AND FELLOWSHIP PROGRAM

"SCHOLARSHIP AND FELLOWSHIP GRANTS

"SEC. 799a. (a) In order to promote the more adequate provision of medical care for persons who—

"(A) reside in a physician shortage area (as determined pursuant to section 799c(b));

"(B) are migratory agricultural workers or members of the families of such workers;

the Secretary is authorized, in accordance with the provisions of this part—

"(C) to make scholarship grants to individuals who are medical students and who agree, after completion of their professional training, to engage in the practice of family medicine (i) in a physician shortage area, or (ii) at such place or places, such facility or facilities, and in such manner, as may be necessary to assure that, of the patients receiving medical care in such practice, a substantial portion will consist of persons referred to in clause (B); and

"(D) to make fellowship grants to individuals who (while undergoing training, or receiving professional experience, designed to prepare them to engage in the practice of family medicine) are serving as interns or residents in public or nonprofit private hospitals which (i)

are located in a physician shortage area, or (ii) a substantial portion of the patients of which consists of persons referred to in clause (B).

For purposes of subparagraph (D) of the preceding sentence, training or experience in obstetrics, pediatrics, or internal medicine shall be considered to be training or experience preparing an individual to engage in the practice of family medicine.

"(b) (1) Scholarship grants under this part shall be made with respect to academic years, and fellowship grants under this part shall be made with respect to 12-month periods.

"(2) The amount of any medical student scholarship grant under this part to any individual for any full academic year shall not exceed $5,000; the amount of any intern fellowship grant under this part to any individual for any twelve-month period shall not exceed $9,000; and the amount of any resident fellowship grant under this part to any individual for any twelve-month period shall not exceed $10,000 (in the case of an individual who, for a preceding twelve-month period, has not received a resident fellowship grant under this part), or $12,000 (in any other case).

"(3) The Secretary shall, in awarding medical student scholarship grants under this part, accord priority to applicants as follows—

"(A) first, to any applicant who (i) is from a low-income family, (ii) resides in a physician shortage area, and (iii) agrees that, upon completion of his professional training, he will return to such area and will engage in such area in the practice of family medicine;

"(B) second, to any applicant who meets all the criteria set forth in subparagraph (A) except that prescribed in clause (i);

"(C) third, to any applicant who meets the criterion set forth in clause (i); and

"(D) fourth, to any other applicant.

"(c) (1) Any medical student scholarship grant awarded to any individual under this part shall be awarded upon the condition that such individual will, upon completion of his professional training, engage in the practice of family medicine—

"(A) in the case of any individual who, in applying for a medical student scholarship grant under this part, met the criteria set forth in subparagraph (A) or (B) of subsection (b) (3), in the physician shortage area in which he agreed (pursuant to such subparagraph) to engage in such practice; and

"(B) in the case of any individual who did not agree (pursuant to such subparagraph (A) or (B)) to engage in such practice in any particular physician short-

age area or has been waived (pursuant to paragraph (4)) to engage in such practice in any particular physician shortage area—

"(i) in any physician shortage area, or

"(ii) at such place or places, in such facility or facilities, and in such manner, as may be necessary to assure that, of the patients receiving medical care provided by such individual, a substantial portion will consist of persons who are migratory agricultural workers or are members of the families of such workers;

for a twelve-month period for each full academic year with respect to which he receives such a scholarship grant. For purposes of the preceding sentence, any individual, who has received a medical student scholarship grant under this part for four full academic years and who has received fellowship grants under this part for three full twelve-month periods, shall be deemed to have received a medical student scholarship grant under this part for only three full academic years.

"(2) The condition imposed by paragraph (1) shall be complied with by any individual to whom it applies within such reasonable period of time, after the completion of such individual's professional training, as the Secretary shall by regulations prescribe.

"(3) If any individual to whom the condition referred to in paragraph (1) is applicable fails, within the period prescribed by paragraph (2), to comply with such condition for the full number of months with respect to which such condition is applicable, the United States shall be entitled to recover from such individual—

"(A) an amount which bears the same ratio to the aggregate of (i) the amounts of the medical student scholarship grant or grants (as the case may be) made to such individual under this part plus (ii) the amount of interest which would be payable on such amounts if such amounts had been loans bearing an interest rate of 7 per centum per annum and the interest thereon had been payable annually, as

"(B) (i) the number obtained by subtracting from the number of months to which such condition is applicable a number equal to one-half of the number of months with respect to which compliance by such individual with such condition was made, bears to (ii) the number of months with respect to which such condition is applicable.

"(4) (A) Any obligation of any individual to comply with the condition applicable to him under the preceding provisions of this subsection shall be canceled upon the death of such individual.

"(B) The Secretary shall by regulations provide for the waiver of suspension of any such obligation applicable to any individual whenever compliance by such individual is impossible or would involve extreme hardship to such individual and if enforcement of such obligation with respect to any individual would be against equity and good conscience.

"(d) In awarding intern and resident fellowship grants under this part, priority shall be given to interns and residents in hospitals a substantial portion of the patients of which are economically disadvantaged persons.

"ADMINISTRATION; CONTRACTUAL ARRANGEMENTS

"SEC. 799b. The Secretary may, in the administration of this part, enter into agreements with schools of medicine, hospitals, or other appropriate public or nonprofit private agencies under which such schools, hospitals, or other agencies will, as agents of the Secretary, perform such administrative functions as the Secretary may specify. Any such agreement with any school, hospital, or other agency may provide for payment by the Secretary of amounts equal to the expenses actually and necessarily incurred by such school, hospital, or other agency in carrying out such agreement.

AUTHORIZATION OF APPROPRIATIONS

"SEC. 799c. (a) For the purpose of making medical student scholarship grants under this part, there is authorized

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to be appropriated $2,500,000 for the fiscal year ending June 30, 1971, $3,000,000 for the fiscal year ending June 30, 1972, $4,000,000 for the fiscal year ending June 30, 1973, $5,000,000 for the fiscal year ending June 30, 1974, and for each succeeding fiscal year, such sums as may be necessary to continue to make such grants to students who (prior to July 1, 1974) have received such a grant and who are eligible for such a grant under this part during such succeeding fiscal year.

"(b) For the purpose of making intern and resident fellowship grants under this part, there is authorized to be appropriated $2,000,000 for the fiscal year ending June 30, 1971, $3,000,000 for the fiscal year ending June 30, 1972, $4,000,000 for the fiscal year ending June 30, 1973, $5,000,000 for the fiscal year ending June 30, 1974, and for each succeeding fiscal year, such sums as may be necessary to continue to make such grants to interns and residents who (prior to July 1, 1973) have received such a grant or a medical student scholarship grant under this part, and who are eligible for such a grant under this part during such succeeding fiscal year.

"DEFINITIONS

"SEC. 799d. (a) For purposes of this part—

"(1) the term 'nonprofit', as applied to any hospital, means a hospital which is owned and operated by

one or more nonprofit corporations or associations, no part of the net earnings of which inures, or may lawfully inure, to the benefits of any private shareholder or individual; and

"(2) the term 'practice of family medicine' means the practice of medicine by a physician (licensed to practice medicine and surgery by the State in which he practices his profession) who specializes in providing to families (and members thereof) comprehensive, continuing, professional care and treatment of the type necessary or appropriate for their general health maintenance.

"(b) (1) The term 'physician shortage area', when used in this part, refers to an area within a State which is determined, in accordance with this subsection—

"(A) to have an insufficient number of physicians practicing their profession therein so as adequately to meet the need for medical care of the population of such area; and

"(B) in which the ratio of physicians to population is lower than in other areas of the State.

"(2) The Secretary shall, in making determinations under this subsection, accept (in the case of any State) the determination, as to the number and location of physician shortage areas in such State, recommended to him by—

"(A) the State planning agency for such State (as designated pursuant to section 314(a)(2)(A)), or

"(B) if in such State there is no such agency, or if such agency fails or refuses to make a recommended determination to the Secretary within such reasonable time as he shall prescribe, by such other agency of such State as the Secretary finds to be qualified to make such a recommended determination and as the Governor of such State shall have designated to make such a recommended determination;

but only if—

"(C) such agency, in making such recommended determination, has sought and obtained the advice and assistance of the State medical society for such State;

"(D) such agency, in making such recommended determination, classifies each area which it determines to be a physician shortage area as to the degree of the physician shortage therein as compared with other areas which such agency determines to be physician shortage areas; and

"(E) the Secretary is satisfied with the adequacy of the criteria employed by such agency as the basis upon which such recommended determination was made.

"(3) If, in the case of any State, the Secretary does not receive (within such reasonable time as he shall pre-

scribe) a recommended determination with respect to such State which meets the requirements of paragraph (2), he shall (after seeking the advice and assistance of the State medical society for such State) determine the number and location of the physician shortage areas (if any) of such State on the basis of the most current and appropriate data available to him".

[S. 3418, 91st Congress, second session, Referred to the Committee on Interstate and Foreign Commerce on September 15, 1970]

AN ACT

To amend the Public Health Service Act to provide for the making of grants to medical schools and hospitals to assist them in establishing special departments and programs in the field of family practice, and otherwise to encourage and promote the training of medical and paramedical personnel in the field of family medicine, and to alleviate the effects of malnutrition, and to provide for the establishment of a National Information and Resource Center for the Handicapped.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

TITLE I—FAMILY MEDICINE

SEC. 101. Part D of title VII of the Public Health Service Act is amended to read as follows:

"PART D—GRANTS TO PROVIDE PROFESSIONAL AND TECHNICAL TRAINING IN THE FIELD OF FAMILY MEDICINE

"DECLARATION OF PURPOSE

"SEC. 761. It is the purpose of this part to provide for the making of grants to assist—

"(a) public and private nonprofit medical schools—

"(1) to operate, as an integral part of their medical education program, separate and distinct departments devoted to providing teaching and instruction (including continuing education) in all phases of family practice;

"(2) to construct such facilities as may be appropriate to carry out a program of training in the field of family medicine whether as a part of a medical school or as separate outpatient or similar facility;

"(3) to operate, or participate in, special training programs for paramedical personnel in the field of family medicine; and

"(4) to operate, or participate in, special training programs to teach and train medical personnel to head departments of family practice or otherwise teach family practice in medical schools.

"(b) public and private nonprofit hospitals which

provide training programs for medical students, interns, or residents—

"(1) to operate, as an integral part of their medical training programs, special professional training programs (including continuing education) in the field of family medicine for medical students, interns, residents, or practicing physicians;

"(2) to construct such facilities as may be appropriate to carry out a program of training in the field of family medicine whether as a part of a hospital or as a separate outpatient or similar facility;

"(3) to provide financial assistance (in the form of scholarships, fellowships, or stipends) to interns, residents, or other medical personnel who are in need thereof, who are participants in a program of such hospital which provides special training (accredited by a recognized body or bodies approved for such purpose by the Commissioner of Education) in the field of family medicine, and who plan to specialize or work in the practice of family medicine; and

"(4) to operate, or participate in, special training programs for paramedical personnel in the field of family medicine.

"AUTHORIZATION OF APPROPRIATIONS

"SEC. 762. (a) For the purpose of making grants to carry out the purposes of this part, there are authorized to be appropriated $50,000,000 for the fiscal year ending June 30, 1971, $75,000,000 for the fiscal year ending June 30, 1972, and $100,000,000 for the fiscal year ending June 30, 1973, and for each of the next two succeeding fiscal years.

"(b) Sums appropriated pursuant to subsection (a) for any fiscal year shall remain available for the purpose for which appropriated until the close of the fiscal year which immediately follows such year.

"GRANTS BY SECRETARY

"SEC. 763. (a) From the sums appropriated pursuant to section 762, the Secretary is authorized to make grants, in accordance with the provisions of this part, to carry out the purposes of section 761.

"(b) No grant shall be made under this part unless an application therefor has been submitted to, and approved by, the Secretary. Such application shall be in such form, submitted in such manner, and contain such information, as the Secretary shall have prescribed by regulations which have been promulgated by him and published in the Federal Register not later than six months after the date of enactment of this part.

"(c) Grants under this part shall be in such amounts

and subject to such limitations and conditions as the Secretary may determine to be proper to carry out the purposes of this part.

"(d) In the case of any application for a grant any part of which is to be used for major construction or remodeling of any facility, the Secretary shall not approve the part of the grant which is to be so used unless the recipient of such grants enters into appropriate arrangements with the Secretary which will equitably protect the financial interests of the United States in the event such facility ceases to be used for the purpose for which such grant or part thereof was made prior to the expiration of the ten-year period which commences on the date such construction or remodeling is completed.

"(e) Grants made under this part shall be used only for the purpose for which made and may be paid in advance or by way of reimbursement, and in such installments as the Secretary may determine.

"ELIGIBILITY FOR GRANTS

"SEC. 764. (a) In order for any medical school to be eligible for a grant under this part, such school—

"(1) must be a public or other nonprofit school of medicine; and

"(2) must be accredited as a school of medicine by a recognized body or bodies approved for such purpose

by the Commissioner of Education, except that the requirement of this clause (2) shall be deemed to be satisfied if, (A) in the case of a school of medicine which by reason of no, or an insufficient, period of operation is not, at the time of application for a grant under this part, eligible for such accreditation, the Commissioner finds, after consultation with the appropriate accreditation body or bodies, that there is reasonable assurance that the school will meet the accreditation standards of such body or bodies prior to the beginning of the academic year following the normal graduation date of students who are in their first year of instruction at such school during the fiscal year in which the Secretary makes a final determination as to approval of the application.

"(b) In order for any hospital to be eligible for a grant under this part, such hospital—

"(1) must be a public or private nonprofit hospital; and

"(2) must conduct or be prepared to conduct in connection with its other activities (whether or not as an affiliate of a school of medicine) one or more programs of medical training for medical students, interns, or residents, which is accredited by a recognized body

or bodies, approved for such purpose by the Commissioner of Education.

"APPROVAL OF GRANTS

"SEC. 765. (a) The Secretary, upon the recommendation of the Council, is authorized to make grants under this part upon the determination that—

"(1) the applicant meets the eligibility requirements set forth in section 764;

"(2) the applicant has complied with the requirements of section 763;

"(3) the grant is to be used for one or more of the purposes set forth in section 761;

"(4) it contains such information as the Secretary may require to make the determinations required of him under this section and such assurances as he may find necessary to carry out the purposes of this part;

"(5) it provides for such fiscal control and accounting procedures and reports, and access to the records of the applicant, as the Secretary may require (pursuant to regulations which shall have been promulgated by him and published in the Federal Register) to assure proper disbursement of and accounting for all Federal funds paid to the applicant under this part; and

"(6) the application contains or is supported by

adequate assurance that any laborer or mechanic employed by any contractor or subcontractor in the performance of work on the construction of the facility will be paid wages at rates not less than those prevailing on similar construction in the locality as determined by the Secretary of Labor in accordance with the Davis-Bacon Act, as amended (40 U.S.C. 276a–276a5). The Secretary of Labor shall have, with respect to the labor standards specified in this paragraph, the authority and functions set forth in Reorganization Plan Numbered 14 of 1950 (15 F.R. 3176; 65 Stat. 1267), and section 2 of the Act of June 13, 1934, as amended (40 U.S.C. 276c).

"(b) The Secretary shall not approve any grant to—

"(1) a school of medicine to establish or operate a separate department devoted to the teaching of family medicine unless the Secretary is satisfied that—

"(A) such department is (or will be, when established) of equal standing with the other departments within such school which are devoted to the teaching of other medical specialty disciplines;

"(B) such department will, in terms of the subjects offered and the type and quality of instruction provided, be designed to prepare students thereof to meet the standards established for specialists in

the specialty of family practice by a recognized body approved by the Commissioner of Education; or

"(2) a hospital to establish or operate a special program for medical students, interns, or residents in the field of family medicine unless the Secretary is satisfied that such program will, in terms of the type of training provided, be designed to prepare participants therein to meet the standards established for specialists in the field of family medicine by a recognized body approved by the Commissioner of Education.

"(c) The Secretary shall not approve any grant under this part unless the applicant therefor provides assurances satisfactory to the Secretary that funds made available through such grant will be so used as to supplement and, to the extent practical, increase the level of non-Federal funds which would, in the absense of such grant, be made available for the purpose for which such grant is requested.

"PLANNING AND DEVELOPMENTAL GRANTS

"SEC. 766. (a) For the purpose of assisting medical schools and hospitals (referred to in section 761) to plan or develop programs or projects for the purpose of carrying out one or more of the purposes set forth in such section, the Secretary is authorized for any fiscal year (prior to the fiscal year which ends June 30, 1975) to make planning and de-

velopmental grants in such amounts and subject to such conditions as the Secretary may determine to be proper to carry out the purposes of this section.

"(b) From the amounts appropriated for any fiscal year (prior to the fiscal year ending June 30, 1975) pursuant to section 762(a), the Secretary may utilize such amounts as he deems necessary (but not in excess of $10,000,000 for any fiscal year) to make the planning and developmental grants authorized by subsection (a).

"ADVISORY COUNCIL ON FAMILY MEDICINE

"SEC. 767. (a) The Secretary shall appoint an Advisory Council on Family Medicine (hereinafter in this section referred to as the 'Council'). The Council shall consist of twelve members, four of whom shall be physicians engaged in the practice of family medicine, four of whom shall be physicians engaged in the teaching of family medicine, and four of whom shall be representatives of the general public. Members of the Council shall be individuals who are not otherwise in the regular full-time employ of the United States.

"(b) Each member of the Council shall hold office for a term of four years, except that any member appointed to fill a vacancy prior to the expiration of the term for which his predecessor was appointed shall be appointed for the remainder of such term, and except that the terms of office of

the members first taking office shall expire, as designated by the Secretary at the time of appointment, three at the end of the first year, three at the end of the second year, three at the end of the third year, and three at the end of the fourth year, after the date of appointment. A member shall not be eligible to serve continuously for more than two terms.

"(c) Members of the Council shall be appointed by the Secretary without regard to the provisions of title 5, United States Code, governing appointments in the competitive service. Members of the Council, while attending meetings or conferences thereof or otherwise serving on business of the Council, shall be entitled to receive compensation at rates fixed by the Secretary, but not exceeding $100 per day, including traveltime, and while so serving away from their homes or regular places of business they may be allowed travel expenses, including per diem in lieu of subsistence, as authorized by section 5703 of title 5, United States Code, for the persons in Government service employed intermittently.

"(d) The Council shall advise and assist the Secretary in the preparation of regulations for, and as to policy matters arising with respect to, the administration of this title. The Council shall consider all applications for grants under this part and shall make recommendations to the Secretary with

respect to approval of applications for and of the amounts of grants under this part.

"DEFINITIONS

"SEC. 768. For purposes of this part—

"(1) the term 'nonprofit' as applied to any hospital or school of medicine, means a school of medicine or hospital which is owned and operated by one or more nonprofit corporations or associations, no part of the net earnings of which inures, or may lawfully inure, to the benefit of any private shareholder or individual;

"(2) the term 'family medicine' means those certain principles and techniques and that certain body of medical, scientific, administrative, and other knowledge and training, which especially equip and prepare a physician to engage in the practice of family medicine;

"(3) the term 'practice of family medicine' and the term 'practice', when used in connection with the term 'family medicine', mean the practice of medicine by a physician (licensed to practice medicine and surgery by the State in which he practices his profession) who specializes in providing to families (and members thereof) comprehensive, continuing, professional care and treatment of the type necessary or appropriate for their general health maintenance; and

"(4) the term 'construction' includes construction of new buildings, acquisition, expansion, remodeling, and

alteration of existing buildings, and initial equipment of any such buildings, including architects' fees, but excluding the cost of acquisition of land or offsite improvements."

TITLE II—MALNUTRITION

SEC. 201. Part A of title III of the Public Health Service Act is amended by adding at the end thereof the following new section:

"SEC. 310c. (a) In order to reduce the incidence of malnutrition in the United States, to advance medical knowledge in the causes and effects of malnutrition, and to encourage and facilitate the provision of early detection and effective treatment of malnutrition and the conditions which result therefrom, the Secretary is authorized, out of the funds available for carrying out the purposes of this section, to:

"(1) make grants-in-aid to and enter into contracts with medical schools, appropriate graduate schools, and nursing schools to assist such schools in establishing courses dealing with malnutrition, its causes and effects, means for its early detection, and effective treatment of malnutrition and conditions resulting therefrom;

"(2) make grants-in-aid and enter into contracts with universities, medical schools, hospitals, laboratories and other public or private institutions, and individuals and groups of individuals for research into malnutrition,

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its causes and effects, means for its detection, and into the effective treatment of malnutrition and conditions resulting therefrom;

"(3) establish special projects designed to provide to students of courses in malnutrition practical training and experience in the field of malnutrition; and

"(4) provide fellowships and otherwise financially assist students to encourage and enable them to pursue studies and engage in activities in poverty areas relating to malnutrition.

"(b) In selecting schools and institutions to carry out the purposes referred to in paragraphs (1) and (2) of subsection (a), priority shall be accorded to those schools and institutions which are located in poverty areas.

"(c) For the purpose of carrying out the provisions of this section, there are hereby authorized to be appropriated $32,000,000 for the fiscal year commencing with the fiscal year ending June 30, 1971, and for each of the next four fiscal years thereafter."

TITLE III—NATIONAL INFORMATION AND RESOURCE CENTER FOR THE HANDICAPPED

SEC. 301. (a) (1) There is hereby established, within the Department of Health, Education, and Welfare, a National Information and Resource Center for the Handicapped (hereinafter referred to as the "Center").

(2) The Center shall have a Director and such other personnel as may be necessary to enable the Center to carry out its duties and functions under this section.

(b) (1) It shall be the duty and function of the Center to collect, review, organize, publish, and disseminate (through publications, conferences, workshops or technical consultation) information and data related to the particular problems caused by handicapping conditions, including information describing measures which are or may be employed for meeting or overcoming such problems, with a view to assisting individuals who are handicapped, and organizations and persons interested in the welfare of the handicapped, in meeting problems which are peculiar to, or are made more difficult for, individuals who are handicapped.

(2) The information and data with respect to which the Center shall carry out its duties and functions under paragraph (1) shall include (but not be limited to) information and data with respect to the following—

(A) medical and rehabilitation facilities and services;

(B) day care and other programs for young children;

(C) education;

(D) vocational training;

(E) employment;

(F) transportation;

(G) architecture and housing (including household appliances and equipment);

(H) recreation; and

(I) public or private programs established for, or which may be used in, solving problems of the handicapped.

(c) (1) The Secretary shall make available to the Center all information and data, within the Department of Health, Education, and Welfare, which may be useful in carrying out the duties and functions of the Center.

(2) Each other department or agency of the Federal Government is authorized to make available to the Secretary, for use by the Center, any information or data which the Secretary may request for such use.

(3) The Secretary of Health, Education, and Welfare shall to the maximum extent feasible enter into arrangements whereby State and other public and private agencies and institutions having information or data which is useful to the Center in carrying out its duties and functions will make such information and data available for use by the Center.

(d) There is authorized to be appropriated for carrying out the purposes of this section for the fiscal year ending June 30, 1971, the sum of $300,000, and for each fiscal year thereafter such sums as may be necessary.

Passed the Senate September 14, 1970.

Attest: FRANCIS R. VALEO,

Secretary.

GENERAL ACCOUNTING OFFICE,
OFFICE OF THE COMPTROLLER GENERAL OF THE UNITED STATES,
Washington, D.C., September 4, 1969.

Hon. HARLEY O. STAGGERS,
Chairman, Interstate and Foreign Commerce Committee, U.S. House of Representatives, Washington, D.C.

DEAR MR. CHAIRMAN: By letter dated July 25, 1969, you requested our comments on H.R. 13063, a bill to amend the Public Health Service Act to provide grants to develop training in family medicine.

The bill would authorize funds to be appropriated over a three-year period for grants to medical schools to assist in meeting the costs of special projects to plan, develop, or establish new programs or modifications of existing programs of education in the field of family medicine, and including the development and equipment of appropriate facilities.

We note that the proposed program is similar in many respects to an existing grant program administered by the Department of Health, Education, and Welfare (HEW), which is authorized under part E of title VII of the Public Health Service Act under the caption "Grants to Improve the Quality of Schools of Medicine, Dentistry, Osteopathy, Optometry, and Podiatry."

Under the existing program, two types of improvement grants, i.e., basic institutional and special project grants, may be made to schools of medicine. Basic institutional grants are formula grants based on student enrollment and may be used for any purpose, other than those prohibited by regulations, which each school determines will most effectively advance the quality of its educational program. Special project grants are to be used among other things in meeting the cost of special projects to plan, develop, and establish new programs or modifications of existing programs of education.

The proposed program in the area of family medicine could possibly be undertaken under the existing program. Therefore, the Committee may wish to consider the relationship of the grants to be authorized under this bill to the grant programs already authorized under part E of title VII.

It is not clear from the language in the proposed section 761 whether or not it was intended that grant funds could be made available to finance the construction of facilities. We believe that the language of the bill should be clarified in this respect by substituting the word "construction" for "development" in line 10, page 2. We note that part B of title VII of the Public Health Service Act already authorizes a program of grants to medical schools for construction and initial equipping of teaching facilities for medical personnel.

The bill does not provide for a review of grant applications by a National Advisory Council. The legislation authorizing the previously cited programs, and most other grant programs administered by the National Institutes of Health, require the Secretary of HEW to consult with a National Advisory Council before approving or disapproving any grant application. The Committee may wish to provide a similar requirement in this bill.

The proposed part D does not contain an access to records and audit authority for the Comptroller General of the United States. We recommend that the bill be amended to include such authority. This could be accomplished by omitting the proposed subsection 762(c)(4) and substituting the following language:

"(4) Each recipient of assistance under this part shall keep such records as the Secretary of Health, Education, and Welfare shall prescribe, including records which fully disclose the amount and disposition by such recipient of the proceeds of such assistance, the total cost of the project or undertaking in connection with such assistance is given or used, and the amount of that portion of the cost of the project or undertaking supplied by other sources, and such other records as will facilitate an effective audit;

"(5) The Secretary of Health, Education, and Welfare and the Comptroller General of the United States, or any of their duly authorized representatives, shall have access for the purpose of audit and examination to any books, documents, papers, and records of the recipients that are pertinent to the assistance received under this part."

Similar provisions are contained in various acts relating to health programs. See sections 280b–11(b), 291d(11), 299i(b), 2697(b) and 2956–5 of title 42, United States Code.

Under section 202 of the Intergovernmental Cooperation Act of 1968, Pub. L. 90–577, 82 Stat. 1101, the Comptroller General and heads of Federal agencies have access to records pertaining to grants-in-aid received by the States. However, section 202 does not cover political subdivisions of State or beneficiaries other than States, which are grant recipients.

Sincerely yours,

R. F. KELLER,
(For the Comptroller General of the United States).

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE,
OFFICE OF THE SECRETARY,
Washington, D.C., July 7, 1970.

Hon. HARLEY O. STAGGERS,
Chairman, Committee on Interstate and Foreign Commerce,
House of Representatives,
Washington, D.C.

DEAR MR. CHAIRMAN: This letter is in response to your request of February 13, 1970, for a report on H.R. 15793, a bill "To amend the Public Health Service Act to provide for the making of grants to medical schools and hospitals to assist them in establishing special departments and programs in the field of family practice, and otherwise to encourage and promote the training of medical and paramedical personnel in the field of family medicine."

The bill would authorize a new five-year program of grants to medical schools:

(1) to operate separate departments devoted to teaching and instruction in all phases of family practice;

(2) to construct facilities appropriate to carry out family practice training programs whether as a part of a medical school or as a separate outpatient or similar facility;

(3) to operate or participate in special training programs for paramedical personnel in the field of family medicine; and

(4) to operate or participate in special training programs for medical personnel to head departments of family practice or otherwise teach family practice in medical schools.

The bill would also authorize grants to public or private nonprofit hospitals which train medical students, interns, or residents:

(1) to operate special professional training programs in family medicine for medical students, interns, or residents;

(2) to construct facilities appropriate to carry out these programs whether as part of a hospital or as a separate outpatient or similar facility;

(3) to provide scholarships, fellowships, or stipends to interns, residents, or other medical personnel in need of such assistance, who are participants in accredited training programs in the field of family medicine and who plan to specialize or work in the practice of family medicine; and

(4) to operate or participate in special programs for training paramedical personnel in the field of family medicine.

For the purpose of making the grants to medical schools and to hospitals, the bill would authorize appropriations of $50 million for fiscal year 1971, $75 million for fiscal year 1972, and $100 million each for fiscal years 1973, 1974, and 1975.

We are in full accord with the objective of encouraging and promoting the training of physicians and paramedical personnel to help to meet the needs of each patient for personalized and unfragmented care for all of his health needs as an individual in a particular family in a given community at a particular time. At a time of increasing specialization and with a variety of types of personnel and facilities often contributing to the care of a single patient, educational programs for health manpower at all levels must emphasize this aspect of training.

Methods of achieving the goal of personalized and unfragmented care for each individual—including not only diagnosis and treatment of illness but also preventive and rehabilitative services—are in a state of experimentation and change. A variety of terms is used to describe the kind of care or practice, or the type of practitioner, that is wanted: family practice, general practice, personal medicine, primary care, first-contact physician, generalist, comprehensive medical care.

A number of schools of medicine and osteopathy and their teaching hospitals have used, or have indicated their intention to use, at least a portion of their formula grants or their special project grants under the Health Professions Educational Assistance Program to support the teaching of continuity, primary, or family-oriented care through a variety of means. Some schools are gearing their entire educational program to the production of family physicians; some are establishing separate departments of family practice or family medicine; others are developing family practice or "primary care" programs on an interdepartmental basis.

Among the medical schools that have been awarded special project grants for expansion of enrollment (including Physician Augmentation projects) under the Health Professions Educational Assistance Program, a number will give additional emphasis to the teaching of family medicine in the course of achieving the goal of increased output.

The Health Professions Educational Assistance Program has aided in the construction of facilities for all teaching purposes in medical schools including their affiliated hospitals. We are trying to remove artificial barriers to sound planning and construction of the institution as a whole, rather than create them through categorical construction aid.

Several other legislative authorities already exist under which activities related to the field of family medicine as contemplated under H.R. 15793 may be aided. Authority for Federal support of training of physicians assistants and other new types of paramedical personnel exists under the Allied Health Professions Personnel Training authority for developmental grants (section 794, Public Health Service Act) and under the new Health Professions Educational Assistance special project grant authority which went into effect July 1, 1969.

A number of projects involving the preparation of nurses to play a role in the provision of family-oriented medical care have been conducted under nurse training and public health training authorities. These have included, among others, projects to plan and evaluate experimental training programs for such clinical nursing specialists as pediatric nurse practitioners.

The Hill-Burton medical facilities construction program provides support for the construction and modernization of private, nonprofit medical facilities, including ambulatory care facilities of the type required for family medicine teaching programs.

At the level of internship and residency training, concern for the need for more training in the provision of personalized or family-oriented continuing medical care is reflected in the recent creation of family practice as a new medical specialty. There is pressure also for increased emphasis on training in continuous, comprehensive patient care in other specialty training programs such as internal medicine, pediatrics, and obstetrics. The costs of interns' and residents' salaries (and to a somewhat lesser extent, teaching costs for these training programs) now are met largely out of payments for services, including reimbursements for care under medicare and medicaid.

In view of the evolving character of the concept of family medicine, there are advantages to aiding activities in this field under broad, flexible legislative authorities such as those contained in the Health Professions Educational Assistance Act. This type of authority permits the support of alternative approaches to training in the provision of comprehensive and continuing care to individuals and families, pending further evaluation of the various mechanisms for educating personnel and organizing medical services in this field. It also allows aid for training in family medicine to be provided in conjunction with aid directed toward another purpose such as expansion of enrollment of medical schools.

The Health Professions Educational Assistance authority is due to expire on June 30, 1971. Because of the close relationship between the family medicine activities proposed in the instant bill and the Health Professions Educational Assistance Programs, we recommend that action on that bill be deferred until the recommendations on the Health Professions Educational Assistance Act have been completed. In any event, however, we would strongly oppose the enactment of another categorical grant authority, such as that embodied in the bill, which would duplicate authorities or mechanisms already existing to achieve the purpose of this legislation.

We are advised by the Office of Management and Budget that there is no objection to the presentation of this report from the standpoint of the Administration's program.

Sincerely,

ELLIOT L. RICHARDSON, *Secretary.*

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE,
Washington, D.C., August 19, 1970.

Hon. HARLEY O. STAGGERS,
Chairman, Committee on Interstate and Foreign Commerce, House of Representatives, Washington, D.C.

DEAR MR. CHAIRMAN: This letter is in response to your request of August 4, 1970, for a report on H.R. 18717, a bill "To amend the Public Health Service Act to provide for the making of grants to medical schools and hospitals to assist them in establishing special departments and programs in the field of family practice, and otherwise to encourage and promote the training of medical and paramedical personnel in the field of family medicine."

The bill is identical with H.R. 15793 on which we reported to you on July 7, 1970. A copy of the report on that bill is enclosed for your convenience. Our views on H.R. 18717 remain those expressed in the appended report.[1]

Sincerely,

ELLIOT L. RICHARDSON, *Secretary.*

EXECUTIVE OFFICE OF THE PRESIDENT,
OFFICE OF MANAGEMENT AND BUDGET,
Washington, D.C., July 9, 1970.

Hon. HARLEY O. STAGGERS,
Chairman, Committee on Interstate and Foreign Commerce, House of Representatives, Rayburn House Office Building, Washington, D.C.

DEAR MR. CHAIRMAN: This is in response to your request for the views of the Office of Management and Budget on H.R. 15793, a bill "To amend the Public Health Service Act to provide for the making of grants to medical schools and hospitals to assist them in establishing special departments and programs in the field of family practice, and otherwise to encourage and promote the training of medical and paramedical personnel in the field of family medicine."

In a report being furnished to your Committee, the Department of Health, Education, and Welfare states its reasons for recommending against the enactment of H.R. 15793.

We concur in the views of the Department of Health, Education, and Welfare, and, accordingly, recommend that your Committee not give favorable consideration to H.R. 15793.

Sincerely,

WILFRED H. ROMMEL,
Assistant Director for Legislative Reference.

Mr. JARMAN. Our first witness this morning is our friend and colleague on the Interstate and Foreign Commerce Committee, the Honorable Fred B. Rooney, of Pennsylvania. Congressman Rooney introduced the first bill on this subject. Fred, it is a pleasure to have you with us to testify this morning.

STATEMENT OF HON. FRED B. ROONEY, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF PENNSYLVANIA

Mr. ROONEY. Thank you, Mr. Chairman.

Mr. Chairman and members of the subcommittee, I have a brief statement. I first of all want to thank you for the opportunity to appear before this distinguished committee on this very important subject which I have had an interest in for the last 2 years.

I might add, Mr. Chairman, that I am very grateful that three very dedicated doctors took time out today to be here. They flew in from San Francisco where they were attending the Academy of Family Physicians Convention. And I am speaking of Dr. Kowalewski, Dr. Johnson, and Dr. Jack Hall.

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[1] See report dated July 7, 1970, p. 49, this hearing.

The trend in this Nation today toward specialization and away from family practice has manifested itself plainly during the past 40 years.

In 1931, three out of every four doctors were general practitioners. Today only one of every five physicians is engaged in this rapidly disappearing art. To make matters worse, only 15 percent of our medical school graduates today are choosing to go into family practice.

Two questions occurred to me when I first became interested in this problem. The first was: What is causing this move away from family practice? The second: Is this a good or a bad trend? In other words, do we really need general practitioners? The fact that I am seated before you today should indicate that my investigation led me to answer the second question with an emphatic yes.

But, for a moment, let us look at the reasons for the overwhelming shift toward specialization. The United States today as a whole has moved away from the "jack of all trades" concept and into the era of the specialist. This trend was initiated by industrialization and has spread into widely diverse areas. We are living today in a time when a worker might spend his whole day tightening the same screw as hundreds of identical articles pass before his eyes. Specialization has even encroached upon the sports world. It is not at all strange to see a baseball manager make repeated trips to the mound removing one pitcher after another in search of one whose particular abilities will offset those of one batter.

So it should not surprise us to see medicine dominated by specialists. However, there is another, more fundamental reason why specialization has taken such a strong hold in medicine. Categorized research, which, I hasten to say, has been responsible for so many of our victories over formerly incurable or disabling diseases, has also become the dominant theme in our medical schools. Thus it is only natural that they should turn out specialists. But I did not come here to criticize specialization. I came here to point to the corresponding and complementary need for family practice specialists.

In 1964, the American Medical Association recognized this need. They appointed the "Ad Hoc Committee on Education for Family Practice." The committee's function was to review AMA policy regarding family and general practice. And while the ad hoc committee was established and financed by the AMA, one half of its membership was sought from and appointed by the Association of American Medical Colleges and the American Academy of General Practice.

The ad hoc committee initiated their study by defining the role of the family physician. As defined by the committee, the family physician is one who: (1) Serves as the physician of first contact with the patient and provides a means of entry into the health care system; (2) evaluates the patient's total health needs, provides personal medical care in one or more fields of medicine, and refers the patient when indicated to appropriate courses of care while preserving the continuity of his care; (3) assumes responsibility for the patient's comprehensive and continuous health care and acts as a leader or coordinator of the team that provides health services; (4) accepts responsibility for the patient's total health care within the context of his environment, including the community and the family, or comparable social unit.

This kind of doctor, Mr. Chairman, would be especially effective in the context of modern day America. It has been said often that the only people who receive adequate medical care are the very rich and the very poor. I would agree with only half of that statement. It seems to me that the poor and the middle class have suffered the most from the decline in family practice. These people need the guidance and overall health care that only a family practice specialist can provide.

After conducting a comprehensive 2 year study, the ad hoc committee published a report titled "Meeting the Challenge of Family Practice." And in the report the committee offered recommendations which can be summarized as follows:

1. Major efforts should be instituted promptly to encourage the development of new programs for the education of large numbers of family physicians for the future.

2. Medical schools and teaching hospitals were urged to explore the possibility of developing models of family practice in cooperation with the practicing profession and the community.

3. New and substantial funds from some source should be made available for all aspects of the programs.

4. Recognition and status equivalent to other medical specialties is necessary for family practice.

Since the appearance of the report of the ad hoc committee a major amount of time and effort has gone into the implementation of these recommendations. However, much remains to be done. Many undergraduate family practice programs are barely established and certainly inadequately supported. The answer, of course, is sufficient funding to bring these programs to a proper level.

And I would like to emphasize the importance of adequate funding. Without it this program will fall by the wayside joining many other worthy measures killed by inadequate attention to our Nation's health care problems. I thought the problem was particularly well stated in an editorial that appeared in the Sunday Star on September 27, 1970, entitled "Action Needed in Nation's Health Care," which I request, Mr. Chairman, be made part of the record at this time.

Mr. JARMAN. The committee will be glad to receive it.

(The editorial referred to follows:)

[From the Sunday Star, Washington, D.C., Sept. 27, 1970]

ACTION NEEDED ON NATION'S HEALTH

Fourteen months after he said the country was facing a "massive crisis" and possible breakdown in health care, President Nixon has called for the drafting of a remedial program. And the word is out that he won't settle for just shoring up the present rickety health services system. He has ordered a blueprint for making Americans the healthiest people on earth, which they now decidedly are not.

If that is indeed his goal, he deserves every encouragement. This is a mission of necessity upon which the nation should have embarked many years ago. In this field, the United States is in a third-rate position among the industrial nations. It just muddles along, tolerating incredible disorganization, appalling inequities and financial ruin for people who get too sick for too long. For millions, adequate care simply is unavailable. Distribution of services is drastically uneven across the nation.

Officials of HEW are reported to be working nights and on weekends on Mr. Nixon's program, and a bundle of recommendations should shortly be on his desk. He will need to sit down when he reads the cost projections. If the formulators come up with a plan scaled to actual needs, the price will be jolting.

It will make the welfare reform legislation he is now trying to push through Congress look like a penny's worth of peanuts. No doubt that is why he has delayed so long in acting on his own health-care crisis alarm, sounded in July of last year. A glimmer of what may be expected was given by Dr. Roger O. Egeberg, an assistant HEW secretary: ". . . as I see the problems, they are awful. Our needs for money are almost insatiable."

Before any hallelujahs are heard, it should be noted that no real movement is visible, except backward. All that is promised is a plan, and that has come not directly from the President but from a third-level administrator, Dr. Egeberg. The doctor has long been agonizing over the deteriorating health-care situation and trying to direct the President's attention to it. Now he vouches for Mr. Nixon's interest and we hope he is correct. We also hope that another year will not elapse before a comprehensive, sensibly graduated program is laid before Congress and the people.

This is a cause to which the public would rally. Most people are gravely concerned about the cost and uncertainty of medical care, and most still have not been exposed to the more shocking evidence which the President could offer.

There is abundant evidence of that concern. For example, on Labor Day the AFL–CIO president delivered a most untypical speech. It wasn't about labor itself, but rather was a statement of labor's No. 1 goal for the Seventies. That, George Meany said, "is to upgrade America's standard of health, to establish a new and better system for delivering health care and health services to the people who need them." He strongly endorsed the national health insurance program now before Congress.

Fifteen senators are sponsoring the insurance bill, which will not and should not be passed in this session. To place it in effect now would be like installing a jumbo jet engine on a Ford Tri-motor plane; it would pull the whole fragile health works to pieces. It is the only logical long-run objective, but preparations must be made. Crippling deficiencies of manpower, money and planning must be dealt with.

The administration, though, has shown no inclination to come to grips with the core problems, and its shotgun assault Wednesday on the health insurance bill bespoke too strong an attachment to the status quo. It revealed an affection for the private health insurance system that seems out of all proportion to that system's achievement record. Indeed the health needs picture drawn by HEW Assistant Secretary John G. Veneman, who presumably was speaking for the administration, was depressing in its narrowness.

He said national health insurance would cost too much (which it probably would if it were immediately implemented), and that it would "radically restructure the health financing and health service industry" with untested new processes. Certainly the present processes have been tested, and in view of the sorry state of health services, some radical restructuring seems inevitable.

Most discouraging, however, was Veneman's conclusion that, over-all, "the best investments that we can make as a nation in improved health are those directed toward assuring sufficient food and an adequate income, and a healthy environment for all." That was a platitudinous evasion of the health-care issue—about on the level of prescribing an apple a day to keep the doctor away. But people more zealous to assure first-rate health services for everyone, regardless of income, are hamstrung until some expensive foundations are laid.

A major expansion and upgrading of services is out of the question until the medical personnel shortage is relieved. The Nixon administration has avoided confronting that primary obstacle which, as a result, is growing larger. New York hospitals now are so desperate for nurses that they are advertising in Europe, Canada and Australia. Probably a fourth of the nursing stations in the country are unfilled. The doctor shortage stands at more than 50,000 and is worsening daily, yet U.S. medical schools turned away 15,000 well-qualified applicants this year. Faced with this predicament, the administration has trimmed federal assistance to medical schools and many are staggering financially. Two of the three here in the District are threatened with closing if they do not receive emergency grants. Johns Hopkins at Baltimore is in serious difficulty.

The President's first concern in the health field should be the rescue of the medical schools, and then their enlargement. The government also should set up improved machinery for measuring their efficiency and for obtaining the largest possible output of new doctors and nurses for the dollars spent.

And some way must be found to improve the dispersal of physicians. More med school graduates must be gotten into practice out among the populace, in localities where they are desperately needed, instead of adding to the urban concentration of specialists. There has been no planning for distribution of medical manpower in relation to needs. Hence some whole counties have been without general-practice doctors, while more attractive areas and specialties have been overloaded. Location incentives can be provided and the fadeout of the general practitioner can be reversed.

Another urgent need is for commitment by the profession to increased use of medical assistants—to the training of a new grade of personnel who in effect would be super-nurses. These aides—extensions of the doctors but at a level just below him—could contribute immeasurably to the creation of an efficient, full-service system. Professional obstinance has suppressed this concept, but there have been recent encouraging experiments.

Action is needed to extend prepaid group practice services to more Americans. About five million now are covered by group plans, which assure treatment at minimal cost. Again, there is resistance in the medical profession, but the AMA president recently voiced strong support for group practice and urged his organization and the federal government to promote it.

The President has been accused of giving health care a low priority rating, and we hope he will soon lay that charge to rest. If his administration can put together a program to create efficiency and sufficiency where there is now chaos and paucity, he will be long remembered. The pattern for advancement should be drawn to culminate with cradle-to-grave national health insurance, when the services structure can support it. Whether health services are a right or a privilege is an old argument, but Americans have settled it in their minds, and George Meany asserted that decision: "We must stop restricting the right to life and death to those who can pay, and denying it to those who cannot."

Mr. ROONEY. We have before us now a measure which again has the potential to combat a critically short supply of doctors of family medicine—those desperately needed "generalists" who can attend to 90 percent or more of the ills which confront the American family unit.

The Star editorial pointed out, "The doctor shortage stands at more than 50,000 and is worsening daily, yet U.S. medical schools turned away 15,000 well-qualified applicants this year."

And, the Star very correctly observed, "More med school graduates must be gotten into practice out among the populace, in localities where they are desperately needed, instead of adding to the urban concentration of specialists."

Several months ago it was authoritatively reported that in this—the most civilized Nation on the face of the earth—the life expectancy of our people actually has declined because of the deterioration of the level of health care. In effect, the total lifespan of our 200 million plus citizens has been cut short by more than 80 million years.

It is a staggering figure and one I feel should convince each of us of the need for priority action to reverse the trend of health care in America. This subcommittee has the opportunity to take one big step in that direction by acting favorably upon the legislation before you. And hopefully, Mr. Chairman, this bill will be reported to the full committee and I hope will be enacted into law in this, the 91st session of Congress. I thank you very much for giving me this opportunity to appear before this very distinguished committee today.

Mr. JARMAN. Thank you very much, Fred, for very effective testimony on the subject of tremendous importance to this country.

Mr. Rogers.

Mr. ROGERS. Thank you. I, too, want to commend the gentleman for bringing this to the committee's attention. It is a problem that I think must be dealt with. I think we must even do more than is proposed in this bill as far as meeting the needs, but certainly this is a significant step. I noticed too in the Star editorial you referred to they talked about assistant doctors, using personnel more adequately, nurses, upgrading them, having a stepping stone in the health profession where you are zeroed in and can't move as you learn. So there are many things that I think we can do, but certainly this is a significant step, and I commend the gentleman for his interest and for introducing this legislation.

Mr. JARMAN. Mr. Nelsen.

Mr. NELSEN. Thank you, Mr. Chairman.

I, too, want to join in thanking our colleague for his appearance here today. I received a call from Dr. Huffington in Minnesota informing me that some of his colleagues would testify later and asked that I be sure to be here. And I think all of us, particularly those who live in rural communities, and smaller communities, are well aware of the tremendous shortage of doctors and nurses, and we see the need of stimulating in every way possible the production of more doctors so these areas can be served. I thank my colleague for his appearance here and his interest in this subject matter. Thank you very much.

Mr. JARMAN. Thank you for leading off in this hearing.

Mr. Preyer.

Mr. PREYER. I, too, want to congratulate Mr. Rooney.

Mr. ROONEY. I wasn't looking for any accolades.

Mr. PREYER. I thought your point about specialization was certainly a valid one, and it is interesting that people from Pennsylvania, particularly around Pittsburgh these days, go to sports metaphors to find an example of specialization. Pittsburgh seemed to be a good example. There is a team with no one specializing in pitching, for example, and yet they do all right. I think this is an excellent statement, Mr. Rooney.

Mr. ROONEY. Thank you. Thank you, Mr. Chairman.

Mr. JARMAN. Our next witness is also a colleague from the full committee, the Honorable J. J. Pickle of Texas. Mr. Pickle, I understand you have a statement you wish to present to the subcommittee this morning. Proceed as you wish.

STATEMENT OF HON. J. J. PICKLE, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF TEXAS

Mr. PICKLE. Mr. Chairman, I thank the subcommittee for the careful consideration they are giving H.R. 15793, the family practice bill, and I wish to testify today in favor of this bill of which I am a cosponsor.

Mr. Chairman, in the past several years, we in the Commerce Committee have had the increasing shortage of medical personnel in this country repeatedly brought to our attention. As the population has continued to grow, this shortage has begun to reach crisis proportions, and this is a fact which I think most of us realize.

The problem comes in deciding how best to combat this shortage. I would submit to you today that the family practice bill attacks a critical gap in our medical services and would be an efficient and effective way of helping to counteract the medical personnel shortage.

This legislation has widespread support in both the House and the Senate. My colleague, Fred Rooney of Pennsylvania, introduced this legislation in the House and I joined in cosponsoring this much needed legislation. As you know, Senator Yarborough introduced similar legislation in the Senate.

The family practitioner is in a unique position to consider and to treat persons in the context of their family and surroundings. He is in a position to spot abnormalities which might lead to early diagnosis of more critical illnesses. Perhaps most important, he is in the best position to emphasize preventive health.

Moreover, we must remember that it is the rural poor, the ghetto dweller, the elderly, the migrant, who are the people who have suffered most by the decline of the family doctor for they lack the means and the family tradition of looking for the kind of medical care they need. In many cases, the emergency rooms of our hospitals have been forced to play the role of general practitioner—but by the time a poor family arrives on the steps of a hospital, corrective measures are almost bound to cost a lot more than if a family doctor had been able to get treatment to them earlier.

Due to the mushrooming of medical knowledge and technology, the trend in our medical schools is to move into specialized fields. Today about 80 percent of the graduates from medical school go on to specialized training. Meanwhile, the percentage of medical personnel engaged in general practice has actually declined.

The Family Practice bill provides a comprehensive approach to developing a new specialty—family medicine. It will aid schools and hospitals in the training of family doctors. It goes further and encourages the training of paramedical personnel which will be of invaluable service in our rural, ghetto and remote areas. These medical people will be able to assist in spreading the use of preventive medicines and in getting people who need attention and the available medical services together. This bill goes on to establish a 12-man advisory council in the Department of HEW to assist in the administration of funds allocated in this law and in the furtherance of the practice of family medicine.

I submit to you that this is a sound bill, and a needed bill. I urge you to recommend it.

Mr. JARMAN. Thank you, Mr. Pickle.

Any questions? If not, then thank you again, sir.

Mr. PICKLE. Thank you, Mr. Chairman.

Mr. JARMAN. Next we will hear from the Honorable Sam M. Gibbons of Florida. It is a pleasure to welcome you to our subcommittee this morning, Mr. Gibbons.

STATEMENT OF HON. SAM M. GIBBONS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF FLORIDA

Mr. GIBBONS. Mr. Chairman, I am pleased to present a statement in support of legislation to amend the Public Health Service Act to encourage and promote the training of medical and paramedical personnel in the field of family medicine. I am the sponsor of H.R. 16320 to accomplish these objectives.

All of us are aware of a crisis in health care services in the United States. This awareness is reinforced each time we need medical help. Many of us have difficulties locating a doctor. Once we do we often must wait long hours in crowded waiting rooms.

This unpleasant situation exists, in part, because of a shortage of family physicians. The general practitioner we once knew is vanishing. In 1931, 84 percent of all those physicians in private practice were general practitioners. In 1960, 45 percent of all those physicians were general practitioners. In 1965, 37 percent were general practitioners, and in 1967 only 20 percent were.

The trend toward specialization accounts for these decreases. Only 2 percent of the medical graduates in 1967 became general practitioners. Between 1963 and 1967 the number of general practitioners declined by 6.2 percent.

As the family physician disappears so does the service he provided. He treated a great variety of ailments, he gave support during emergencies, and most important of all, he had a thorough and intimate knowledge of his patients.

Increasingly, his role is being filled by the pediatrician and the internist. However, his role is not being filled at all in rural and poverty areas. In New York City there are over 200 doctors for every 100,000 residents. In Mississippi there are 69 physicians for every 100,000 residents. The contrast is even more startling in the ghettoes and poverty areas of New York City, where there are only 10 physicians for every 100,000 residents.

In the past few years a new field—family practice—has emerged. A few American medical schools are beginning to offer courses in this area. However, much needs to be done. Such courses must be developed into a curriculum which becomes an integral part of the medical school. Medical schools and teaching hospitals must, furthermore, provide good models of comprehensive health care for their students.

As the Ad Hoc Committee on Education for Family Practice of the American Medical Association put it, the family physician "serves as the physician of first contact with the patient and provides a means of entry into the health care system. He evaluates the patient's total health needs, provides personal medical care in one or more fields of medicine, and refers the patient when indicated to approximate sources of care while preserving the continuity of his care. He assumes responsibility for the patient's comprehensive and continuous health care and acts as a leader or coordinator of the team that provides health services. He accepts responsibility for the patient's comprehensive and continuous health care and acts as a leader or coordinator of the team that provides health services. He accepts responsibility for the patient's total health care within the context of his environment, including the community and the family or comparable social unit."

The family physician in this context would treat most of the patient's illnesses and would provide much needed preventive care.

Several recent developments in the field of family practice have contributed to its advancement. Late in 1968, the American Medical Association's House of Delegates drafted and approved the essentials for graduate training programs in family practice. In 1969, the American Board of Family Practice was officially approved. The board plans to offer the first examination for certification of practice to eligible candidates early in 1970. A new residency review program for family practice has been established. Twenty-two residency programs in family practice have been approved by this new program so far.

To support and encourage such developments in the field of family practice, I am cosponsoring legislation which would authorize appropriations of $50 million for the fiscal year ending June 30, 1971; $75 million for the fiscal year ending June 30, 1972; and $100 million for the fiscal year ending June 30, 1973, and the next 2 fiscal years thereafter for the purpose of making grants to qualified medical schools and hospitals to create departments of family practice, family practice curriculum, and to provide professional and technical training for medical and paramedical personnel in the field of family medicine.

Thank you, Mr. Chairman.

Mr. JARMAN. Thank you, Mr. Gibbons, for sharing your views with us today.

Mr. GIBBONS. It has been my pleasure, Mr. Chairman.

Mr. JARMAN. The Honorable Spark M. Matsunaga of Hawaii, will be our next witness.

Come forward, Mr. Matsunaga, have a seat and you may proceed as you see fit.

STATEMENT OF HON. SPARK M. MATSUNAGA, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF HAWAII

Mr. MATSUNAGA. Mr. Chairman and members of the subcommittee, thank you for this opportunity to set out briefly my views on H.R. 15793, H.R. 16360 and other similar bills, which would encourage the practice of family medicine in America.

Family medicine may be a relatively new term for some of us, but it is merely a new way of describing a most familiar and friendly figure: the family doctor. In an area of critical medical personnel shortages, the family doctor, the general practitioner, has virtually disappeared from the face of the country.

The young man or woman who, 30 years ago, would have practiced what we now call family medicine in a small town, has moved to the city, taken intensive training in one specific area of medicine, and become a specialist.

The complexity of modern medicine practically dictated this increasing specialization. It has become increasingly difficult to keep abreast of new developments in any single field of medicine, let alone the entire spectrum of medical specialities.

But in the process of devising increasingly sophisticated remedies for increasingly sophisticated maladies, we have lost the family doctor. In 1931, three doctors of every four were general practitioners; the figure today is one in five. This is a distressing situation. The family

doctor provides the traditional point of entry into the health care delivery system in America. Not being able to find a family doctor with which to plan a preventive health strategy, most families receive health care on a crisis-to-crisis basis. The result: poorer health for the family, and a heavier strain on critically short health care resources.

It is to the correction of this situation that H.R. 16360 and the other bills are directed. The proposal is to make funds available for grants both to schools and to individuals, to promote the flow of more qualified doctors and paramedical personnel into the practice of family medicine. I will not burden the subcommittee by repeating the specific provisions of the various bills, but I believe that the scheme devised is a workable one.

Mr. Chairman and members of the subcommittee, we need more family physicians. They provide a means of entry into the health care system. They can evaluate the need for more specialized treatment. They can assume responsibility for the family's continuous and comprehensive health care needs.

It is my firm belief that the system of grants and loans established in these bills, if funded adequately, can substantially alleviate the critical shortage of general practitioners of medicine. I urge this distinguished subcommittee to approve this urgently needed legislation.

Thank you for your consideration.

Mr. JARMAN. Thank you, for a thoughtful statement, Mr. Matsunaga.

Mr. MATSUNAGA. Thank you, Mr. Chairman.

Mr. JARMAN. Our next witness this morning is Dr. Edward Kowalewski, president, American Academy of General Practice, Akron, Pa.

Doctor, you may want to correct the chair on pronunciation.

Dr. KOWALEWSKI. No; that is correct, Mr. Chairman. Kowalewski.

Mr. JARMAN. Kowalewski?

Dr. KOWALEWSKI. Yes.

STATEMENT OF DR. EDWARD KOWALEWSKI, PRESIDENT, AMERICAN ACADEMY OF GENERAL PRACTICE; ACCOMPANIED BY DR. NORMAN COULTER, MEMBER, BOARD OF DIRECTORS; AND MIKE MILLER, DIRECTOR, DEPARTMENT OF LEGISLATION AND PUBLIC POLICY

Dr. KOWALEWSKI. Mr. Chairman, as I came to this seat I had a kind of fear that I wouldn't be able to say the right words for the gravity of the situation that we face. I would urge that you consider my limitations and give the opportunity, if possible, for putting in the proper words for such a very important need which one man isn't able to face up to all the time.

I would also like to thank you for setting this session up. We just came from our annual Scientific Assembly meeting in San Francisco which we will be returning to, and I wish to tell you that the representatives from our 50 States came from their respective States with a mandate from their people for us to pursue the maintenance of their health care system. So we are not talking simply for ourselves. We are talking for the people of the country.

I am Dr. Edward J. Kowalewski, a practicing physician of 22 years experience, and 18 years of opportunity seeing all over this country its medical needs. I practice in Akron, Pa. I was a member of the Expert Review Panel of HEW, the Regional Medical Programs Review Committee, and a consultant to the U.S. Public Health Service as a member of the Family Health Care Service Committee. I am appearing here today as president of the American Academy of General Practice. Seated with me on my left is Dr. Norman Coulter, a family physician from Orlando, Fla., who is past president of the Orange County Medical Society and a member of the academy's board of directors, and Mr. Mike Miller, a member of our staff.

The academy is the Nation's second largest medical association, with a current membership of over 31,000 physicians residing in all 50 States, Washington, D.C., Puerto Rico, and the Virgin Islands. As academy president, it is with a great deal of pleasure that I appear before you today to testify in support of H.R. 15793 and its companion bill S. 3418. Although some minor amendments were made to S. 3418 prior to its recent pasage by the Senate, the American Academy of General Practice does not feel that these amendments alter the intent of the legislation.

Gentlemen, in recent years there has been a startling decline in the percentage of the total physician population which is engaged in the practice of family medicine. This has been widely noted and efforts have been made to correct it, but they have not reached their mark. Even the Health Professional Educational Assistance Act has failed. This is, in my opinion, a trend which must be reversed if we are to establish the best possible health care delivery system. The ultimate beneficiary of this reversal will not be the Federal Government or the American Academy of General Practice or the individual physician, but the Nation's people. In the year 1931, three out of every four physicians in the United States were general practitioners. That is to say, three out of every four doctors were engaged in providing health care primarily outside the hospital. The number of physicians engaged in limited specialty practice in 1931 comprised roughly 15 percent of the total physician population.

By the year 1949, the trend had become obvious. Only 50 percent of the total physician population was engaged in private practice as general practitioners. On the other hand the number engaged in private practice as specialists represented nearly 29 percent of the total physician population.

As of 1967, the most recent year for which figures are available, the general practitioner in private practice represented only 21.3 percent of the total physician population, or approximately one out of every five doctors as compared to three out of every four doctors in 1931.

If I may express these figures in different terms, in 1931, there were 1,097 people for every general practitioner in private practice and 5,551 people for every limited specialist in private practice. In 1967, there were 3,171 people for every general practitioner in private practice, and 1,564 people for every limited specialist in private practice.

I cite these figures not as proof of the need for more family physicians, but as proof of the emphasis on specialization. I think there are very valid reasons, which I shall presently discuss, why this emphasis is undesirable, and must be reversed.

I should state at this point, there are several reasons why there has been a de-emphasis on training family physicians. Advances in medical science have opened new medical horizons and made feasible the practice of medicine in many specialized areas. At the same time, medical schools have focused much of their attention on research aimed at new discovery and new horizons.

The medical school curriculum has been geared to accommodate research with the result that few, if any, of the medical school faculty have been general practitioners with a primary interest in training family doctors. It is only natural that faculty surgeons would tend to support programs which would improve the training of surgeons just as faculty internists would tend to support programs to improve the training of internists. Once the emphasis switched to research, the trend toward limited specialization became self-perpetuating.

Allow me to now suggest some of my reasons for previously stating that the de-emphasis of general practice is undesirable and must be corrected. Based upon past figures, it can be reasonably estimated that today only 15 percent of the medical school graduates will enter private practice as general practitioners. When this is viewed in the light of the fact that the family practitioner is capable of treating 85 percent of the illnesses which beset mankind, it becomes indeed alarming. Certainly no one would disagree with the statement that there is an immediate need to increase the number of physicians providing patient care. Can anyone possibly disagree with the statement that this need should first be met by increasing the number of physicians capable of providing 85 percent of care required?

The role of the family physician in the overall health care picture is more vital today than ever before. He can treat the vast majority of illnesses which confront him. In those instances when it is necessary to refer his patient, the family doctor assumes the role of team quarterback. From his vantage point, he can see the whole person as that person relates to his total environment. With the perspective, the family physician is in the best position to determine the patient's next step in the health care system.

In this vein, and basic to the system of residencies being considered under this bill, is the heir to classic general practice—the new broad-scale specialty of family practice. This new primary specialty became a fact in February 1969, when the council on medical education of the American Medical Association and the independent advisory board for medical specialties approved the creation of a certifying board in family practice. Where classic general practice was, like all of medicine, crisis oriented, family practice will emphasize keeping people healthy as well as providing comprehensive, continuing medical service. This is a subtle but highly important difference. It is the aim of preventive health care; the scientific application of the old adage about an "ounce of prevention." More than ever before, because they now will be taught, family doctors in this new specialty will treat the patient within the context of his environment—his family relationships,

his job, his economic situation—not only when he is sick but before he gets sick. He will be able to do this because family practice residency training will orient him in psychology, anthropology, family economics, and the interrelationship and availability of community services. This family doctor specialist truly will be a new doctor for a new day. And this, gentlemen, our students today desire.

This specialty board now has had its first examination and has certificated its first diplomates, some 1,600 of them. Almost all of these men are practicing family doctors—99 percent are members of the Academy of General Practice—and are the vanguard of this new kind of physician. The important ones, however, as St. John said, are those that will come. These will be trained in the residency training programs supported by this legislation. These doctors are the primary physicians of the future who will bring medical care back to the American people. The new specialty will give doctors-to-be the incentive to enter primary care in large numbers. The family practice residency system—supported by this legislation—will train them in how to render primary, preventive health care. And, gentlemen, we have as of this past year six applicants for each residency slot that is available.

Another reason I believe current de-emphasis on family practice must be corrected is the increased cost of health care. There are obvious reasons why the decrease in family doctors has contributed to increased costs and there are more subtle reasons.

Hospitalization costs have risen rapidly in recent years. This is, in some part, due to the law of supply and demand. With the unavailability of adequate numbers of physicians to treat patients outside the hospital, the only alternative is to admit the patient to the hospital where he can be properly cared for. This puts a premium on hospital space and increases costs.

Health care costs are further increased when, due to the lack of sufficient numbers of office based family practitioners, people's illnesses reach the point at which they must be treated in the hospital. I submit the proposition that if there were adequate supply of family physicians, where the people need them, many illnesses which would have eventually required hospitalization could be effectively treated in the office and, therefore, make hospitalization unnecessary.

The increasing number of malpractice suits, with a resulting increase in the cost of malpractice insurance, has been a major contributing factor in the increase in health care costs. The decline in the number of family physicians has had a subtle but very real impact in this area.

On November 20, 1969, the Subcommittee on Executive Reorganization of the Senate Committee on Government Operations issued a voluminous report entitled "Medical Malpractice: The Patient Versus the Physician." The report points out the fact that due to the depersonalization of medicine, individuals are much more likely to instigate malpractice suits in the present day than they were in the past. Page 9 of the report states:

". . . perhaps the most overlooked factor in the rise of these claims has been the slow but constant change in the organization of health care services. Care by the old family physician has generally diminished. Much of our care is now in the hands of superspecialists and supersurgeons whom we may see only once or twice in our lives and in whose hands we entrust our very lives."

And on page 6 of the subcommittee states:

> The breakdown in the physician-patient rapport results, in part, from the growing specialization in medicine. Doctors, whose specific professional interest is a certain medical problem that poses the scientific challenge they have been trained to deal with, may show—or appear to show—less concern for a patient's emotional needs than does the general practitioner or family physician.

Perhaps one of the most immediate reasons why steps must be taken to produce more family physicians is because many communities don't have a doctor or are faced with the possibility of not having a doctor shortly. Gentlemen, I can document for you that this story is repeated and repeated in every county in every State of this country. And you will be receiving shortly from the members of each of the States documentation of this. It is a fact of life that smaller communities cannot support a limited specialist, and they rely completely on family physicians. Since the demand for family doctors is greater than the supply, it follows that many communities are without adequate physician population.

This point is illustrated by figures published in the November 24, 1969, issue of the Journal of the American Medical Association. In 1968, the AMA's Physician Placement Service received 208 requests from family doctors seeking job opportunities, while, 1,060 opportunities were offered. In the same year, the Placement Service received 448 requests from surgeons seeking opportunities while 170 opportunities were offered only and 224 requests from obstetrician-gynecologists while 158 opportunities were available.

I would like to make one additional point before discussing the reasons I believe, and the American Academy of General Practice believes, that the legislation being considered by this committee is a necessary first step in increasing the number of physicians providing patient care as family physicians.

The American public has continued to rely heavily on the family physician and has made this reliance known by ever-increasing patient demands on the family physician. According to statistics published in the January 5, 1970, issue of Medical Economics, a survey conducted in June of 1969 indicated that general practitioners averaged 179 patient visits per week, whereas general surgeons averaged 116 patient visits per week, ob-gyn specialists averaged 122 visits per week and pediatricians averaged 155 visits per week.

Further proof of the public's demand for family doctors may be seen in recent actions taken by State legislatures in New York, New Jersey, Illinois, Kentucky, and North Carolina. In these five States laws have been enacted requiring State-supported medical schools to establish departments of family practice. This in itself can't be seen as the solution to the problem in view of the fact that funds still must be provided to establish and maintain these departments. This in itself can be viewed as a positive indication that the public is demanding and beginning to demand more and more that appropriate action by Government be taken to insure the training of additional family physicians. And I can assure you, gentlemen, that one of my greatest jobs this past year was to try to hold down legislation and give medical teaching institutions an opportunity to do this job themselves. I can assure you that we have spent a great deal of our time trying to hold down State legislation for the time being.

To this point, I have attempted to explain the situation as it exists and the reasons the present situation is undesirable. I would now like to make a few comments regarding the impact which the legislation under consideration will have on this undesirable situation.

It is imperative that funds be made available on a categorical basis for training family physcians. I have already spoken of the medical school trend toward research with a resulting emphasis on limited specialization which has become self-perpetuating. By simply increasing the amount of Federal funds available to medical schools, one has no reason to expect that medical schools will establish departments of family practice. Rather, the supposition would be that the medical schools would tend to strengthen those departments and programs already in existence. Further validity is added to this supposition when one realized that the country's medical schools are facing a financial crisis which makes it difficult to maintain currently existing programs much less establish new programs.

The categorical approach rather than block funding to financing has been responsible for the greatest advances in government supported medical endeavors. For example, psychiatry, the kidney area, heart, cancer, and stroke got no place until they got into categorical financing, because this provides a specific constituted body of responsibility with a specific charge.

If the supply of family doctors is going to be increased it must be done at the level of the medical school and teaching hospital. H.R. 15793 and S. 3418 provide the mechanism for insuring that more physicians will receive residency training in family practice at either the university medical center or the AMA approved teaching hospital, and also for insuring that more physicians will receive residency training in family practice at the undergraduate level. This exposure at the undergraduate level is vitally important if we are to expect medical students to enter the field of family medicine. I have stated that in the past, few if any, medical school faculty have had experience as general practitioners. Students tend to identify with their instructors. Consequently, it is understandable that the number entering family practice training programs after 4 years of medical school is very low. This legislation makes it possible for medical schools not only to provide residency training programs in family practice, but to set up departments of family practice with which medical students at the undergraduate level may identify.

And, Mr. Chairman, I have a statement here which I would like to read into the record which I think is very exemplary:

> A poll of the class of 1969 at the Harvard Medical School showed 3 percent of the freshmen wanting to be general practitioners. The class of 1973 expressed 22 percent in the area. In terms of financial aid, the percentage of funds available to support this interest is miniscule.

It must be increased as an expression of public concern, and we feel that emphasis should be on the creation of priorities in medical education based on the public need.

Through exposure to these departments during the first 4 years of medical school, it can reasonably be predicted that increased numbers of students will enter hospital or medical school residency programs in family practice.

Some questions have arisen as to whether the departments of family practice which would be established by this legislation should be separate from and equal to the other medical school departments. Those of us in the general practice area have gone down the blind alley of trying to produce family doctors in a nonspecialty department and it simply doesn't work, gentlemen. Family practice must be given the same prestige as the other medical disciplines if we are to expect young men and women to become family physicians, not only on the same quality basis but on an even higher quality basis. Dr. Francis Land, the director of the division of family practice at the University of Nebraska School of Medicine, stated:

> I feel that in order for the family practice program to be viable in a medical school, it is absolutely essential that there be a separate entity of equal standing in family practice with the chairman or director reporting directly to the dean. I state this because only in this fashion can the director of the program become a member of the executive faculty and engage in decisionmaking concerning the entire medical school curriculum, including both undergraduate or graduate. This to me is a very essential element in the development of this movement to provide more clinicians, primarily physicians, for this Nation.

We wholeheartedly agree with Dr. Land, and we could duplicate this statement by many other medical educators many, many times over.

The legislation which you are considering here today provides for the training of paramedical personnel in family medicine. This is desirable in that there is a definite need for paramedical personnel trained specifically to assist family physicians. For the same reasons that departments of family practice must be established through categorical grants, the training of paramedical personnel must be done through categorical grants. And Congressman Rogers, you are so correct that we must extend the arm of the practicing physician, give him help, but this training must come along at the same time that the student is receiving his education in medical school so that they can in effect come out as a team, and at the same time we are providing programs in the academy to teach the physician who has been out of medical school for some time how to better utilize physician assistants to extend their effectiveness.

I would now like to touch upon the amount of funds which would be authorized by these bills. I should preface my remarks with the statement that the figures which I will be using are estimates which are subject to many variables in different situations.

Based upon an approximate cost of $300,000 for establishing a department of family practice in a medical school or teaching hospital, 40 medical schools and 130 hospitals could establish programs during the first year for which funds are authorized. This would cost $51 million.

The cost of maintaining these programs would drop to $250,000 after the first year. Although construction costs will not exist after the first year, additional residents would be added to the programs, thereby making the net decrease in funds only $50,000. To maintain the original 170 programs during the second year would cost $42½ million; 20 new medical school programs and 80 new hospital programs could be added the third year at a cost of $30 million. Total costs for the second year would be $72½ million.

During the third year, it would cost $67½ million to maintain the 270 existing programs; 15 new medical school programs and 90 new hospital programs could be added the third year at a cost of $31½ million. Total cost for the year would be $99 million.

During the fourth year, it would cost $93¾ million to maintain the 375 programs in existence; 10 new medical school programs and 10 new hospital programs could be added at a total cost of $6 million. Total expenditures for the year would be $99¾ million.

During the fifth year, it would cost $98¾ million to maintain the 310 hospital programs and 85 medical school programs in operation. It is not anticipated that there would be any necessity for establishing new programs during the fifth year.

Based upon a family practice residency program with four residents, 680 physicians will have received residency training after 3 years; an additional 1,080 will have received their training after 4 years; an additional 1,500 after the fifth year; and, an additional 1,580 after the sixth year. Since no new residency programs were added during the fifth year, the figure of 1,580 per year would remain constant after the sixth year.

Six years after the funds authorized by S. 3418 have been made available, 4,840 physicians will have graduated from family practice residences; 310 hospital residency programs and 85 medical school programs will be producing 1,580 family practice residents per year. This is not an overabundant number of programs which you consider, for example, the fact that there are 416 residency programs in international medicine and 393 residency programs in general surgery.

I would like to reemphasize my earlier statement that the figures of $300,000 for starting a program and $250,000 for maintaining a program are estimates, subject to several variables. In arriving at these figures, no amounts were alloted to planning grants or for the training of personnel to head departments of family practice.

I should further point out that after 3 years, hospital residency programs will generate income of their own which may reduce the amount of outside funding necessary. It is hoped, however, that after 3 years, the hospital residency programs will be expanded to graduate more than four residents per year. If this happens, much of the self-generated income will be used to expand the hospital programs.

This is not an overabundant program, when you consider, for example, the fact that there are 416 residency programs in internal medicine, and 393 residency programs in general surgery.

I have attempted today to give you gentlemen some idea of the feelings of the American Academy of General Practice regarding the future of family practice in this country. I firmly believe that the enactment of this legislation will prove invaluable in providing additional doctors whose primary function is the care of people.

Thank you for giving me the time to appear here in behalf of the academy. If you have any questions, Dr. Coulter and I will be happy to answer them.

Mr. Chairman, just one last thing. In the testimony in the Senate, there was asked for a listing of medical schools with departments of family practice or divisions of family practice. Having just seen this and recognizing that many of those listed here might give the impression that there is an overabundance of these departments, I can assure you that many of these are simply token or paper departments.

Thank you, Mr. Chairman.

Mr. JARMAN. Thank you, Dr. Kowalewski, for an excellent and comprehensive statement on this subject.

What do you think the attitude will be of schools of medicine in the country in terms of setting up a separate department for the teaching of family medicine?

Dr. KOWALEWSKI. I can say, sir, that you show deep understanding in this because this is very important, the attitude that they would take, we have at the present time many medical schools which want to get into this area, who have the interest and the personnel and the conviction to do it. But financially they can't do it.

Now, it is a little bit easier in a medical school that is a brandnew one, just being established. Somehow this can work in. But for the one that is already established it is a problem.

I can assure you also that there are those individuals in medical schools willing to support this on the teaching level.

It has been gratifying to us to see the increasing numbers of qualified people appear who want to, who believe in this concept and are willing to teach. So that I really believe, and we can demonstrate and document this, that the schools are definitely interested.

The problem always exists, sir, however, we find that if there is understanding of the concept involved, the problem can be resolved. Only in those areas where people do not take the time to understand, do problems occur.

Mr. JARMAN. I certainly think the figures you quote, the percentage figures at the Harvard Medical School are of real interest. Did you say 3 percent in one class and 23——

Dr. KOWALEWSKI. Twenty-two in the next class.

Mr. JARMAN (continuing). In the next class?

Dr. KOWALEWSKI. And in addition to that, sir, I think that the most convincing proof of all of this is, I have had the opportunity and you will hear testimony tomorrow from the Student American Medical Association that indeed the only reason why our accomplishments have become a reality is because the student in increasing numbers has been there on the medical school level to demonstrate his interest. All the attempts that we have tried to make to change medical school curricula, to make curricula meaningful in medical schools has not, did not come about until the student came and made the changes. The student is reflecting and trying to adapt himself to the needs of people, and he is doing it in the medical school, and I take my hat off to him.

Mr. JARMAN. Thank you.

Mr. Nelsen.

Mr. NELSEN. Thank you Doctor for your appearance. A couple of things have come to my attention. In rural communities we have many, many small hospitals supported enthusiastically by little towns, and which are now operating under standards that do not seem to meet the new hospital standards that are evolving. Little by little it is tougher and tougher for these small hospitals to survive. As a result the doctors go to other hospitals and pretty soon these small town facilities have little left.

Do you see any merit to trying to work out a system where some of these smaller hospitals meeting limited standards can serve as a place

where somebody with a broken arm or some little ailment can go for help when it is needed. Doctor, do you see any merit to a little change of policy in this direction?

Now, this may not be true in your State. It may be true in some States and in other States it is not.

Dr. KOWALEWSKI. I am aware, sir, and this is especially important, because if you take away in this country that small hospital that you are talking about and add up the numbers of people that they take care of—let us say that for some reason they would be closed then—we are in deep trouble, because they take care of more people per day than all of our large institutions put together. I think manpower is a problem in this area, especially primary physician manpower.

Mr. NELSEN. Yes.

Dr. KOWALEWSKI. If we are able as one portion of it to supply the physicians in that community that are needed, this small hospital is needed, and it will stay and it will be supported.

Now, we insist that the training of our new family physicians provide them with the competency in taking care of outpatients as well as inpatients. And the greatest support to what you are saying, the need of it is this, that many patients will accept treatment in their own locality, but if you say to him, "John, I want you to go 200 miles to New York" or some other big city, they say, "Forget it, Doctor. I will stay here." And this, gentlemen, to me is very important. Anybody who practices sees this daily.

Mr. NELSEN. Of course another point, we hear so much talk about is survival of the rural communities and the need of decentralizing our larger population centers to bring them to rural areas. Of course anything we can do to keep the rural doctor and to keep the rural hospital, helps make it possible to keep the rural communities.

Now, one of our former members, Mrs. Bolton, was a very enthusiastic supporter of trying to secure good nurses who can do some of the chores, as we say on the farm. Have you any views on this? Do you see some merit and need in this area?

I also understand that in the dental profession the doctor is now thinking of having an aide that can do some of the little things which would increase his production.

Dr. KOWALEWSKI. Yes. We are very much concerned and very much involved in this, and I would start to answer your question by saying this, that the first medical professional who sees the patient, the first one, should be the most highly qualified person that we can put in that area, because his early direction will determine the rapidity of the care of that patient, the final cost, and the quality of his care.

Now, supporting this highly qualified man, in all the communities where the people are, we should have an extension of his arm by specially trained physician assistants and by all of these people that you talk about.

Now, in family practice the needs are so different that we are going to provide special training for those who will be family practice assistants. Being a family practice assistant requires special abilities, because the concerns so frequently that come to the family doctor are not only clinical concerns, but we are the people who have to direct the person as to how he handles many economic and social problems

also, as for example Medicare. And believe you me, a great deal of our time is spent in this area. And please, gentlemen, simplify it somehow.

Therefore this man must be trained not only in the clinical areas but also shall we say in the daily economic areas.

Mr. NELSEN. Another question.

In Minnesota our medical school is a large one, and a large percentage of our graduates will leave our State to go to other States that have no medical school. The dollar burden to our State has become very extensive, and to expand the production would require still more dollars which we find difficult to supply. And I have often wondered when youngsters that come in from other States—say they come in from the Dakotas to Minnesota—Why that State shouldn't make some contribution to the cost of producing the doctors that go back to their State to practice. Maybe by some equalization we could make it possible for us in Minnesota to do still a better job. I also see the justification of Federal aid to a medical school because of the fact so many of them are supplying doctors for other States. The present situation creates a real tax problem in our State.

Dr. KOWALEWSKI. It is very important, and, sir, we have made a study of this, and I would like to share this with you, that if the medical schools in the State are geared to answer the medical needs of that State and if there is sufficiency of residencies in that State prepared to answer the direct medical needs, the specific medical care needs of that State, at least 60 percent of the people will stay in that State. If they do not answer the particular needs of that State, they will leave. And we must take some examples from Canada. For example, in Dalhousie Medical School this past year, 72 percent of their graduates this past year went into family medicine, and 72 percent of them stayed in the Province. And why? Because they take care of the education, undergraduate, and postgraduate education which fulfills the needs of the community.

More specifically, in reference to the financing part of it, all of us, you gentlemen in Congress and we in organized medicine are concerned and we are working to try to solve this problem, but I have come to the realization that we are only going to get as far as the people of this country put a priority on health care. If the people do not provide the means and continue to put other things ahead of medicine, then only to that degree will we be able to provide care. This is a fact that the public must be made aware of.

Mr. NELSEN. I might mention that the Mayo Clinic at Rochester recently contacted both me and this committee, and stated that they are considering a medical school there that as a part of their total package. And, of course, they have tremendous expertise. They have great doctors, and this would be quite a contribution to our productive capacity as far as doctors are concerned.

And I am glad to see the awakening of need of the family practice doctor, because this, of course, is something I think we need in rural America. We need a little more attention to this problem. And so many of the young doctors who become specialists are lost to our rural communities.

Thank you, Mr. Chairman.

Mr. ROGERS. Dr. Kowalewski, your statement was excellent pointing up the problems that we find in the delivery of health care in this country. I am delighted to see a good Floridian with you, Dr. Coulter, as well as Mr. Miller, who is not from Florida I presume. But I would be interested if you could just point out maybe the situation in Florida, Dr. Coulter.

Dr. COULTER. Thank you, sir. Mr. Chairman, members of the subcommittee, I am from Orlando, Fla., which has a population of approximately 100,000 people, and if we consider those who live between Orlando and the Cape and Patrick Air Force Base and so on, I am sure it quite exceeds perhaps 125,000 to 150,000 people.

I regard these as urban people. I am connected with an 800-bed hospital in Orlando, where we have many excellent specialists, many excellent subspecialists, and they do a fine job and we appreciate their presence. We use them. We depend upon them greatly. Nevertheless, in my office and in the office of my colleagues who are in family practice in Orlando, we get daily requests from patients for family physicians. They call and say to me or to my nurse or to my secretary, we have called six doctors, and these six doctors have said something like this: What you tell us is not in my field; what you tell us is not in my age group, and so on and so forth. Can't you give us, please, somebody who can take care of me and the rest of my family.

And this is what we are up against in the urban areas as well as in the rural areas. This to us is a tremendous problem. And we hope some way can be found to increase the number of family physicians not only for the rural areas but for the urban as well.

Mr. ROGERS. Thank you.

Actually, what you are telling us is that this has become the age of the specialist and that what we must do is make a specialty out of general practice; isn't that it?

Dr. KOWALEWSKI. That is right.

Mr. ROGERS. You now want to make a specialty here.

Dr. KOWALEWSKI. Yes, we have as a matter of fact, accomplished this step.

Mr. ROGERS. So that we can attract people to this specialty, just as they are attracted to specialties in other areas.

Dr. KOWALEWSKI. That is the point, Mr. Rogers. To us as established practitioners, specialty is not important, but to the young man it is. However, I don't wish to leave the idea that that is shallow——

Mr. ROGERS. No; I understand.

Dr. KOWALEWSKI (continuing). Because accompanying this is the fact—let me put it this way. When we graduated from medical school, the old idea of medical schools then was to produce an undifferentiated physician, and by God we were undifferentiated. We were ready for nothing. It took us 15 to 20 years to learn the techniques of being a family practitioner. This is how the general practitioner will differ from the family physician of the future, because built into his medical school training and built into his residency are the special things that he needs to know. For example, today a family physician, his ink isn't dry on his sign outside than a member of the community comes to him and says, Doctor, we are having a drug problem. Could you help us do something about it?

What we are doing for our family practice oriented medical students now is to not only teach them the pharmacology of the drugs and the scientific portion of the drugs, but we are teaching him how to mount a program in his community to do something about it. And we will take this approach not only to drugs, but sex, pollution, the problems of a community, and so forth. And this is the difference between a general practitioner of longstanding and the new family physician. When you get right down to it we used to use a lot of times the term "experience," but we have learned how to break that down. The physician has learned, how to react with the community and react with people, was what we meant when we said an experienced physician.

Mr. ROGERS. Well, and I think, too, now we are beginning to see that our system of basically curative medicine must be modified and we must start preventive medicine.

Dr. KOWALEWSKI. That is right.

Mr. ROGERS. And this, of course, now will emphasize the general practitioner, whereas curative medicine emphasized the specialist.

Dr. KOWALEWSKI. Yes.

Mr. ROGERS. So I would think that as prevention is now coming to the fore, that is one reason you are having young men in Harvard who want to get into this. They want something to prevent it. This is why group practice is becoming a fad, in being, and because of medical costs going up. So all of these factors, I think, are coming to your way of thinking of a general practitioner to begin to keep people out of the hospital to keep them from being sick; isn't that correct?

Dr. KOWALEWSKI. You are a hundred percent correct, sir. The very important thing that we must provide is the opportunity for all people of this country to be able to identify with a family physician, to have the opportunity to ask that early question, Doctor, do I have a problem or don't I? Now, that very fact of being able to identify with a physician is extremely important.

Mr. ROGERS. Yes.

Dr. KOWALEWSKI. We have to make the physician available, and we have to give that opportunity to each and every person, everywhere. And we are not in favor of a clinic opening at 9 o'clock and closing at 3 o'clock, for 6 days a week. We feel that the system we want to accomplish here will serve the ghetto, will serve the urban and will serve the rural area.

Mr. ROGERS (presiding). Yes. Now, I presume, too, that as we move into this general practice, as you say, you will need the paramedical personnel. I presume people will if they have eye trouble go to the specialist right off, a lot of them, rather than coming to a general practitioner. But overall care and establishing this rapport with a physician would be the advisable thing for a family to do, and I can understand that. I do think we need something to be done.

Now, I would think—you have established your board specialty since what, 1969, only a year?

Dr. KOWALEWSKI. Yes, February 1969.

Mr. ROGERS. Now, this will probably have as much to do with medical schools beginning to set up departments, will it not——

Dr. KOWALEWSKI. Yes.

Mr. ROGERS (continuing). As any action we could take, I would think.

Dr. KOWALEWSKI. Yes.

Mr. ROGERS. So, of course, it is premature to see that reaction, but I am sure that will be a great driving force for the medical schools now to respond to the medical profession setting up a board specialty in this area. So with that and perhaps some added funds—I think that is probably even more significant than this legislation, but perhaps with some added funds here and some emphasis this can be done, because I think anyone who looks at the problems today knows we must have more general practitioners, family practice. And I am sure this committee is very much aware of it.

Dr. Carter.

Mr. CARTER. At the present time I believe that most of the medical schools in the United States, or all of them get at least 50 percent of their costs from the Federal Government. Most of these grants are made from institutes of health for research, is that true?

Dr. KOWALEWSKI. Yes, sir.

Mr. CARTER. You would like to see some of those funds earmarked for family practice, is that true?

Dr. KOWALEWSKI. Yes, sir; that is correct.

Mr. CARTER. Yes. Of course a general practitioner must have training in different fields, many basic fields, as I see it. To become a member of the American Board of General Practice, how many years as an intern and as a resident would be required?

Dr. KOWALEWSKI. In this change, in this interval change, the individual has to have 1 year of internship and several combinations of residencies totaling 3 years plus so many years of active practice, plus so many years of hours credit of post graduate education. About 1978, if I recall correctly, the only way they will be able to qualify for the American Board of Family Practice is that they must have the 3 years of prerequisite special residency training in family practice, but you must recognize that at present we are in an adjustment period.

Mr. CARTER. I certainly think that this——

Dr. KOWALEWSKI. And pass examination. I forgot that. Yes.

Mr. CARTER (continuing). Is a very good program. Of course, they must have a wide base in internal medicine, basic surgery, noncomplicated, and obstetrics, and gynecology; do you agree?

Dr. KOWALEWSKI. Yes, sir.

Mr. CARTER. And also psychiatry.

Dr. KOWALEWSKI. Yes, sir. If there is one thing I have learned, and I would like to share with you, and all of you gentlemen have experienced this, this is a big country with different geography, with different people and different medical needs. We have geared our whole program to be understanding and flexible to this fact. If the medical needs of one community are such, there is hopefully sufficient permissiveness in that area to shape the program to suit that need.

For example, gentlemen, in many parts of this country if the qualified physician was not doing surgery, there wouldn't be anybody to do it. On the other hand, there may be another part of this country where he doesn't have to have that but he darn well better have more background in psychiatry. So this program is geared to respond to the peculiar needs of each and every part of this country.

Mr. CARTER. And in many cases physicians or general practitioners are forced into fields they don't want to be in because of the nature of their surroundings, is that not true?

Dr. KOWALEWSKI. This is true. This is extremely true, and again you as responsible legislators and we in organized medicine, have to have the community recognize that today each young medical family looking for a place to set up practice looks for one primary thing, and that is, is this a community where I can raise my family the way I always wanted to? So communities must recognize that they have things to do to make this community attracive to the young medical family.

Mr. CARTER. Since the field of the general practitioner is so great, he must be well grounded in many different—well, in medicine, surgery, and obstetrics, psychiatry, as you have indicated in this case. Now, about our community hospitals throughout the country. Do they serve a good purpose?

Dr. KOWALEWSKI. I would reiterate what I said a little bit earlier. Without the community hospital, our medical care system in this country would fall apart.

Mr. CARTER. Well, I certainly agree. There is a tendency now toward establishment of regional hospitals. Do you agree with that trend?

Dr. KOWALEWSKI. I would say, sir, that this will end up in a manner something like this, that in some few areas the regional concept will work. In other areas, which in my opinion will be the majority, it simply will not because of the different habits that people have. There is one fact that we have got to remember. All of us really want to do this. If we want care for our own immediate family or for ourselves, we want it pretty much nearby, and we equate the same way with all other people, also. I believe we have got to recognize that we have got to go where the people are and serve them where they are and not make the people go at an inconvenience to an institution a great distance away.

We have many experiences where people will not go to an institution far away for a simple call. I point out to you that it is a day out of work. I point out to you that it is the cost of a babysitter. So I think we must decentralize in medicine and provide medical care where the people are, with an adequate number of primary physicians, with an adequate number of community hospitals, but that the small community hospital should have a place to refer the specialty problems.

Mr. CARTER. In such hospitals you would think that women could go and have their babies, and noncomplicated surgery, or in case they had a board surgeon around he could assist them with more complicated surgery, and ordinary illnesses could be treated there.

Dr. KOWALEWSKI. Yes.

Mr. CARTER. This is a good service to a community. Some of us—I would rather not—I am not one of the group, but some people envision regional hospitals replacing the community hospitals. You are not in agreement with that?

Dr. KOWALEWSKI. I am not in agreement. I think I am a realist. I think I am out where these things are happening, and it will never happen.

Mr. CARTER. Yes, sir. Isn't it true that there are general practitioners and others in community hospitals who have established lines of communication and referral to State universities and to medical centers throughout our country?

Dr. KOWALEWSKI. Yes.

Mr. CARTER. Really do we have the manpower necessary to establish a great number of regional centers?

Dr. KOWALEWSKI. No, sir.

Mr. CARTER. Actually, would it be possible to build regional centers, say, for each five-county area in the United States or some such area?

Dr. KOWALEWSKI. That is a big question, and I shouldn't say no, it isn't possible. I think in some areas this might be possible and might function.

Mr. CARTER. Yes, sir.

Dr. KOWALEWSKI. But I think in the greatest majority it would not work.

Mr. CARTER. We have established already our centers of referral pretty well. Of course, in some cases some regional areas might well be established with the specialists who are necessarily there.

I have enjoyed your statement. I think you have covered the subject quite well, and certainly I want to, I am a cosponsor of this bill and will support it. I want to see the opportunities for the general practitioner to improve and I want to see the possibilities for continuing education to these men to improve so that they can reach the level of accreditation which you mentioned.

By the way, facetiously it has been said that the general practitioner is one who knows less and less about more and more until finally he knows nothing about everything. On the other hand, someone said a specialist is one who knows more and more about less and less until finally he knows everything about nothing.

Dr. KOWALEWSKI. Thank you.

Mr. CARTER. Thank you, Mr. Chairman.

Dr. KOWALEWSKI. And to that, Mr. Carter, I think I can have some supportive information pertaining to what you have just said about this business of one physician cannot know it all, and I can document some of these factors here where we have attacked that program and can do something about it. I would like to introduce that to the testimony.

(The following speech entitled, "Your Medical Destiny—Does It Relate to the Needs of the People?" was received for the record with a request for special notice to the last seven paragraphs.)

YOUR MEDICAL DESTINY—DOES IT RELATE TO THE NEEDS OF THE PEOPLE?

By Edward J. Kowalewski, M.D., President, the American Academy of General Practice, Before the Student Body of George Washington University School of Medicine, September 14, 1970

Dr. Parks, honored guests, distinguished teachers, future physicians, ladies and gentlemen:

It is with a great deal of humility that I address you today. I consider it the highest honor possible to return to George Washington University Medical School whose teachers and philosophy added so much to the directions of my efforts on behalf of medicine. It is my sincere wish that each of you students will experience, as I have, the deep feeling of satisfaction of service which started here in these halls and was nurtured and guided by many of the teachers who sit about you here today.

I hope you will find that to be a physician is an honored destiny, a destiny of fulfillment of our Maker's compassion, and that you as individual physicians, or hopefully, as leaders of physicians, will realize that you have a responsibility that can only be measured in terms of the ultimate success of our culture and the civilizations which will follow it. I am convinced that your vital contribution to the health of this Nation, will ultimately determine, to a great degree, the moral and social direction of this country.

Since I left these halls, much good fortune in experience has come my way. I have experienced practicing family medicine as a solo practitioner, and then organized one of the first group family practices, and became involved with preventive health measures outside of what used to be considered the physician's proper role.

I have become involved in organized medicine because of my deep conviction that to meet the growing medical needs of our people, changes had to be brought about. I have had the opportunity in the past twenty years to see medical needs and medical practice in all parts of this country, from the rural to the big city, to the ghetto, to the suburban, to the Indian and the Eskimo villages. I have been closely involved with medical students, their leaders and their problems. I have had the opportunity to visit and to appreciate the problems of the medical schools and the medical educator. At the same time, I have been in the position to hear directly from the people as to their medical needs, had the opportunity to see first hand the needs and concerns of the practicing physician, and had the opportunity to see the at-first gradual and now mounting medical wishes of the people being translated into governmental concern and legislation. I have had the opportunity to consult and advise in many governmental medical programs; to see the changes in regards to financial support for medical education; to see medical change from an unbalanced approach of rigid cold science to its more balanced state of medicine as a service. And finally, I have had the opportunity to participate in the establishment of primary medicine as a new, much needed, equal science and specialty with equal educational opportunities. It was these experiences that have given me a balanced view of the medical needs of this country and which have motivated whatever effort I have made on behalf of their resolution.

I didn't come here just to reminisce, though. But reminiscing does give one perspective on how things have changed, everything. Washington certainly is different from 25 years ago. Medicine is different, too. We were only on the threshold of the "miracle age" of medicine then. Penicillin and antibiotic therapy were brand new. Most of the drugs used today weren't even discovered yet. We didn't know nearly as much about heart disease, cancer, renal disease, etc. Organ transplants were Buck Rogers stuff then. So was ecology and environmental health. So were the health expectations of the American public. In this light, then, people have changed too. They are sharper, more attuned to the uses of power, less docile, more demanding, more expectant of fulfillment of "the good life" than ever before in the history of the world. Tradition everywhere is embattled, cornered, up against the wall, and traditional medicine is no exception.

That brings me to the subject of my talk here today *"Your medical destiny—does it relate to the needs of the people?"* I want to discuss what I believe your medical destiny, and mine, to be. I want to talk about *what's in it for you*, because your first consideration has got to be *you and yours*. I want to talk about *what's in it for the people*, because you have an obligation to them. And, I want to discuss *what's in it for medicine*, because the profession is the repository of the art and science of healing without which there can be nothing in it for anyone.

Beyond these things, I wish to discuss, in terms of your medical destiny, the role of organized medicine (the functional body that has the power to make things happen) in curing its ills; the role of medical education (that part of organized medicine concerned with reproduction of the species) and, lastly, I want to talk about what I believe you can do to match up your medical destiny with the needs of the people.

Let's analyze the question. First, we must define what I believe your medical destiny to be.

I believe you will be the generation of doctors who will lead a renaissance in American medicine, who will re-establish medicine as a social institution, sensitive to the needs of the people it serves, instead of a sterile, more and more fragmented technology.

I believe you will be the first group to begin generally re-orienting medical practice away from crisis care and toward health maintenance, and that you'll not only re-educate the profession, but the public in this direction.

I believe yours will be the first medical generation to emphasize primary care as the basic element in medicine and, in doing so, you will begin to re-balance the ratio between primary physicians and consultants.

I believe you will see a complete revamping of our health care delivery structure, to incorporate systems that will re-emphasize the validity of private practice.

Finally, I believe you will see a decline in relative health-care costs as the shift in the primary—to consulting-physician-ratio begins to take hold, as new systems begin to function, and as ambulatory care regains pre-eminence over institutionally-based care.

It also is your destiny, as it is mine, to suffer the uncertainties, insecurities, anxieties and true injuries resulting from the lag between a revolving culture and an evolving profession, for I believe there is a true revolution afoot in our nation today, a revolution just slightly less than violent in attitudes, mores, the things of the spirit. I am intensely hopeful that a more beautiful butterfly will emerge from our national cocoon, but in the meantime, as the popular songs says, it's "hang on Snoopy, hang on'."

Dire or near-dire predictions serve a purpose, but only up to a point. There has to be a payoff, too. There has to be something more than Osler had in mind with this aphorism: "as perplexity of soul will be your lot and portion, accept the situation with a good grace." *What is in it for you, in realistic terms?*

First, as always, a very good living, with the income *and the time* to pursue the re-creational things of the body, the mind and the spirit. The large incomes of the last decades probably will even out somewhat but I'm sure that's bad; high demand will dictate plenty for each doctor and, because there will be a more equitable distribution of physicians, none will be worked to death.

At the same time, the re-emergence of medicine as a social institution will begin to restore its *"heart"* in the eyes of the public and, along with greater availability of medical service, help relieve the pressure from the governmental sector. The emergence of the philosophy and the attitude of health maintenance, on the part of the profession as well as the public, will bring a new excitement to medicine, a new challenge that will give a broader base to health in America and contribute to lowered health care costs. This, of course, implies new systems of delivery, including health teams, new modes of prepayment, new attitudes on the part of insurance carriers, and dozens of other ideas only just beginning to form now—but it's the thrust of the immediate future.

I think it's implicit in this discussion that the blessings of medicine ahead for you as practitioners also will be more abundant for the American public. Demand for service will be better satisfied than ever before, greater numbers of primary doctors, and greater emphasis on preventive and ambulatory care, will reduce the cost of sickness, which will be more readily and more broadly covered by insurance carriers.

Medicine will tend to leave the hospital medical center and return to where the people are. There will be a need, under certain circumstances, for doctors' offices' to be situated in medical center complexes. However, the emphasis even then, will be on the office, not on the hospital's emergency room, which has unfortunately by default and dire necessity, become the impersonal, cold, inefficient "family doctor" to many. In addition to benefiting doctors and the public, I believe it's obvious how medicine as a profession will benefit from this evolutionary process. It will again become the humane, concerned profession.

We've talked at some length about the rewards of an emerging new posture in American medicine, its destiny and yours and mine. Part and parcel of this, of course, is that the health-care structure has to be made more sensitive to the needs of the public it serves. I have already implied the means to this end but I believe they should be stated clearly and amplified.

No. 1—*Relieve the doctor shortage.* All possible ways must be sought and, when found, pursued to increase the gross number of qualified *practicing* physicians in this country. This is such a pervasive need that it requires all possible talent, application and haste, as well as the attention of organized medicine, medical education and government. The public has the pressure on. The government is applying pressure in response to the demands of the public. Organized medicine has taken some important steps aimed at increasing production. Now the burden is on medical education, which is where the chain reaction has to end, and begin. I'm pleased with the thing medical education is doing in this direction but I honestly believe *the problem is more fundamental than it's been treated so far.* Solution, or an approach to solution—the right track, will come only with a complete rethink of the nature of medicine's and medical education's role in society.

No. 2—The other side of the doctor-shortage coin is the artificial imbalance in the ratios of primary-care physicians and consultants, and city-based doctors and those who serve the rest of the nation. *These imbalances have to be rectified on the basis of the needs of all the people, not just the affluent classes, and defi-*

nitely not solely on the wishes of physicians and individuals. Now I don't mean here that I'm advocating totalitarian manipulation. I mean that the requirements for medical service must be allowed to be the primary governor of the type of doctor produced and place he will practice. Of course, one tends to take care of the other to an important degree when supply and demand is allowed to function. The "new" generation, with its concern for people and its distaste for hypocrisy, will help the new medical professional to serve the rural as well as the urban ghetto in a more effective way than government programs ever could, though new forms of Federal assistance to the individual physician will continue to be an important factor. At the same time, the community will have to recognize its responsibility to institute the means and corrective measures required to attract and maintain, on a continuing basis, those adequately trained physicians and ancillary medical personnel who are motivated and dedicated to provide medical services in such areas. Broadly speaking, each community must answer that first question in the minds of each young physician and his wife—that is, *"is this a community in which we can raise our family the way we want to?"* I can assure you that many communities have been bypassed by the young physician because they could not fulfill this need. Unless this need is promptly recognized by all communities, no amounts of money and no new drawing board fancy programs or systems will ever succeed.

No. 3—Hand in glove with redistribution physicians by type and by place of function must go a heightened spirit of cooperation, not just in a practical sense but also philosophically, between primary doctors, consultants and research physicians. To some degree, this will come with increased respect for the new generalist as a qualified specialist in his own right. However, there will need to be a more finely drawn distinction among the roles of the three spheres of medical activity, a distinction which I personally believe will be the primary divisions of medicine in the future, as opposed to the narrow specialty fragmentation of the present and near past.

No. 4—More and more research effort, and I don't mean R & D (research and development), but basic investigative activity, must be focused on delivery of health service, the great medical challenge of the 70's. This must be based primarily in the centers of learning and in organized medicine, with the ear of the insurance industry readily available, rather than in government or in such special-interest areas as labor unions. The latter can contribute but cannot be expected to make determinations that are sound, either medically or fiscally, or impartial. True research needs to be carried forward at full speed in the areas of health teams to serve disadvantaged urban and rural areas, prepayment programs, medical communications, computer diagnosis, multiphasic screening and related methods, regional planning, and a host of other systems and sub-systems.

No. 5—I have already stated that public and professional attitudes have to change in many aspects of medical activity. Primary among these is preventive or pre-emptive health care and the payment for it. Traditionally, though cognizant of the adage "an ounce of prevention is worth a pound of cure," people have been reluctant to seek health services when they felt good. By the same token, the physician, sensitive to this attitude, has not actively advocated preventive measures, except in certain narrowly-defined areas. Not many physicians have set up fee systems for preventive maintenance, although some third-party groups have with varying success. Nor has there been much action in this area from the blues or other traditional carriers. But if health care is going to be worthy of being considered a right, its got to be comprehensive, and comprehensive means preventive as well as episodic. The carriers exist ultimately to serve the people. Over time, they will be allowed to exist only to the extent that, and so long as, they serve the needs of the people. The new challenge in health care is comprehensive, continuing, preventive, the maintenance of health rather than, solely, the treatment of disease. Properly packaged, the people will accept it, and pay for it, and will bless the medical profession for bringing it about.

As I noted earlier, medical schools bear the primary burden for correcting the doctor shortage, just as GM and Ford and Chrysler would bear the burden if we had a motor car shortage in this country.

The answer to our health care crisis is: *more well qualified high quality physicians*, with assistants that can extend their effectiveness, and not mass produced second rate physician substitutes for the underprivileged. One high class medical care for all must be our goal. There must be no compromise on this standard.

There are a number of factors involved here, but I believe there are certain things that can be done that would increase our physician production measurably right now. Let me outline them.

Great numbers of highly qualified, dedicated young people want to be physicians, but are denied entry into medical schools every year, because there is no room for them. Each of our medical schools must reaffirm that its main purpose for being is to educate physicians. In addition, changes are long overdue in the methods used by medical school admission committees. Antiquated admission methods have proven to be stumbling blocks to adequate student selection.

To more adequately utilize all the facilities and teaching manpower in our medical schools today, we should have two concomitant classes running staggered. Actually, this one step alone, and without the addition of one new brick, would enable us to almost double the output of physicians today. Efforts toward establishing new medical schools, and for additions and replacement of old schools, should be pursued at the same time.

It is important to understand that there are basically two types of medical school candidates and interests. One is oriented basically to the "care area of medicine", and the other toward "research or academic areas." Both are necessary interests and must be pursued, but the research/academic interest does not require as much of the clinical materials and clinical facilities as the care area. Also, the degree offered in the research/academic area need not be an M.D. degree.

Because time spent by the student in school is a most essential consideration, why not permit him to progress at his own rate and capability? Let him fulfill the established requirements and graduate sooner, rather than adhere to a fixed, time-honored period that is totally unrealistic because people do not all learn at the same rate.

All of organized medicine, especially practicing physicians, must openly work for the financial support of our medical schools so that medical schools do not have to rely solely on "research funds" for support. At the same time, medical schools must put their financial houses in order. Presently many of them can not support requests for funds because of this deficiency.

I know, as do most practitioners, that medical schools are having a rough time of it now. GWU is among them. As I noted, practicing physicians, the cogs of organized medicine, must support medical schools as never before. But they know that the reason schools are having trouble is because the government's research well has run dry. They believe a school's job is to educate and train doctors for the public's needs. They are not convinced a school should allow a teacher to devote the majority of his time to his bench instead of his students, regardless of where the money comes from. Nor do they think a university medical center's primary job is to provide health service to the public. I believe sincerely that the practicing doctors of America would support the schools to a degree not believed possible, *if* they felt the schools were honestly doing their basic job. We need to close the credibility gap and have real understanding and an honest relationship between gown and town all the time—not just at "money" time. We've talked about what I believe is your destiny in medicine. We've discussed how it will relate to the people of this nation. Now perhaps we should explore what you as students can do to have a hand yourself in making your destiny jibe with the needs of the people.

First, I would ask you to remember back before you started medical school. Recall to mind the thoughts and feelings which motivated you toward a medical career. I'm sure the ideal of service played a role. Also, try to formulate in your mind in summary fashion—say, about 200 words—what you believe a physician should do, what you think his job in life is. Then, on the basis of these pretty fundamental thoughts about yourself and about the profession, begin to engage in the mental processes necessary to determine whether you want to enter patient care or research teaching as your career in medicine, if you have not already done so. Take as much time as you need but keep it in your mind. If you finally decide for patient care, begin thinking then whether your real interest is primary care or if you would prefer to function as a consultant. And, I mean a true consultant, not a primary doctor masquerading as a consultant. Then, when you finally make your mind up on this, vow to bring real conviction to your choice of career. Also, vow that you will support your career choice while in school and later, in practice, and demand for it sufficient facilities and support to keep it strong and viable.

But don't ever forget the other career areas are important, too, and must not be allowed to atrophy, if your school is to be truly great.

As medical students you have several areas of great opportunity to make vital contributions to the overall development of more meaningful medical education. You have the opportunity of *"elective periods"*—in which you can to a considerable degree, mold your own educational needs. In many schools you are important parts of *"curriculum committees"*. I plead with you to use these opportunities wisely and meaningfully. Use whatever opportunity available to you to see the needs of medical care all over this great big diverse country of ours. Try to come to a decision earlier in your educational experience as to where and how you will eventually settle down to practice and use your electives to fulfill your and the communities specific medical needs.

I applaud and respect the medical students expressed sincere commitment to care for the basic medical care needs of his fellow man. I envy you for the increasing educational opportunities that are being made available to you to better prepare you for such services. You have the opportunity to transfer philosophy to service. The future is yours and so is your responsibility to provide for the medical needs of the people. Talk as much as you will about medical care systems and methods of financing such systems, no talk is meaningful in any system of care you discuss unless it is backed up by physicians, by bodies, by numbers actually *providing*, not talking about services.

As students, let me give you some encouragement for those moments when you will be lost and frustrated by there being too much to know in medicine today for anyone to attempt to learn it all. This is a half-truth. There *is* too much to know for any one person to know it all, but what physician needs to know it all? Dean Robert Carter of the University of Mississippi said:

"There is no valid direct evidence that the increase in scientific knowledge precludes good practice of medicine. In fact, the opposite may be true as new knowledge replaces clinical empiricism and as treatment becomes more effective. The old saw, 'You can't learn it all' is perfectly true, but it is equally true that a physician need not master every item of medical knowledge to treat a patient well. This is an area where some teachers seem unable to distinguish essential from nonessential information at different levels of training and practice. Inefficient, poor teaching is apt to be confused with an impossible amount of information to be taught."

I am happy to report that more and more medical schools and teachers are recognizing and fulfilling this need which will make your task surmountable and more easily manageable.

You as the student, in cooperation with your medical school and your teachers, supported by the practicing physician and his medical organizations, will determine the future destiny of medical care in this country. I know you will be responsive and I know that together we will bring about the best care system the world has yet seen, because you are concerned.

Dr. COULTER. Mr. Chairman.

Mr. ROGERS. Yes.

Dr. COULTER. If I may, sir, I neglected to say, sir, that in my own locality many of our specialists, friends of mine continuously are telling me and telling us family doctors, for heavens sakes, why don't you get more of you because we are having to do some of the general practice. We don't like to do it. We don't have the patience with it. We don't do it well. And this past year when the Florida Board of Medical Examiners met to examine applicants for State licensure there was a hospitality room set up with a big sign saying please, general practitioners, come to Florida. We need more.

Mr. ROGERS. I am sure this is true, and I have heard specialists say this very same thing.

Now, Mr. Kyros.

Mr. KYROS. Thank you, Mr. Chairman. Dr. Kowalewski, I certainly want to welcome you and the other gentlemen here today. I am delighted to hear your testimony, and I am glad that it has been brought

to the attention of our committee so that we can bring it to the attention of our colleagues.

I am interested in a few points which have not been touched on yet, although most of the things I was interested in have been covered very well by my colleagues.

I notice that you are on the regional medical programs review committee, a program that has been before this committee several times.

It seems to me that in that program particularly, the general practitioner, family practitioner in the rural area, plays an integral part. Would you tell us how the family practitioner fits into the regional medical program?

Dr. KOWALEWSKI. Yes. I served on this committee from the very beginning until last year when my term was up, and we fought it through the difficult parts when it was the DeBakey Report, and so forth. But as time goes on the measure of success of the regional medical programs will depend to a great degree on how that individual program was able to reach the grassroots.

For example, let us take the area of cancer. Some believe that we can do everything—in the case of cancer with surgery, irradiation and chemotherapy. But you have got to have young physicians out there finding the possible cancer early. We have put out the challenge to translate new scientific medical findings into practical usage, and there is a great difference, gentlemen, there is a great difference in what the newspapers report every day on scientific findings and what actually can be used, so we put the challenge to the regional medical programs: if there are new things, let's see what they are and how we can use them.

For example, we are just concluding, with the aid of the United States Public Health Department, a study on 1.6 million Papanicolaou smears.

Now, we have learned a lot scientifically from this, but what has happened is that because we mounted a study we have introduced and encouraged the woman to get into the habit of an annual physical examination, so this is a preventive measure. It is an early measure. Unless the physician is in it on the ground floor and unless he can reflect the peculiar needs of that community, regional medical programs will not succeed. But I must say in all sincerity there are some parts of this country where they have applied themselves, and they are successful.

You must recognize that the biggest problem in RMP was to make it different from simply a university medical school research concern. There is a great need to bring care all the way down to where the people are, not just in medical centers; if RMP does this then it will succeed.

Mr. KYROS. Yes, I thought the thrust before this committee was to get the best possible health care right out there to the people and I am glad to hear that.

Dr. KOWALEWSKI. For example, one other specific to that is what they have done in the coronary care area. Now, the important part of coronary care is what happens in the first few hours, right where you are, in that small community hospital or right in the home. And they have made a very good contribution, very good contribution to this aspect of coronary care.

Mr. KYROS. That is where you can transmit the information into a medical center and a specialist can then read the cardiograms and send information back?

Dr. KOWALEWSKI. This is about the third step. The first step is that they have helped to educate, continue to educate, and update the ability of the physician who first sees that patient. They have also helped to train some of the nurses who can assist him, and then about the third stage would be the consultation—communication that you can have with others.

Mr. KYROS. I am glad to hear that in your opinion the regional medical program is effective and that the family practitioner is an integral and important part of it.

I was also interested in the point that you made about the change in attitude of students in medical schools. It was surprising to hear you say, I think, that the number of students interested in family practice, or general practice, had gone from 3 percent to as high as 22 percent over a period of the last 4 to 5 years. What explanation can you give for that, Doctor?

Dr. KOWALEWSKI. Well, I think this is a reflection of the student's general concern for his fellow man, whether it is in medicine or other areas. I have been intimately involved with this in visiting and participating in almost every medical school in this country, and they want to relate specifically to the needs of the people. They want to live with the people. And it is this basic component by which I think they are going to do something meaningful that our generation has failed in. They might be in a state of upheaval now, but I think there is going to come out of it a more beautiful cocoon, and I think we are going to get out of this a reflection of the need of family and reflection of the need of community. It is going to take a little while and we might be frustrated with it but the nidus is there. It is working.

Mr. KYROS. This program calls for the training of paramedical personnel and personnel other than doctors. Isn't that right?

Dr. KOWALEWSKI. Yes, sir.

Mr. KYROS. Now, is there some problem with any State medical act, regarding the using of physicians' assistants? Do we get into a problem legally sometimes?

Dr. KOWALEWSKI. Yes, there are legal problems. And the State legislators and Federal legislators are going to have to shape up to this, because what we might have, gentlemen, which would be a terrible thing, we might educate and prepare a lot of people and find them completely illegal and no place to go. We have got to be very careful about this. We have got to set the stage.

Mr. KYROS. With regard to the doctor shortage, when I visited the Soviet Union last year I found that they use the system of "felshners," people who are not trained doctors and they are not nurses, but are between nurses and doctors. They do suturing and those kinds of things under the supervision ostensibly of a doctor. Is there some role for that kind of person in the United States.

Dr. KOWALEWSKI. Well, this is very interesting because I can update you. As of now the felshner system is being pushed out. They ran into the problem that these people were not sufficiently trained, and they were running into many problems of people dissatisfaction. So they are going to a higher grade of intermediary at the present time.

Mr. KYROS. With regard to felshners, What was the particular problem?

Dr. KOWALEWSKI. Well, the average care provided in areas of Russia is about on the level of what a good mother provides in the way of first aid for her family in her home in this country. And our people won't stand for that; our people want high quality medical care.

Mr. KYROS. I have no other questions at this time except to thank you again for your testimony and to welcome you here, Dr. Kowalewski.

Dr. KOWALEWSKI. Thank you, Mr. Kyros.

Mr. ROGERS. Thank you, Mr. Kyros. Mr. Preyer.

Mr. PREYER. Thank you, Mr. Chairman. I notice the bill provides funds to construct such facilities as may be appropriate, and you mentioned something about construction costs. How extensive would the construction aspect of establishing the family practice program be?

Dr. KOWALEWSKI. This is a very good question. It varies. It varies whether it is a new school, a new construction, and able to build it in as part of it. We have had some very interesting experiences. Some medical schools have been so eager to do this that they have taken the old laundry, an old laundry building, a steam laundry area and completely redone it and remodeled it, and that is the family practice department. And that is new, I mean that is reconstruction, and that is one kind of cost.

The other thing that is being done is that old buildings are being purchased in adjoining medical schools, and they are revamped so that they look and function completely like a family physician's office. This kind of revamping frequently is more expensive than a new building.

Now, this is very important because we found that you must have a separate distinct area which the student can identify with. Most of our schools now are just simply bulging at the walls.

This leads me to another point, that in order to answer this need of the great numbers of students who want to go into medical school, qualified medical schools, we have to somehow, for example, maybe have two concomitant classes running staggered to answer this need, because there is an inequality here that disturbs me. We have the kids who are interested. We have the need. Why can't we get these two together?

Mr. PREYER. You have mentioned the figure here of 4,840 physicians which would be turned out at the end of 6 years. Are these 4,800 physicians in addition to the normal number medical schools would turn out at the end of 6 years, or is that 4,800 physicians who are specializing in general practice but you are turning out the same general number, overall number of physicians?

Dr. KOWALEWSKI. You are correct. We can only turn out as many as are permitted to come into medical schools. They would be a portion. They would not be in addition. We would love to see that in addition.

Mr. PREYER. But this program doesn't contemplate building new buildings and putting an additional number of students into medical schools so much as it does contemplate getting more of the people who are going to medical schools to specialize in general practice?

Dr. KOWALEWSKI. Your second point is the immediate one. The other one we must work on, because when you review the qualifications and desires of the student applicant you find that we have very many excellent students who might be 99.3 AMCAT average instead of 99.4 scientific average but who might be 100 percent concerned about the social needs of people, and most go into the care area of medicine. So we have to somehow learn to measure to allow that student to come into medical school.

Mr. PREYER. Well, I am glad to hear that it is the latter alternative, because right now construction funds are awful hard to come by. And if all of this money went into construction I think it would be very hard to get.

I appreciate your comments very much, and just one final comment on the motivation side of things for doctors. I certainly agree with you as to the importance of that. I have got one small county in my district which is a four-county district where there is one doctor only, and he is very old, very elderly, and wants to retire. But we can't get new doctors in there because the new doctor, particularly if he brings his wife with him, and she looks at the schools and looks at the whole social environment then they move someplace else.

Dr. KOWALEWSKI. That is right.

Mr. PREYER. So maybe you will need a course for wives in your program also——

Dr. KOWALEWSKI. That is right.

Mr. PREYER (continuing). To let them know what they are getting into.

Thank you very much.

Mr. ROGERS. Thank you, Dr. Kowalewski.

Mr. CARTER. Mr. Chairman, I have a question or two, if I may.

Mr. ROGERS. Certainly.

Mr. CARTER. It seems to me—you mentioned that we certainly have young men who want to get into medical schools and only one out of six that's been accepted. We have the manpower and we have got the need, but we have got to face up to the fact that we must have construction. We have to have more schools, and larger schools, larger medical schools. There is no question about it.

And about the paramedical personnel, I think it is important for the general practitioner to have more, they have got to have more people, more X-ray technicians who are a great help to these people, more laboratory technicians, to make the diagnoses easier to come by. And more nurses, of course. And these are things that are necessary. And with the mountainous paperwork that we have, we need people trained for clerical work.

Dr. KOWALEWSKI. That is right.

Mr. CARTER. We absolutely have to have them. I know that in most clinics there are people who are used just for this, in this field alone, and it takes a great deal of time.

Then the smaller hospitals now to retain their accreditation must also have the services of radiologists. Sometimes they come only a half a day or a day a week, but this is necessary. They are also required to have pathologists. And some way or other we have got to supply the community hospitals with the pathologists and radiologists that are needed.

Dr. KOWALEWSKI. That is right.

Mr. ROGERS. Thank you very much.

Mr. CARTER. Yes, sir.

Mr. ROGERS. Thank you. And thank you, Dr. Coulter and Mr. Miller, for being here. We appreciate very much your testimony.

Our next witness is Dr. Amos Johnson, who will present the statement of Dr. Gerald Bassett, assistant professor, School of Medicine, University of Washington, Spokane, Wash.

We have three witnesses. I hope we can get to all three this morning.

Dr. Johnson, I think, has been a driving force in this legislation as much as anybody I know. I have had the pleasure of visiting with him before. I know his intense concern, and I think he is to be commended for the fine work he has done. The committee is pleased to receive your statement.

STATEMENT OF DR. AMOS JOHNSON, GARLAND, N.C.; ALSO PRESENTING THE STATEMENT OF DR. GERALD BASSETT, ASSISTANT PROFESSOR, SCHOOL OF MEDICINE, UNIVERSITY OF WASHINGTON, SPOKANE, WASH.

Dr. JOHNSON. Thank you, Mr. Rogers, gentlemen of the committee. I am reading today a statement that was supplied by Dr. Gerald Bassett who is a professor in the University of Washington School of Medicine. Because of the rather short time to come and present this paper, Dr. Bassett was unable to make the arrangements and with your permission I will read it for Dr. Bassett.

"My name is Gerald Bassett. I am a staff physician for the MEDEX program in the State of Washington." And I would like here to digress a minute. This MEDEX refers to what Dr. Kowalewski so aptly spoke to awhile ago about extending the arms of the physician. This MEDEX is the physician's assistant and this program at the University of Washington is the second program university-associated in the United States. The other one is in my State at Duke University.

This program at the University of Washington is this year being implemented in some 10 other States, and there is a very definite move to create this very needed person. And I will speak a little more to that in a minute.

"As deputy director of MEDEX, one of my primary responsibilities is curriculum development and teaching of MEDEX trainees during the university phase of the program. Since the MEDEX program has as its objective the extension of physicians practicing family medicine, I appreciate the opportunity to add support for the much needed legislation which you are considering today.

"We hardly need authoritative commissions to point out what many people already experience in seeking medical care; difficulties in obtaining appointments for routine health care; long periods in waiting rooms; seemingly hurried examinations and explanations; impersonal emergency room care on nights and weekends. Clearly our supply of sufficiently qualified physicians is not sufficient alone to meet the increasing health expectations and future demands of an expanding population.

"The State of Washington shares in this national problem. In the rural heart of the State physician numbers are declining as doctors migrate to cities or towns to specialty practices rural areas cannot support. Rural doctors are not being replaced and the age of the few practitioners left behind is steadily rising. Both large and small communities without medical practitioners constantly advertise for help in professional journals. Today, there are more than 80 towns and some of these communities asking for more than one practitioner.

"Truly, then, one of the more serious problems facing our Nation in the health field is the manpower shortage. The shortage cuts across the entire range of health occupations but is perhaps most acutely felt by patients seeking the help of physicians for themselves and their families. There is a critical need for family physicians.

"There are, in the main, three ways to tackle this relative lack of family physicians: (1) We strive to increase enrollment and graduates of medical schools."

Here I would like to digress for just a minute. We see so much written in the literature, now, that there is an identified need of 50,000 more physicians. Perhaps we do need 50,000 more physicians, but if we are going to feed into the education process the way it operates 50,000 additional people to be trained to become doctors in the United States without relating the productivity of medical education needs of the people in this country, then 50,000 additional doctors will do us very little good. Already today we have three or four times as many surgeons as we need in this country, and if the 50,000 additional physicians are going to be productive of an additional 4,000 or 5,000 general surgeons, then we have thrown away that productivity. And I know of no place where medical education in general or any medical school in particular has evaluated its productivity as relates to the specialty output to the needs of the area in which the school operates in any given State.

"(2) We attempt new allocational patterns that will utilize more efficiently the services provided by existing family physicians; and

"(3) We help develop new professionals whose job will be to extend the family physicians' capacity to provide medical services.

"I am pleased to note that both H.R. 15793 and S. 3418 help solve the problems in each of these areas.

"In the first instance, medical schools are already in the process of opening their doors to more students. This action is well and good, but will not answer the problems of students specializing in areas other than family practice. This legislation contains far-sighted proposals that will work within the overall goal of increasing total physician manpower, at the same time helping solve the distributional problem caused by specialization. By actively recognizing and financing support programs in family medicine, students will now have a choice of and a chance to enter a field of practice not readily available to them in the recent past.

"In case there is any question of the interest of medical students in the field of family medicine, I can tell you, for example, that 42 junior medical students at the University of Washington have applied for summer fellowships in family medicine sponsored by the Washington Academy of General Practice." And let me here digress and say that

the population of each class in this particular medical school proximates around 90. So this is about a 50-percent interest at the present time there.

"From my personal considerations with students I have the distinct impression that many of them have assessed and understood the importance of the family practitioner—or, in other words, they know where the action is.

"The second and third instances are, however, the areas of most interest to me as a worker in the field of training paramedical personnel. For example, we find that our MEDEX—and I am speaking of MEDEX only because I know best who they have been and what they are doing—we find that our MEDEX and their family physician preceptors are putting together new organizational patterns for covering the medical service needs in their rural communities. Several preceptors and MEDEX teams are working together to cover locales which, by force of circumstances, were formerly left with pretty much episodic and near-emergency-only care. Most clearly, the proposed legislation would aid in the development of new professionals whose job will be to help physicians meet increasing demands for medical services. In addition, I see an especially strong commitment of these bills being the provision for training paramedical personnel specifically in the field of family medicine. To me this provision would have two very important results: (1) It is training for the greatest need; and (2) it makes explicit in teaching-learning situation the connection between medical and paramedical team members.

"The opportunity will now exist for future co-workers to jointly learn and develop professionally. I suggest a triple benefit from this kind of potential for team learning: (1) For the patient, who will have more skilled people to help him; (2) for the student physicians, who will learn not only what family practice can be, but also that it can be a way of life shared with others instead of a 'one-man-slave-to-the-practice' situation; and (3) for a whole cadre of interested, dedicated individuals, who will have an opportunity to find satisfying employment in a career not readily available to them in the past.

"My closing remarks are brief. Both my State medical association and the medical school are deeply committed to the idea of family practice and the training of paramedical personnel to assist family physicians. Evidence of this commitment is the offering of a family practice pathway recently instituted at the medical school, and joint sponsorship of the MEDEX program by both the Washington State Medical Association and the University of Washington School of Medicine.

"As deputy director of the MEDEX program, and as an individual physician, I enthusiastically support and recommend enactment of this legislation as a positive step that will help meet the Nation's health manpower shortage."

If I may be allowed to say one or two other words.

Mr. ROGERS. Yes, sir.

Dr. JOHNSON. This medical, MEDEX, physicians' assistant paramedical personnel I know from experience can permit me to see at least 30 to 50 percent more patients effectively and provide quality health care for these people.

Thirty-one years ago, I hired a man out of high school to work in my practice in a little community, in Garland, N.C. One month ago, that man was given an honorary degree by Duke University as being the first physicians' assistant in the United States. Their program there was developed around the study of the function of this person who worked in my office, so I am very familiar with what can be accomplished by the training of adequate assistants of the various kinds that Mr. Carter spoke about, not only the physicians' assistant but the nurses and the laboratory assistants, and most important right now those who are trained to work with the patients to see that they receive the benefits that were intended for them by federally sponsored programs, medicare, medicaid. Every day in my office we find a person who has been in a hospital, and I have all of them bring their records, their expenditures, their canceled checks, their receipts, and we find that over 50 percent of the people who have come back from an experience in the hospital under medicare and medicaid have been overcharged or not given adequate credit for that which was deserving to them by these programs, not that they were intentionally taken away by the hospital, but by the hospital employees who administer the technical work in the business office not knowing and not understanding what is available. Usually we recover anywhere from $25 to as high as $500 for patients who have been through this experience.

Mr. Rogers, that represents the testimony.

Mr. ROGERS. Thank you, that is very helpful. In this MEDEX program now, is it the thrust of the program that in the summer the students go out with practicing physicians?

Dr. JOHNSON. The MEDEX program is considerably different from the program at Duke University. The MEDEX program gives the student 3 months extensive training in the University of Washington Medical School in the basic sciences, and then the remaining months of the 1-year program is a one-on-one training experience, on-the-job training with the physician who prior to this person's entry into the program has agreed that he would like to have this person. He then works with the physician for 9 months in his training program.

Then the physician can hire this person to stay with him, and presently 14 out of 15 in the first class are employed, and 10 States are getting new programs and about 20 other States want them.

Mr. ROGERS. I think it would be good for our record if we could get a rundown of the program at Duke and Washington.

Dr. JOHNSON. I will see that that comes.

Mr. ROGERS. As to how it is run, the responsibility and the success.

Dr. JOHNSON. One brief word. The program at Duke is a much more sophisticated program. It is a 2-year intensive program, almost all of it in the Duke Center. The last 3 months are spent out getting experience. I had one (student) this summer. But it is a much more sophisticated program, and these trainees are much better able to work in the rural hospitals with the intensive care units, and the electronic equipment. They are taught how to handle all of this. The people in Washington are taught to provide, to dirty their hands by giving health care to people at a level of the community needs.

Mr. ROGERS. I understand. Yes. Thank you.

(The following information was received for the record:)

BULLETIN OF DUKE UNIVERSITY

Physician's Assistant Program 1970-1971

Durham, North Carolina 1970

(89)

Physician's Assistant Program Calendar 1970-1971

1970

September

14 Monday—Registration 8:30 a.m. Mandatory for all students; 1:00 p.m. Orientation for new students.
15 Tuesday—Classes begin
28 Monday—Board examinations begin, second year students

October

1 Thursday—Board examinations end
2 Friday—Graduation ceremonies
21 Wednesday—Classes end, Phase One
22 Thusday—Examinations begin, Phase One
24 Saturday—Examinations end, Phase One
26 Monday—Classes begin, Phase Two

November

25 Wednesday—Thanksgiving recess begins, first year students only*
30 Monday—Classes resume

December

18 Friday—Christmas recess begins, first year students*

1971

January

4 Monday—Classes resume

March

26 Friday—Spring recess begins

April

5 Monday—Classes resume
24 Saturday—Classes end, Phase Two
26 Monday—Examinations begin, Phase Two

May

1 Saturday—Examinations end, Phase Two
3 Monday—Classes begin, Phase Three
10 Monday—Rotations schedule posted

June

9 Wednesday—Classes end, Phase Three
10 Thursday—Examinations begin, Phase Three
12 Saturday—Examinations end, Phase Three
14 Monday—Vacations begin, first year students only*
25 Friday—In-hospital rotations end, second year students

*A two-week vacation period will be scheduled for each student during the month of June. Arrangements for additional time off including Thanksgiving, Christmas, New Year's, Easter, and other holidays must be made with the faculty in charge of each rotation.

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General Information

History and Development

Duke University's concept of the Physician's Assistant Program developed in the early 1960's following an unsuccessful attempt to initiate a postgraduate education program for physicians. When Dr. Eugene A. Stead, then chairman of the Department of Medicine at Duke and founder of the Physician's Assistant Program, analyzed the reasons for the failure, he discovered that practicing physicians had no time they could reasonably set aside for the purpose of education. Dr. Stead felt that perhaps ancillary health personnel could be trained to competently assume many of the physician's tasks, thereby giving them more time. During the ensuing months of research Dr. Stead became aware that ancillary personnel were being trained to do many technical jobs within the Medical Center which had previously fallen within the sole realm of physician responsibility.

As a result of Dr. Stead's observations, on April 17, 1965, Dr. Barnes Woodhall, then Vice Provost for Medical Affairs at Duke University, appointed an *ad hoc* committee chaired by Dr. Andrew G. Wallace, Assistant Professor of Medicine, to evaluate the existing programs and the manpower needs. This committee met on four occasions during the spring of 1965 and came to the following conclusions: (1) the need for extensive numbers of highly trained technical personnel existed both within and outside the Medical Center; (2) two types of allied health

personnel were needed, one very highly skilled and limited to a specific area and the other a more advanced individual with a broad and sophisticated background; (3) there existed the need for a core curriculum to allow for academic advancement and variation in careers; (4) there must be an attempt to define the specific needs to resolve the individual manpower problems; and (5) there must be a method of attracting career oriented, qualified applicants and providing them with a functional and compact curriculum.

On July 1, 1965, initial limited funding was made available by the National Heart Institute to further evaluate the prospect of the physician's assistant. On October 4, 1965, four candidates, all of whom were ex-Navy corpsmen, were chosen as the initial students.

On February 1, 1966, a second *ad hoc* committee was appointed by Dr. William G. Anlyan, then Dean of Duke University Medical School, which was chaired by Dr. Stead. The purpose of this committee was to further explore the development of physician's assistants, including the types of projected roles, the educational background requirements, and the scope of their responsibilities and activities. Five days later Dr. Stead read a preview of the program before the 62nd Annual Congress on Medical Education, sponsored by the American Medical Association in Chicago.

This second committee first met under Dr. Stead's chairmanship on February 16, 1966, at which time the progress of the program was reviewed, and three primary questions were raised. These were: (1) How much of the plan for personnel training is practical and possible? (2) What sort of certification should be given to the student? (3) What provisions should be made for additional training for the student, as determined by his ultimate employment?

At the committee's second meeting the following month, three criteria were cited as the main determining factors in the ultimate success of the concept. These were: (1) physician's acceptance of physician's assistants, (2) society's acceptance of physician's assistants, and (3) the physician's assistants' individual competence.

Throughout 1966, meetings of the second committee were spent in providing a continuing review of the program, researching possible sources of funding, and beginning an in-depth search into the legal aspects in the use and development of such personnel.

On April 13, 1966, in response to an inquiry from the committee, the Attorney General's Office ruled in reference to the Medical and Nursing Practice Acts that "Nothing . . . shall be construed in anyway to prohibit or limit performance by any person of such duties as specified mechanical acts in the physical care of a patient when such care and activities are performed under the orders or directions of a licensed physician, licensed dentist or registered nurse." It was the committee's recommendation at the time that regardless of this interpretation, efforts should be

made to move in the direction of modifying the Medical Practice Act so that it would allow the physician more leeway in the delegation of certain tasks.

With this information in mind, tasks that could be accomplished by an assistant were defined and a seemingly appropriate curriculum was developed. Also considered in the development of the program and curriculum was the fact that each physician is different from every other physician to such a degree that the ultimate definition of the role of an assistant would be impossible. The emphasis was, therefore, placed on developing a training program that would provide a core of vocabulary and skills for physician's assistants with the clinical emphasis on the development of an assistant for the general practitioner or general internist. It was recognized that the final training of each physician's assistant would be provided by the physician with whom he worked.

In September, 1967, the Department of Community Health Sciences assumed administration of the Physician's Assistant Program under the direction of the department chairman, Dr. E. Harvey Estes, Jr. On October 1, 1967, the program graduated its first three students, all of whom were employed in the Medical Center to facilitate evaluation studies. In April, 1968, Dr. D. Robert Howard became the first full-time director of the program. Because of numerous other activities within the Medical Center, Dr. Stead now serves as the chief advisory consultant to the program.

Although the primary goal of the program was to provide the general practitioner and general internist with an assistant, because of pressure from other physicians who participated in the teaching of these individuals, the program has since expanded its scope to include radiology, pediatrics, pathology, and medical and surgical subspecialties, with plans for further expansion to include psychiatry, geriatrics, obstetrics and gynecology, and industrial medicine.

Along with expansion of the scope of training, major in-roads have been made toward the development of an effective educational system (to include the use of programmed learning), investigation of state licensure laws for the development of model legislation to encompass the physician's assistant, and procurement of professional liability coverage for the physician, the hospital, and the university-trained physician's assistant. In addition, the last twelve months have shown a marked expansion in the size of the student body from fifteen students in the second year of training to forty students in the first year, with a planned expansion to 100 students per class by 1971.

Since the program's inception, a total of twenty-nine graduates have completed the course of instruction, of which fifteen are employed outside the Medical Center, and fourteen remain at Duke. Of those remaining in the center, three are engaged in activities which are predominantly of a research nature, and the remainder are engaged in activities pri-

marily associated with patient care. Most of the graduates assume considerable administrative duties beyond their clinical duties.

The value of these professional assistants has been readily demonstrated by their skill and attainments applicable to the specialty they serve, be it in general medicine or in some limited subspecialty. Because the assistant has been trained to supplement skills available to the health team rather than compete with the other participants, they have been readily accepted by virtually all other team members at the working level. To be sure all members of the health team including the radiological technician, medical technician, medical record librarian, physical therapist, occupational therapist, dietician, nurse, and many others have provided assistance to the physician for a more effective and efficient provision of care to a greater number of patients. The physician's assistant, however, created to support the physician in his roles in the office, the home, and the hospital has served to develop a closer liaison between the physician and the other allied health team members.

Specifically the physician's assistant is trained as a data gatherer. He can elicit detailed patient histories, do complete physical examinations, collect specimen data through intricate technical procedures such as gastric analyses, venous and arterial punctures, lumbar punctures, pulmonary function studies, and electrocardiography, and can provide accurate routine patient analyses. In addition, the physician's assistant provides such patient care services as cast application and removal, superficial wound suturing, dressing changes, and after-hours laboratory studies. The physician's assistant also aids the physician by being an extension of the physician in several locations through available communication. When the physician is in his office, the physician's assistant can be in the hospital doing routine workups, narrative summaries, and can schedule and explain diagnostic procedures to hospital patients; in the office, the physician's assistant can provide efficiency to the patient care system by collecting data for the physician ahead of time so that actual physician/patient contact can be used in a more meaningful manner. In the home, the physician's assistant can provide his physician with an extra set of sensory organs and also aid in routine management of invalid patients. Perhaps the greatest value of the physician's assistant to the physician lies in the fact that the physician has a well-trained, virtually unrestricted assistant to whom he can teach those skills and functions that will allow his particular practice to function in a more efficient, effective, and economical manner.

Relationship to the University

The students in the Physician's Assistant Program are currently registered as special students and not as Duke University undergraduate students. Access to all graduate and undergraduate library facilities is

available through the presentation of the Duke University Identification Card. After the completion of the two-year training program, the students receive transcripts of their grades and a certificate of accomplishment from Duke University Medical Center. Although this is not a degree, the credits are applicable toward a degree at other institutions.

In order to provide qualified students with the option of furthering their academic achievements so that career mobility can be more than a phrase and the career ladder can become a reality, the incorporation of an optional baccalaureate degree into the program is under consideration at this time. In addition to the successful completion of the Physician's Assistant Program, this professional training would be coupled with a broad background in liberal arts in compliance with the standards of education at the baccalaureate level.

Legal Status and Professional Liability

When the Physician's Assistant Program was initiated, it was recognized that the use of a new type of manpower in the health field might present legal difficulties in view of the licensing schemes for medical personnel. Under their power to legislate for the protection of the health and safety of their citizens, all states have enacted licensure laws to regulate the practice of medicine. These laws are typically phrased to authorize qualified physicians to perform all health care functions. Various other categories of health professionals are granted more circumscribed licenses enabling them to perform certain of these functions for which they are qualified by training and experience. Although the licensure laws for the allied health professionals were often merely permissive when first enacted, preventing only the use of a given title by the unlicensed, in many instances they have subsequently become mandatory, making criminal any action within the scope of a licensed profession by one not licensed by that profession. The initial question posed by the new program was, therefore, whether the graduates would, by their activities, infringe upon the sphere of persons performing under such mandatory licenses. The problem was considered by the North Carolina Attorney General, who in 1966 issued his advisory opinion that the performance of the projected physician-supervised activities would not contravene the licensure laws of the state. The program has operated thus far in reliance on that opinion and no difficulties have been encountered.

If it were contemplated that the physician's assistants would perform any *independent* functions, it would be necessary that some explicit exception to the Medical Practice Act be provided by the legislature to authorize such activities. Otherwise the performance of such functions would constitute the unlicensed practice of medicine, leaving the phy-

sician's assistant subject to criminal action. In addition, the physician-employer of the assistant would be subject to criminal action for aiding and abetting and possible license revocation for unprofessional conduct. The duties of the physician's assistant are, however, solely *dependent,* under the supervision of the physician, and thus developing custom and usage may be relied upon to furnish the necessary legal sanction. The physician is the party actually "practicing medicine" in this situation. In view of the expertise required in such practice — an expertise which legislatures and courts do not have — the medical profession is able to set its own standards by reference to the ordinary practices of the profession. If employment of such dependent personnel is a customary practice, even among a respectable minority of physicians, there should be minimal danger of criminal liability. The more physician's assistants are used and accepted within the medical community, the safer their position and that of the employing physician becomes.

A major concern of physicians with respect to such personnel relates to possible civil liability for their actions. Under the doctrine of *respondeat superior,* the physician is responsible for negligent actions of any person in his employ or under his supervision. The physician's liability for the actions of the physician's assistant would be similar, therefore, to his current liability for the actions of his nurses and other office personnel. It is felt that his supervision should insure against negligence on their part, and his liability for their actions is indirect or vicarious. There is a possibility that the physician himself will be found negligent in delegating a particular function to the physician's assistant and will therefore be directly liable for anyone injured. If, however, the particular delegation is one customarily made, the very fact that such delegation is an ordinary practice within the profession is evidence that it was not negligent. The question of negligence *vel non* is one for the jury to answer in the particular case, on the basis of the evidence before it. The greatest danger exists initially before the practice is established as custom and usage but decreases with acceptance by the profession. In a recent Washington case, action by an unlicensed nurse, viewed against the background of the state's licensure scheme, has given rise to an inference of negligence against which custom and usage was not admissible for jury consideration. Allowing such an inference to be drawn from the mere failure to be licensed is definitely a minority approach; in North Carolina and the majority of other states, the law currently seems to be that the failure to be licensed is immaterial on the issue of negligence.

The question of professional liability coverage was investigated. Initial coverage, in 1966, was limited to coverage of the student in the Medical Center. They were found to be automatically included under the existing policy carried by the Medical Center. When the students were sent outside the Medical Center for community-based experience, companies

that provided coverage for the physician involved extended coverage to the student at the same rate the physician paid for his other employees. From 1966 to 1969 all students and graduates, while away from the Medical Center, were associated in their training or employment with physicians who carried their professional liability insurance with these companies.

In 1969, as the expanded class was assigned to physicians from coast to coast, the issue of professional liability was raised once more. As a result of these inquiries and because the issue was relevant to all related programs, various aspects of this issue were placed before the major professional liability carriers listed by the American Medical Association. These carriers expressed a willingness to furnish professional liability coverage to the physician and hospital at a negligible rate, and to the university-trained physician's assistant at a rate approximately 50 percent of that charged the employing physician.

As with any new program, there are uncertainties and unanswered questions. Although no actual legal problems have materialized in the practical operation of the program or in the use of the graduates thus far, there has been a continuing effort to clarify the issues and resolve any remaining uncertainties. A conference relating to the legal status of physician's assistants was held in Durham in the spring of 1968, and the issue was again considered at a general conference on the program held in the fall of that year. Recently funding was made available to finance a study to develop model legislative proposals which, if enacted by the state legislatures, would further regularize the position of the physician's assistant.

On October 26, 1969, a third conference, sponsored by the Department of Health, Education and Welfare in conjunction with the Department of Community Health Sciences, was held to determine the most desirable and feasible means of accommodating emerging groups of allied health professionals into the legal framework of medical practice.

Five alternative courses of action were presented for consideration: (1) maintaining the status quo (i.e., doing nothing); (2) licensing physician's assistants; (3) enacting a general statute authorizing supervised delegations by physician's; (4) special licensing of physicians to utilize physician's assistants; and (5) establishing a Committee on Health Manpower Innovations to control the development and utilization of new personnel.

During the course of the proceedings several variations of the original proposals were presented, which were discussed in conjunction with the respective proposals. The ultimate consensus of opinion was that efforts should be directed initially toward the drafting of a general statute authorizing supervised delegations by physicians, with the responsibility for determining which persons may accept such delegations vested in the State Board of Medical Examiners.

It was acknowledged that in practical fact this limited legislation might prove adequate and that it may not be necessary to proceed further. It was suggested, however, that in drafting this initial legislation as much consideration as possible be given to questions which may arise pertaining to the development or need for further regulation, should that prove necessary.

It may be that these efforts are inspired by an overabundance of caution, as the physician's assistant seems to be fitting harmoniously into the scheme of health care delivery. A definite legislative sanction would, however, go far toward curbing any lingering doubts as to the risks inherent in employing such innovative personnel.

Attitudinal Studies

With the creation of this new role within the established health care system, questions concerning the degree of self-acceptance, role-set acceptance, patient acceptance, physician acceptance, and financial savings directed toward medical expenditures were raised. The evaluations of these points have been done or have been undertaken by the Graduate School of Business Administration.

Generally speaking, both patient and physician acceptance of the twenty-nine graduate physician's assistants has been high. From an initial study in self and role-set acceptance of eight graduate physician's assistants, it became evident that self-acceptance was necessary to maintain the career commitment with role acceptance being equally necessary for generating a maximum effectiveness within the system. The area of graduate self-identity developed as an important issue. The graduates felt they could not achieve identity or individuality in the medical center resulting because of competition for responsibilities with medical students, interns, and residents. Because of this need for identity and individuality, the drive to enter practice with physicians remains high.

From this initial evaluation, the necessity of other evaluations became evident. The second study was concerned with patient acceptance of the physician's assistant. Among the patient groups studied, there were no patients who exhibited a negative attitude toward the incorporation of the physician's assistant into the health team. The degree of acceptance correlated with the patient's understanding of the physician's assistant's role and his level of high educational attainment. Thus, no patient with six years of education or less enthusiastically accepted the physician's assistant. The second extreme dealt with those patients having at least a college education, none of whom were ambivalent (low acceptance) toward the physician's assistant. This group saw a need for him and viewed the physician's assistant as beneficial to the system. The greatest acceptance occurred between these two levels of education. The patient either

identified more with the system, or created a connection between the system's efficiency and his own personal benefit.

Patients on the lowest income levels showed a less enthusiastic acceptance, which was correlated with poor understanding and educational background. Those on the highly educated, affluent levels also felt some loss in status when they paid for "just a physician's assistant." Thus acceptance was greatest in the middle socio-economic group — $5,000 to $8,000 annual income per year. They felt sure of their status, unlike the lower income group, and were more free in judging the situation and assessing the value of this individual to themselves. This group was also fairly well informed and sophisticated concerning health affairs. The study also showed patient acceptance to be highest in the small community clinic. Interestingly enough, it is in just this area that the doctor shortage is the most severe.

An economic analysis revealed that the yearly expenditure required for training physician's assistants is approximately the same as the expenditure required for training medical students. Of course, their training is two years as compared with the five to ten years it takes to train a physician, consequently the total cost is markedly below that for training M.D.'s. The degree of augmentation of a physician's patient care output by a physician's assistant is under objective study at this time. Augmentation figures of 75 percent have been reported from most physicians using the graduates. One assistant working in an exceptionally busy family practice group has produced nearly 100 percent augmentation. The increased income generated is used in part to pay the assistant's salary, and it is hoped that in many cases the presence of a physician's assistant will delay or prevent an increase in the cost of physicians' services to the patient.

Physician acceptance cannot be answered on the basis of present experience because all physicians who have employed such individuals were favorable to the concept. It was of interest that most physicians using physician's assistants were not particularly concerned about setting limits on their potential activities. Most felt that this would be an individual matter, though it was conceded that it was currently a legal matter as well.

Opportunities for the Graduate

Skills and Functions

The training in the development of specific skills which the Physician's Assistant Program offers its students is directed toward making them stable and productive members of the health team and thereby provide opportunities for a career and for future growth in many health-related areas.

Graduates of the program can be employed by a physician or by a group of physicians. Within the Duke University Medical Center, graduates are needed in research laboratories, clinical areas, diagnostic laboratories, and special areas such as the renal center and the hyperbaric chamber. Outside the Medical Center there are infinite opportunities for employment by community-based physicians and clinics. In any case the physician's assistants' clinical endeavors will always be under the supervision of a physician.

Employment Opportunities

The need for the physician's assistant can be measured and evaluated in many ways, but perhaps one of the most significant ways is in viewing the employment opportunities. The available positions outnumber the graduates by over five-to-one. Almost daily, requests from all over the country are received for physician's assistants; however, as with requests for physicians, many of these must go unfilled. Even though the primary objective of the program is to fulfill the needs of the first line community physician, it is easy to realize how every segment of medical practice can function more efficiently by utilizing these intermediate level professional assistants.

Salary Range

At the time of the program's inception, the question of salary range was raised. It was felt that a professional person of this caliber would command an economically attractive income which in itself would be capable of encouraging career stability. However, two related items were quickly realized — if the income of the physician's assistant was too far out of line with that of the nurse, hard feelings could possibly arise, and in order to command a respectable income, the physician's assistant would be on a schedule closely resembling that of a physician. On the basis of these and other factors it was felt that a justifiable starting salary would be in the range of ten thousand dollars a year. The ultimate income of a physician's assistant will undoubtedly be based on his actual value to his physician-employer.

Utilization and Role

In order to fulfill the desired role, a physician's assistant must be able to participate in every setting in which his physician-employer functions. There is nothing to preclude the use of physician's assistants in the hospital setting as indicated by the status of the following three issues relating to such use of trained physician's assistants.

First, existing legislation in most states is compatible with utilizing

physician's assistants in the hospital setting so long as the assistant is under the supervision of a physician and functions within the limiting legal framework.

Second, the current position of the Joint Commission on Hospital Accreditation is compatible with the use of physician's assistants in the hospital setting. So far as is known, no health related professional organization has taken any stand in opposition to this issue.

Third, in all existing situations the issue of professional liability coverage has created no difficulty for the hospital, the physician, or the physician's assistant.

A procedure has evolved for implementing the necessary steps for adequate legal and ethical support. This procedure involves both the physician and the hospital as follows:

1. The physician who employs a physician's assistant and wishes to utilize him in the hospital setting should make a formal request to the hospital director for individual limited privileges for his assistant. This document should include: (*a*) information on the assistant's background, character, education, and training; (*b*) a detailed breakdown of the proposed functions of and desired privileges for the assistant; and (*c*) the proposed measures of control to be utilized and the limitations to be observed.
2. The hospital director, upon receipt of his request, should first check with the hospital legal counsel to determine what changes, if any, are necessary in the hospital charter and bylaws. The request would then be handled in accordance with the existing rules of operations.
3. After approval by the necessary committees and individuals within the organization, appropriate notifications can be made.

In the judgment of the administration, every physician's assistant should be employed by and be responsible to a physician. Such an assistant can be used by more than one physician, but one physician's assistant per two physicians is felt to be maximum ratio by all who have been instrumental in the training program to date. The reasons for this are many but are based primarily on two factors — the need for identification of the physician's assistant with a physician, and the realization of the responsibility required on the part of the physician toward the physician's assistant. To be sure, many needs could be fulfilled by using this type of assistant exclusively in a hospital setting, but such a utilization must include a bond of responsibility between the physician's assistant and his physician-employer.

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Academic Information

Curriculum

The educational curriculum for the training of physician's assistants covers a period of twenty-four months. Even though applicants may have taken some similar courses in their previous training they are requested to take all of the courses in the program. The reasons for this are to ensure uniformity of the graduates; because the emphasis of the content is directed toward the program goals and may, therefore, be different than other courses; and because experience has demonstrated that the courses serve as a good means for review. In those situations where an applicant seems so well qualified that nothing would be gained by participation in a course, he is given the opportunity to take the necessary examinations and upon satisfactory completion of these is allowed to omit the course. The educational program, though similar in many respects to other medically related programs, is intended to provide the necessary background for the development of a career as a physician's assistant and should not be considered as a stepping stone toward the eventual realization of a Doctor of Medicine degree.

Preclinical Curriculum

The preclinical curriculum covers an academic period of thirty-six weeks and is divided into three phases rather than two semesters. The first and third phases are each six weeks in duration and the second phase, twenty-four weeks. See the section on Courses of Instruction in this *Bulletin.*

Preclinical Schedule

Course Number	*Hours Lecture*	*Hours Laboratory*	*Total Hours*	*Credits*
Phase I (six weeks)				
PA 101 History, Philosophy, Ethics of Medicine	18	0	18	1
PA 103 Basic Clinical Laboratory	36	36	72	2
PA 105 Medical Terminology	18	0	18	1
PA 107* Inorganic Chemistry	18	0	18	1
PA 109* Introduction to Animal Experimentation	30	0	30	1
PA 185 Community Health	24	0	24	1
Phase II (24 weeks)				
PA 131 Clinical Microbiology	24	0	24	1
PA 133 Anatomy	48	48	96	2
PA 134 Physiology	72	0	72	2
PA 135* Chemical Biology	72	0	72	3
PA 137 Clinical Medicine	240	0	240	6
PA 139 Pharmacology	48	0	48	2
PA 141 Physical Evaluation	24	24	48	1
PA 143* Clinical Chemistry	16	32	48	2
PA 145 Diagnostic Procedures	16	32	48	2
PA 147 Animal Surgery	16	32	48	2
PA 193 Clinical Psychiatry	54	0	54	3
Phase III (six weeks)				
PA 181 Electrocardiography	24	0	24	1
PA 183 Radiology, Introduction	24	0	24	1
PA 189 Patient Evaluation	12	60	72	2
PA 187* Data Processing	18	12	30	1
Total (36 weeks)	812	244	1124	38

*See radiology curriculum.

Clinical Curriculum

The clinical curriculum of fifteen months consists of nine months (thirty-six weeks) of required rotations, and six months or twenty-four weeks of elective rotations. It is during this aspect of the training program that the student is expected to develop expertise in the application of his preclinical learning. See the section on Courses of Instruction for general course descriptions.

Clinical Schedule — Example

	Duration	*Credits*
Inpatient Service	2 months	6
Outpatient Service	2 months	6
Pulmonary Function	1 month	3
Administration	1 month	3
Health Clinic	1 month	3
Library Research*		1
Outside Physician	2 months	6
Elective†	2 months	6
Elective†	2 months	6
Elective†	2 months	6

*Successful completion of a library research project is required of all students.

†Electives selection in accordance with specialty training guidelines.

Clinical Specialty Training

General Medicine

	Course	*Duration*	*Credits*
Medical Inpatient Service	201	2 months	6 s.h.
Medical Outpatient Service	203	2 months	6 s.h.
Health Clinic	209	1 month	3 s.h.
Pulmonary Function	205	1 month	3 s.h.
Administration	207	1 month	3 s.h.
Outside Physician	213	2 months	6 s.h.
Elective		2 months	6 s.h.
Elective		2 months	6 s.h.
Elective		2 months	6 s.h.
Library Research	211		1 s.h.
		15 months	46 s.h.

General Pediatrics

Pediatric Inpatient Service	215	2 months	6 s.h.
Pediatric Outpatient Service	216	2 months	6 s.h.
Health Clinic	209	1 month	3 s.h.
Pulmonary Function	205	1 month	3 s.h.
Administration	207	1 month	3 s.h.
Outside Physician	213	2 months	6 s.h.
Elective†		2 months	6 s.h.
Elective†		2 months	6 s.h.
Elective†		2 months	6 s.h.
Library Research	211		1 s.h.
		15 months	46 s.h.

†Rotation selection from PA 511-520, 416.

General Surgery

	Course	Duration	Credits
Medical Inpatient Service	201	2 months	6 s.h.
General Surgery	412	2 months	6 s.h.
Surgical Outpatient Clinic-ER	233	2 months	6 s.h.
Infectious Disease	800	1 month	3 s.h.
Acute Care Unit	420	1 month	3 s.h.
Plastic Dressing Room	418	1 month	3 s.h.
Elective*		2 months	6 s.h.
Elective*		2 months	6 s.h.
Elective*		2 months	6 s.h.
Library Research	211		1 s.h.
		15 months	46 s.h.

*Elective selection from PA 312, 314, 315.

Internal Medicine

Medical Inpatient Service	201	2 months	6 s.h.
Medical Outpatient Service	203	2 months	6 s.h.
Health Clinic	209	1 month	3 s.h.
Pulmonary Function	205	1 month	3 s.h.
Administration	207	1 month	3 s.h.
Outside Physician	213	2 months	6 s.h.
Elective*		2 months	6 s.h.
Elective*		2 months	6 s.h.
Elective*		2 months	6 s.h.
Library Research	211		1 s.h.
		15 months	46 s.h.

*Elective selection from PA 311-323.

Allergy and Respiratory Disease

	Course	Section	Duration	Credits
Medical Inpatient Service	201		2 months	6 s.h.
Medical Outpatient Service	203		2 months	6 s.h.
Health Clinic	209		1 month	3 s.h.
Pulmonary Function	205		1 month	3 s.h.
Administration	207		1 month	3 s.h.
Outside Physician	213		2 months	6 s.h.
Allergy & Respiratory Dis. I	311	1	2 months	6 s.h.
Allergy & Respiratory Dis. II	311	2	2 months	6 s.h.
Allergy & Respiratory Dis. III	311	3	2 months	6 s.h.
Library Research	211			1 s.h.
			15 months	46 s.h.

Cardiology

	Course	Section	Duration	Credits
Medical Inpatient Service	201		2 months	6 s.h.
Medical Outpatient Service	203		2 months	6 s.h.
Pulmonary Function	209		1 month	3 s.h.
Health Clinic	205		1 month	3 s.h.
Administration	207		1 month	3 s.h.
Outside Physician	213		2 months	6 s.h.
Cardiology I	312	1	2 months	6 s.h.
Cardiology II	312	2	2 months	6 s.h.
Cardiology III	312	3	2 months	6 s.h.
Library Research	211			1 s.h.
			15 months	46 s.h.

Dermatology

	Course	Section	Duration	Credits
Medical Inpatient Service	201		2 months	6 s.h.
Medical Outpatient Service	203		2 months	6 s.h.
Health Clinic	205		1 month	3 s.h.
Pulmonary Function	209		1 month	3 s.h.
Health Administration	207		1 month	3 s.h.
Outside Physician	213		2 months	6 s.h.
Dermatology I	323	1	2 months	6 s.h.
Dermatology II	323	2	2 months	6 s.h.
Dermatology III	323	3	2 months	6 s.h.
Library Research	211			1 s.h.
			15 months	46 s.h.

Endocrinology

	Course	Section	Duration	Credits
Medical Inpatient Service	201		2 months	6 s.h.
Medical Outpatient Service	203		2 months	6 s.h.
Health Clinic	209		1 month	3 s.h.
Pulmonary Function	205		1 month	3 s.h.
Administration	207		1 month	3 s.h.
Outside Physician	213		2 months	6 s.h.
Endocrinology I	314	1	2 months	6 s.h.
Endocrinology II	314	2	2 months	6 s.h.
Endocrinology III	314	3	2 months	6 s.h.
Library Research	211			1 s.h.
			15 months	46 s.h.

Gastroenterology

	Course	Section	Duration	Credits
Medical Inpatient Service	201		2 months	6 s.h.
Medical Outpatient Service	203		2 months	6 s.h.
Health Clinic	209		1 month	3 s.h.
Pulmonary Function	205		1 month	3 s.h.
Administration	207		1 month	3 s.h.
Outside Physician	213		2 months	6 s.h.
Gastroenterology I	315	1	2 months	6 s.h.
Gastroenterology II	315	2	2 months	6 s.h.
Gastroenterology III	315	3	2 months	6 s.h.
Library Research	211			1 s.h.
			15 months	46 s.h.

Hematology

	Course	Section	Duration	Credits
Medical Inpatient Service	201		2 months	6 s.h.
Medical Outpatient Service	203		2 months	6 s.h.
Health Clinic	209		1 month	3 s.h.
Pulmonary Function	205		1 month	3 s.h.
Health Administration	207		1 month	3 s.h.
Outside Physician	213		2 months	6 s.h.
Hematology I	316	1	2 months	6 s.h.
Hematology II	316	2	2 months	6 s.h.
Hematology III	316	3	2 months	6 s.h.
Library Research	211			1 s.h.
			15 months	46 s.h.

Hyperbaric Medicine

	Course	Section	Duration	Credits
Medical Inpatient Service	201		2 months	6 s.h.
Medical Outpatient Service	203		2 months	6 s.h.
Health Clinic	209		1 month	3 s.h.
Pulmonary Function	205		1 month	3 s.h.
Health Administration	207		1 month	3 s.h.
Outside Physician	213		2 months	6 s.h.
Hyperbaria I	317	1	2 months	6 s.h.
Hyperbaria II	317	2	2 months	6 s.h.
Hyperbaria III	317	3	2 months	6 s.h.
Library Research	213			1 s.h.
			15 months	46 s.h.

Industrial Medicine

	Course	*Section*	*Duration*	*Credits*
Medical Inpatient Service	201		2 months	6 s.h.
Medical Outpatient Service	203		2 months	6 s.h.
Health Clinic	209		1 month	3 s.h.
Pulmonary Function	205		1 month	3 s.h.
Outside Physician	213		2 months	6 s.h.
Rehabilitation	419		2 months	6 s.h.
Environmental Health	701		1 month	3 s.h.
Industrial Hygiene Lab.	702		2 months	6 s.h.
Industrial Hygiene Survey	703		2 months	6 s.h.
Library Research	211			1 s.h.
			15 months	46 s.h.

Nephrology

	Course	*Section*	*Duration*	*Credits*
Medical Inpatient Service	201		2 months	6 s.h.
Medical Outpatient Service	203		2 months	6 s.h.
Health Clinic	209		1 month	3 s.h.
Pulmonary Function	205		1 month	3 s.h.
Administration	207		1 month	3 s.h.
Outside Physician	213		2 months	6 s.h.
Nephrology I	319	1	2 months	6 s.h.
Nephrology II	319	2	2 months	6 s.h.
Nephrology III	319	3	2 months	6 s.h.
Library Research	211			1 s.h.
			15 months	46 s.h.

Neurology

Medical Inpatient Service	201		2 months	6 s.h.
Medical Outpatient Service	203		2 months	6 s.h.
Health Clinic	209		1 month	3 s.h.
Pulmonary Function	205		1 month	3 s.h.
Administration	207		1 month	3 s.h.
Outside Physician	213		2 months	6 s.h.
Neurology I	320	1	2 months	6 s.h.
Neurology II	320	2	2 months	6 s.h.
Neurology III	320	3	2 months	6 s.h.
Library Research	211			1 s.h.
			15 months	46 s.h.

Radiology

First Year

Regular Course	*Replacement*	*Course Name*	*Hours*	*Credits*
PA 143	PA 160	Pharmacology & Physiology of Contrast Materials	48	1
PA 145	PA 161	Principles of Radiation Physics	48	2
PA 183	PA 162	Principles of Radiobiology	72	2
	PA 163	Basic Radiation Protection	24	1
			192	6

Second Year

Rotations

	Course	*Section*	*Duration*	*Credits*
Gastrointestinal Radiology I	601		2 months	6 s.h.
Gastrointestinal Radiology II	602		3 months	9 s.h.
Uro-Radiology	603		2 months	6 s.h.
Trauma-Soft Tissue and Bone	604		1 month	3 s.h.
Chest Radiology I	605		1 month	3 s.h.
Chest Radiology II	606	1	2 months	6 s.h.
Chest Radiology III	606	2	2 months	6 s.h.
Outside Physician	607		2 months	6 s.h.
Library Research	211			1 s.h.
			15 months	46 s.h.

*See Prerequisites #5.

Neurosurgery

	Course	*Section*	*Duration*	*Credits*
Medical Inpatient Service	201		2 months	6 s.h.
General Surgery	412		2 months	6 s.h.
Surgical Outpatient Clinic-ER	233		2 months	6 s.h.
Acute Care Unit	420		1 month	3 s.h.
Neurology	320		2 months	6 s.h.
Endocrinology	314		2 months	6 s.h.
Orthopedics	415		2 months	6 s.h.
Neurosurgery	413		2 months	6 s.h.
Library Research	211			1 s.h.
			15 months	46 s.h.

Ophthalmology

Surgical Inpatient Service	231		2 months	6 s.h.
Surgical Outpatient Service	233		2 months	6 s.h.
Health Clinic	209		1 month	3 s.h.
Pulmonary Function	205		1 month	3 s.h.
Health Administration	207		1 month	3 s.h.
Outside Physician	213		2 months	6 s.h.
Ophthalmology I	414	1	2 months	6 s.h.
Ophthalmology II	414	2	2 months	6 s.h.
Ophthalmology III	414	3	2 months	6 s.h.
Library Research	211			1 s.h.
			15 months	46 s.h.

Orthopaedic Surgery

Medical Inpatient Service	201	2 months	6 s.h.
General Surgery	412	2 months	6 s.h.
Surgical Outpatient Clinic-ER	233	2 months	6 s.h.
Infectious Disease	800	1 month	3 s.h.
Anatomy Lab	421	1 month	3 s.h.
Rheumatology	322	1 month	3 s.h.
Neurology	320	2 months	6 s.h.
Orthopedics	415	2 months	6 s.h.
Neurosurgery	413	2 months	6 s.h.
Library Research	211		1 s.h.
		15 months	46 s.h.

Otolarynology

General Pediatrics	511	2 months	6 s.h.
General Surgery	412	2 months	6 s.h.
Surgical Outpatient Clinic-ER	233	2 months	6 s.h.
Infectious Disease	800	1 month	3 s.h.
Plastic Dressing Room	418	1 month	3 s.h.
Pulmonary Function	205	1 month	3 s.h.
Neurology	320	2 months	6 s.h.
Neurosurgery	413	2 months	6 s.h.
Otolaryngology	416	2 months	6 s.h.
Library Research	211		1 s.h.
		15 months	46 s.h.

Plastic Surgery

Medical Inpatient Service	201	2 months	6 s.h.
General Surgery	412	2 months	6 s.h.
Surgical Outpatient Clinic-ER	233	2 months	6 s.h.
Infectious Disease	800	1 month	3 s.h.
Nephrology	319	2 months	6 s.h.
Plastic Surgery	418	2 months	6 s.h.
Otolaryngology	416	2 months	6 s.h.
Neurosurgery	413	2 months	6 s.h.
Library Research	211		1 s.h.
		15 months	46 s.h.

Urology

Medical Inpatient Service	201	2 months	6 s.h.
General Surgery	412	2 months	6 s.h.
Surgical Outpatient Clinic-ER	233	2 months	6 s.h.
Infectious Disease	800	1 month	3 s.h.
Nephrology	319	2 months	6 s.h.
Urology	417	2 months	6 s.h.
Elective*		2 months	6 s.h.
Elective*		2 months	6 s.h.
Library Research	211		1 s.h.
		15 months	46 s.h.

*Elective selection from PA-412 to 418.

Resources for Study

Libraries

The new Perkins Library, among the first seventeen university libraries in the country, contains 1,940,146 volumes and 4,000,000 manuscripts. About 80,000 volumes are added annually. Separate departmental and professional school libraries provide notable collections in the several disciplines.

More detailed information may be obtained in a *Student's Guide to the General Library,* available upon request to the Librarian of the University.

The Medical Center Library, located in the Davison Building, attempts to provide all services and collections necessary to further educational, research, and clinical activities in the medical field. Extensive reference and bibliographical services are provided. The collection exceeds 90,000 volumes, and 1,700 periodicals are received currently.

The Trent Collection on the history of medicine is an unusually fine one, rich in manuscripts and rare books, and provides an opportunity for study and research as well as casual reading in the field.

Hospitals

Duke Hospital is an integral part of the Medical Center and currently has 800 beds and 23 bassinets. The hospital performs the dual functions

of professional education and patient care. Comprehensive diagnostic and treatment facilities are provided. Different levels of patient care are provided, ranging from the intensive care units, through the conventional treatment sections to minimal care units. Private, semiprivate, and ward accommodations are available. Over 20,000 patients are admitted each year. The approximate daily census by service is as follows: Surgery, including the surgical subspecialties, 310; Medicine, 205; Pediatrics, 55; Psychiatry, 50; and Obstetrics-Gynecology, 50. Surgical facilities include 18 operating rooms where over 15,000 surgical procedures are performed annually. Four obstetrical delivery rooms are maintained. Special diagnostic and treatment units are also available, such as the recovery room, cardiac catheterization laboratory, hemodialysis laboratory, and hyperbaric oxygenation chamber.

The outpatient services are comprised of the public clinics, the private patient clinics, the employee health office, and the emergency service. Over 250,000 visits are made each year to these units. Close working relationships between Duke Hospital and other various outside health agencies enhance continued care of the patients.

The clinical faculty of the Duke University School of Medicine forms the medical staff of Duke Hospital. Thus this group not only participates in both undergraduate and graduate medical education but also in active medical practice within the hospital and the private diagnostic clinics. Duke Hospital is approved for internship and residency training by the Council on Medical Education and Hospitals of the American Medical Association and conducts an active educational program involving approximately 340 house staff members. The hospital is fully accredited by the Joint Committee on Accreditation of Hospitals.

The Durham Veterans Administration Hospital is located within walking distance of the School of Medicine. The full-time professional staff are all members of the faculty of Duke University School of Medicine. This 489-bed general hospital provides an opportunity for closely integrated student teaching and house staff training.

Administration and Registration

Admission Requirements

New students are admitted for the acadmic year of school beginning in the fall. Since the enrollment is limited, the Committee on Admissions selects students who, in its judgment, are best qualified to benefit from the educational advantages which the program offers. Selection is based on the academic record of the candidate, on test scores, and on satisfactory evidence of good character and general fitness. Because of the academic demands on the student during the two year training program, certain prerequisites have been established for qualification as a candidate for the program.

Prospective students are urged to broaden their reading and to make the acquaintance of a broad variety of books and magazines. At the same time they should make every opportunity to increase their competence in writing. Those who cannot write simple, clear, grammatical English prose will be progressively at a serious disadvantage in the competition for admission and also the general work of the program. Careful attention to correct English in all correspondence and on application blanks cannot be too seriously stressed for candidates for admission.

Prerequisites

1. A high school diploma or its equivalent by examination. Preference is given to candidates with two or more years of successfully completed

general college course work. All applicants should have some science courses in their academic background.

2. Previous experience in the health field with at least one year involving extensive direct patient contact.

3. Three character references and personal evaluations. These should be completed on the forms provided by the Committee on Admissions. One form should be completed by a physician with whom the applicant has worked, one by a commanding officer or supervisor, and one by an unrelated acquaintance of five years or more.

4. Completion of the Scholastic Aptitude Test and the Math Achievement Test Level I of the College Entrance Examination Board. These tests are given on the first Saturday of March, May, November, and December, and on the second Saturday of January and July. Arrangements for taking these examinations can be made through the Educational Testing Service. Applicants from the west, southwest, and all foreign countries should address their correspondence to: College Entrance Examination Board, P. O. Box 1025, Berkeley, California 94701. Applicants from the east, midwest, and south should address their correspondence to: College Entrance Examination Boards, P. O. Box 592, Princeton, New Jersey 08540. Information can also be obtained through local high schools, military education offices, and local Educational Testing Service offices in many cities. When taking the examinations the student will have to fill in the college that is to receive the test results. *Our code number is 5174. Do not fail to take that number with you when you take the examination.*

5. Applicants seeking admission to the radiology curriculum must submit evidence of the satisfactory completion of a certified, two year radiology program plus a minimum of two years experience as a registered radiological technician.

6. Candidates should allow at least three weeks for the receipt of requested information and applications must be received by the testing center one month prior to the date of the examination. Applicants should therefore begin preparation for the examinations at least two months prior to the examination date. Because final student selection begins in the spring all applicants must take their examinations no later than May of the year they wish to begin.

It should be noted that the Scholastic Aptitude Test given in the mornings consists of both verbal and math sections. The math section of the Scholastic Aptitude Test should not be confused with the Math Achievement Test Level One which is given in the afternoon. This latter test is also required.

7. Application files must be complete by April 15 (except for test results which are due in May) of the year for which admission is requested. To be considered complete they must contain the following:

a. A completed application form with photograph.
b. Transcript records from high school, college, military schools, and all other academic training.
c. Three completed personal evaluation forms.
d. Appropriate College Entrance Examination Board test results.

Application for Admission

Application forms may be obtained by writing to the Physician's Assistant Program, Committee on Admissions, P. O. Box 2914, Duke University Medical Center, Durham, North Carolina 27706.

Selection

Selections are made prior to July 1 for the students entering the following September. The data on each candidate are carefully screened by the Committee on Admissions and a personal interview will be arranged at Duke University for those with satisfactory credentials. Final notification will be made by July 1 as to whether or not an applicant has been accepted for admission. Applicants will be considered without regard to race, creed, sex, or national origin.

Registration and Orientation

Students will be registered on the first day of classes. Registration begins promptly at 8:30 a.m. Students who report at a later time will be required to pay a $10.00 late registration fee. In no case will registration be considered after the end of the first week of classes. Orientation will immediately follow registration procedures and will last the remainder of the day. During orientation, each student is required to undergo a physical examination under the program's direction. Students whose condition needs further observation may be admitted tentatively, but must cancel their applications if findings prove them physically unable to pursue the progam.

Identification Cards

On registration day each student is issued an identification card which is to be carried at all times. The card secures library privileges, health services, entry into certain athletic events, and admission to other functions entitled by special student status. A student is expected to present the card at the request of any authorized official of the University.

These cards are not transferable and their loss should be reported immediately to the Program Director's office. The cost of a new identification card is $5.00.

Academic and Non-Academic Regulations

Academic Regulations

An over-all indication of the quality of student performance is provided by assigning quality points per semester hour of a course as follows:

Grade	*Quality Points*
A+	4.0
A	4.0
A—	3.7
B+	3.3
B	3.0
B—	2.7
C+	2.3
C	2.0
C—	1.7
D+	1.3
D	1.0
D—	1.0
F	0.0

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The course grade is not based on examinations alone but also on the quality of the student's classroom work and written work throughout the didactic phases of the program.

A—Excellent. An *A* indicates achievement of distinction. It involves excellence in several, if not all, of the following aspects of the work — completeness and accuracy of knowledge, intelligent use of knowledge, independence of work, and originality.

B—Good. A *B* indicates general achievement superior to the acceptable standard defined as *C*. It involves excellence in some aspects of the work as indicated in the definition of an *A*.

C—Average. A *C* indicates the acceptable standard for graduation from this program. It involves such quality and quantity of work as may be fairly expected of a student of normal ability who gives to the course a reasonable amount of time, effort, and attention. Such acceptable standards should include the following factors — familiarity with the content of the course, familiarity with the methods of study of the course, full participation in the work of the course, and the ability to write about the subject in intelligible English.

D—Lowest Passing Grade. A *D* indicates work which falls below the acceptable standard defined as *C* but which is of sufficient quality and quantity to be counted in the hours of certification if balanced by superior work in other courses.

F—Failure. An *F* indicates failure that may not be made up except by repeating the course. All failures in the preclinical section must be made up before the student is eligible to participate in the clinical section.

Students with failing grades in any of the preclinical courses will be ineligible to continue in the clinical portion until the failures have been made up.

Students must have a quality point ratio of at least 2.0 before starting the clinical portion of the Physician's Assistant Program.

Grading

Final grades of performance in academic work are sent to the students at the end of each phase of the preclinical portion and after each clinical rotation while enrolled in the program. Students will be notified of any unsatisfactory performance. Progress through each phase of the program is monitored by the faculty in charge. Further evaluations are based on writen and oral examinations. The student is certified as a physician's assistant upon successful completion of all preclinical and clinical material along with passing scores on the written, oral, and practical board examinations at the end of the twenty-four month period.

Incomplete Work

If because of illness or other emergency a student's work in a course is incomplete, he may receive an *I* for the course instead of a final grade.

Incomplete courses must be completed before the close of the succeding phase; otherwise, the *I* is converted to an *F* and the course must be retaken before the student can receive any credit for it. In case a student whose work is incomplete is also absent from the final examination, an *X* is received for the course.

Class attendance regulations specifically place the responsibility for class attendance upon the individual student. A student is expected to attend his classes regularly and punctually. It should be recognized that one of the most vital aspects of a residential college experience is attendance in the classroom, and that the value of this academic experience cannot be fully measured by testing procedures alone. The members of the student body are considered sufficiently mature to appreciate the necessity of regular attendance, to self-discipline essential for such performances, and conversely, to recognize and accept the consequences of failure to attend. Instructors are privileged to refer to the Program Director for appropriate action any student who in their opinion is causing his work or that of the class to suffer because of absences or lateness.

Absences from classes due to illness will be excused when certified by a proper medical official. Absences from classes due to authorized representation of the University may be excused. Officials in charge of groups representing the University are required to submit the names of those persons to be excused to the Program Director's office forty-eight hours in advance of the hour when their absences are to commence.

Non-Academic Regulations

Accepting admission to the Physician's Assistant Program obligates the student to all Duke University regulations. The regulations, rights, and responsibilities of the student are incorporated in a student handbook issued to the students at the time of registration.

Certification

Student's progress through the course is carefully monitored by the faculty. During the clinical experience the students are evaluated by the faculty and staff in charge at the completion of their rotations. The final week of the twenty-four month program is set aside to allow the student the opportunity for demonstrating his abilities in oral, written, and practical evaluations. Upon satisfactory completion of the requirements, the student is then certified by Duke University as a physician's assistant.

Financial Information

Tuition and Fees

At the present time students of the Physician's Assistant Program are classified as Duke University Special Students and are therefore not required to pay tuition. The only required fees are the $5.00 application fee, and a $10.00 registration fee payable each year for participation in the Student Government Society. The application fee must accompany the application, and the other fees will be collected on the day of registration. An additional fee of $10.00 will be charged to students who do not register at the designated time.

Student Expenses

The following table represents an estimate of a student's necessary expenses for the twelve month academic year. Allowances for clothing, travel, and other miscellaneous expenses must be added to this estimate. These of course will vary considerably depending on the needs and tastes of the individual.

Room — Single	$ 720
Room — Married	$1450
Board	$ 720
Books	$ 150

Equipment	$ 250
Uniforms	$ 30

Financial Assistance

The Physician's Assistant Program is approved for veterans educational benefits (G.I. Bill) for those who are eligible.

Limited funds are available for student support and are granted on the basis of needs as determined by application to the Director. Applications for assistance will be considered only after registration. Students should not anticipate financial assistance by the program as a means of support.

Employment Opportunities

Part-time employment for students is available in many areas of the Medical Center. Employment that can net the student about $100.00 per month and yet not jeopardize his education is generally available. Students must comply with the academic schedule and are prohibited from working more than fifteen hours per week.

Employment for students' wives is available in or near the University. Typical salaries are three to five hundred dollars per month for secretaries, practical nurses, and other technically trained people; and four to seven hundred dollars per month for registered nurses, medical technologists, and other professionally trained people.

Student Life

Living Accommodations

Housing

Single students are responsible for making their own arrangements. Even though no campus housing is available, suitable quarters can be rented in areas near the Medical Center.

The University contemplates continuing its lease for 104 two- and three-bedroom apartment units for use by married graduate and professional students including married students in the Physician's Assistant Program. As compared with similar apartment properties in the Durham area, rental of the Duke-leased units provides a financial advantage to most students accepting leases through the University Department of Housing Management.

Detailed information about University housing facilities for married students, including rental rates, will be provided on request by the Department of Housing Management, Duke University, Duke Station, Durham 27706.

Dining Facilities

Several dining facilities located in and near the Medical Center are available to the students. In the Duke University Union Building there are two cafeterias offering multiple-choice menus and a dining area, the Oak Room, which offers full menus and *a la carte* items.

The Hospital offers a cafeteria service with multiple-choice menus for employees and professional students.

Student Health Services

Students are treated through the Employee Health Clinic and Faculty Health Clinic during the day and in the Emergency Room after 5:00 p.m. They have the opportunity of obtaining health coverage through the North Carolina Blue Cross & Blue Shield Association policy made available to students and employees of the University and Medical Center. Students will be given a complete physical examination at the beginning of the first year, which includes a roentgen examination of the chest and various other laboratory studies. Annual physical examinations thereafter are also required.

Organizations

There are two organizations open to students enrolled in the Physician's Assistant Program. Participation in one of these, the Student Government Society, is mandatory and costs $10.00 per year. In the professional organization, the American Association of Physician's Assistants, participation is on a voluntary basis by both students and graduates. Fees for participation in the latter organization are $12.00 per year to students and $20.00 per year for graduates.

The Student Government Society officers include the president, a secretary, and class presidents and representatives from each class elected by the student body and the individual classes respectively. An executive committee, chaired by the president and composed of the secretary and the class presidents, serves as the official student voice of the Physician's Assistant Program. The responsibilities of the Student Government Society include the ability to represent student views and express opinions on various subjects to the faculty and administration; to act as a service organization for the student body responsible for student services deemed feasible by the organization and approved by the Physician's Assistant Program administrators; and to assist in the orientation of the freshman students.

A major responsibility of the Student Government Society is the preservation of the honor code which is a proud tradition of the Duke University Medical Center. The prevailing opinion has been that if a student cannot withstand the relatively minor stresses and temptations arising during his training, he can never be expected to act with integrity under the much greater demands and responsibilities he will

encounter as a physician's assistant. Thus, a strong honor system exists to develop and maintain honesty during the course of training. Each student, on or before entering the program, is required to sign a statement expressing his understanding and familiarity with the honor code and his willingness to abide by its provisions. The Student Government Society maintains an Honor Council, chaired by the president and comprised of the secretary and the class presidents and representatives to try students accused of any infringements of the honor code. The program administration serves to recommend the disposition of a student found guilty by the Honor Council.

The professional organization, incorporated in 1968 as the American Association of Physician's Assistants (AAPA), provides an active professional program with the cooperation of the students and graduates directed toward the objectives of program development, professional ethics and guidelines, and continuing education.

Motor Vehicle Registration

Each motor vehicle operated on the Duke University campuses by students must be registered within five days after operation on the campus begins, and thereafter must display the proper registration emblem.

To register a vehicle, the student must present the following documents: (1) a state vehicle registration certificate; (2) a valid driver's license, and (3) satisfactory evidence of automobile liability insurance as required by North Carolina — $10,000 per person, $20,000 per accident for personal injuries and $5,000 property damage.

Parking, traffic, and safety regulations will be given each student who registers his vehicle. Students are expected to abide by these regulations.

University Regulations

Possession and Use of Alcoholic Beverages

In the State of North Carolina, it is unlawful for the persons under twenty-one years of age to purchase, possess, or use certain beverages containing alcohol. The University neither condones the illegal purchase or use of such beverages by its students nor countenances the serving of them to students under age. Moreover, it prohibits the consumption by any person or persons of these beverages on the University grounds or in its non-residential buildings. Within these limits, the University is prepared to leave to the individuals directly concerned the decision whether

or not lawfully to possess or drink the beverages in question in the residential limit. The living group remains responsible for the general tone of each area of residence, however, and may by majority vote adopt house regulations more limiting than the laws of the State.

The attention of all students is called to sections of the General Statutes of North Carolina (see Appendix A).

Possession and Use of Certain Drugs

Duke University prohibits its members to possess, use, or distribute illegal drugs, including opiates, barbiturates, amphetamines, marijuana, and hallucinogens, except for legally authorized medical purposes and scientific research. Both federal and North Carolina laws forbid unauthorized possession and distribution of drugs of the classes specified. In addition, the presence and use of many of these drugs within the University community are contrary to the intellectual and educational purposes for which the University exists.

The University recognizes that ignorance or innocence concerning such drugs threatens the safety of members of its community. It therefore seeks to provide as much information as it can concerning consequences of harmful drugs. The University recognizes also that the illicit use of drugs may reflect emotional problems and is prepared to assist its members involved in their use through medical and psychiatric counseling. Nevertheless, the University considers a violation of the drug prohibition a serious matter and reserves the right to take action appropriate to the circumstances of each case.

Action taken by the University in all cases of drug violation will be guided by a concern both for the emotional and physical welfare of the person involved and for the maintenance of a suitable educational environment for all members of the University.

Rules. Alleged violations of the policy stated in paragraph 1 above will be adjudicated by the appropriate deans, or in the case of nonstudents, by comparable authorities, and their appointed delegates. It is expected that deans' staffs will exercise professional judgment in referring indicated cases to University health and counseling services, in keeping with paragraphs 2 and 3 of the policy stated above.

The two gounds which may constitute occasion for the assessment of penalties are:

a. Conviction of a member of the University on a drug charge by a court of law.

b. A finding by the appropriate University Tribunal, in conformity with the principle of due process, of sufficient evidence that a member of the University has violated the drug policy.

The maximum penalty to be imposed within the University upon a student for the possession or use of marijuana shall be suspension; for the possession or use of other illegal drugs, or the distribution of any

illegal drug, the maximum penalty of the University is expulsion. Other members of the University shall be liable to appropriate comparable penalties.

See section B and C of the Appendix for federal and state statutes pertaining to the possession and use of certain drugs.

Nondiscrimination and Off Campus Facilities

As University policy prohibits discrimination in any way on the basis of race, creed, or national origin, it is required that University personnel and campus organizations govern themselves accordingly. This covers the official activities sponsored, financed, and controlled by these groups whether the activities are held on or off campus. If they are held off campus, the use of facilities where discrimination is practiced is prohibited. Individual students, faculty members, or private groups are free, of course, to conduct their personal affairs as they see fit.

Pickets and Protests

Disruptive picketing, protesting, or demonstrating on Duke University property or at any place in use for an authorized University purpose is prohibited.

Courses of Instruction

Preclinical Courses

PA 101. *History, Philosophy, and Ethics of Medicine.* An eighteen hour lecture course designed to provide knowledge and understanding of current ethical standards by means of historical development and the orientation of these ethical standards into the current framework of the health team structure provides students with the ability to observe and apply these standards in the various settings and relationships in which they function. In addition, emphasis is placed on an historical overview of significant medical facts in the development and use of non-physician members of the medical team. The remaining portion is delegated to analysis and application of medical and paramedical roles toward the fulfillment of current and future medical needs of society. 1 s.h. *Howard*

PA 103. *Basic Clinical Laboratory.* A seventy-two hour lecture-laboratory course designed to introduce the use of laboratory equipment and the obtaining and processing of various specimens. Each student develops the capability of accurately performing numerous fundamental laboratory procedures including a complete blood count, urinalysis, and Gram stain. The interpretation and usefulness of laboratory data in physical diagnosis and treatment is stressed. In addition, during the laboratory portion, students develop a proficiency with such procedures as collecting needed chemistry samples. 2 s.h. *McQueary*

PA 105. *Medical Terminology.* An eighteen hour lecture course that (1) formulates a working knowledge of medical etymology through the study of Greek and Latin word roots and the evaluation and correction of medical records and other forms; (2) develops an early understanding of the accepted methods for recording significant historical, physical, and clinical data; and (3) emphasizes the necessity of proper spelling, correct punctuation, and legible penmanship. 1 s.h. *Kernodle*

PA 107. *Inorganic Chemistry.* An eighteen hour lecture course which teaches the student fundamental concepts, measurements and problem-solving, matter and its classification, periodic classification of the elements, chemical bonds, writing chemical formulas, empirical and molecular formulas, equations and mass relationships, the gas laws, the mole and volume relationships of gases, solutions, particles, acids and bases, pH and salts, standard solution and titration, and chemical equilibrium. This accomplishes a fundamental systematic study of the nature of matter and its properties, combining theoretical and applied chemistry. 1 s.h. *Spooner*

PA 109. *Introduction to Animal Experimentation.* A thirty-hour lecture course that presents (1) the extrinsic and intrinsic causes of disease due to a nutritional excess of deficiency; (2) the zoonodic management of disease transmission to man and the necessity for food hygiene; (3) the transmission of disease and the basics of epidemiology; (4) the common and specific diseases transmitted from animal to man to include rabies, leptospirosis, salmonellosis, brucellosis, and the mycoses; and (5) the selection and handling of various experimental animals. 1 s.h. *Vakilzadeh*

PA 131. *Bacteriology.* A twenty-four hour course designed as an introduction into the clinical applications of bacteriology and microbiology. A study is made of the common bacteria, fungi, and viruses that cause disease in man. The student becomes acquainted with the proper methods of specimen collection, handling, and identification and the methods and procedures employed in bacteriological laboratories. The instruction is designed to give the student a clear concept of: (1) how organisms gain entrance to the body; (2) the types of toxins which they produce; (3) the nature of the immune bodies which are produced by the host; and (4) the methods of preventing the disease by active and passive immunization. 1 s.h. *Osterhout*

PA 133. *Anatomy* . The core course in anatomy constitutes ninety-six hours during a twenty-four week period in Phase II. The gross anatomy of the head, neck, trunk, back, pectoral and pelvic girdles, and the limbs as well as the interior of the cranium, including the gross anatomy of the ear, orbit, oral and nasal passages, paranasal sinuses, and, finally, neuroanatomy is presented. Instruction is designed to be as informal and as nearly individual as possible. General principles and the functional viewpoint of living anatomy are stressed in the hope that the

student may be stimulated to secure a working knowledge of anatomy in the broadest sense. Patients exemplifying anatomical principles are presented, some within the classroom, others over live television or videotape at the appropriate time in the students' learning process. All of the above is integrated with the physiology, patho-physiology, and clinical medicine taught during Phase II. 2 s.h. *Anatomy Staff*

PA 134. *Physiology.* The core course in physiology consists of seventy-two hours of lectures over a twenty-four week period in the second phase. The course includes the following topics: (1) theory of diffusion of metabolizing systems; (2) osmotic equilibrium and transport processes; (3) cellular basis of activity in skeletal, cardiac, and smooth muscle; (4) ionic properties of muscle membranes; (5) molecular basis of contraction; (6) cardiac electrophysiology; (7) development of cardiac action potentials; (8) processing and exchange of gases with the atmosphere, transport of carbon dioxide and oxygen, and exchanges of gases in the pulmonary and systemic capillaries; (9) mechanism of action of hormones, their effect on cell membrane permeability, enzyme systems activity, growth regulation, osmoregulation, and reproduction; (10) neurophysiology to include neurone synaptic interrelationships and transmitter substances. Instruction is on a formal basis with no laboratory experience. This course is integrated with the anatomy, pathology, and clinical medicine courses during Phase II. 2 s.h. *Physiology Staff*

PA 135. *Essentials of Chemical Biology.* A twenty-four week seventy-two hour lecture presentation of the fundamentals of inorganic, organic, and biological chemistry through lectures, laboratory exercises, and demonstrations. The course is outlined to focus attention on the basic theories and laws of chemistry and physics as applied to the structures and function of living cells, tissues, organic systems, and the whole organism, particularly man. Students become acquainted with more frequently used medical laboratory equipment, chemicals, techniques, and the mathematical calculations used in handling chemical problems. Students perform those qualitative procedures essential for understanding basic concepts of these two areas of chemistry as they apply to physiological mechanisms and processes. An introduction to metabolic processes is considered by a study of the environment and nutrition of man, respiration and energy requirements, and the mechanisms necessary for regulating and maintaining homeostasis. Consideration is also given to the pathological interruption of these control mechanisms. 3 s.h. *Spooner*

PA 137. *Introduction to Clinical Medicine.* A twenty-four week, 240 hour course providing the basic direction for the core curriculum of Phase II. Its purpose is to acquaint students with the common pathologic and psychosomatic disorders seen in clinical medicine. Lectures are given by physicians, nurses, dieticians, physical therapists, and specialists in other related disciplines, for the purpose of developing techniques of planning total patient care based on the knowledge and understanding

of a disease's etiology, pathology, signs and symptoms, clinical course, complications, prognosis and prophylaxis as well as the personal circumstances surrounding the patient. Each student is exposed to the patient, his family, and the ward staff. He follows the patient's course for several days, and then develops a written and oral presentation in accordance with hospital guidelines, presenting the patient to the class, at which time he directs the class discussion concerning the prognosis, therapeutic plan, and future therapy. 6 s.h. *Staff*

PA 139. *Pharmacology.* A forty-eight hour lecture course taught during the core phase that: (1) introduces the student to the scope of pharmacology and its relation to other sciences; (2) develops an analytical approach to drugs, i.e., indications for actions, side effects, precautions, contraindications, usual dosage, toxic effects, and related treatment; and (3) teaches the student to evaluate each drug with the patient in mind. Drugs are presented according to their reactions and correlated with the diseases concurrently being studied in the clinical medicine course. Consequently, drug therapy is covered regarding common diseases seen in the following systems: skeletal, skin, cardiovascular, respiratory, renal, endocrine, neurology, and eye, ear, nose, and throat. 2 s.h. *Staff*

PA 143. *Clinical Chemistry.* The purpose of this course is to familiarize the student with the equipment, reagents, values, and implications of numerous clinical testings. The students are given the methods to develop an understanding of blood banking, immunohematology, hepatic metabolism, enzymes in cardiology, gastroenterologic studies, and rheumatoid studies. The student becomes knowledgeable in the performance of ABO and RH typing; PSP, BSP, and creatinine clearance testing; blood urea nitrogen and electrolytes; sulkowitch testing; sedimentation rates, lupus preps, schilling tests, and histalog testing. This exposure helps develop a knowledge of normal and abnormal test values and the ability to assist those that may be doing them on an emergency basis. 2 s.h. *Staff*

PA 145. *Diagnostic Procedures.* Provides the student with the fundamentals of the more unusual and detailed laboratory and clinical procedures including applied sterile technique, basic physical therapy exercise, demonstration of cast application and splinting, cutdowns, spinal taps, thoracentes, paracenteses, tracheotomies, nasogastric intubation, gastric analysis with histalog, bone marrow taps, gastroscopy, sigmoidoscopy and proctoscopy, skin testing, glucose, insulin, and orinase tolerance testing; catheterization, visual fields and acuity, and audiometry. The time is divided between lecture and demonstration with laboratory and bedside participation by the student. Each lecture demonstration and participation phase is conducted by a specialist in that area being studied. To achieve the most complete effect from each topic or procedure presented, each is correlated with practical experience. 2 s.h. *McQueary*

PA 147. *Animal Surgery.* An eight-week laboratory course allowing students to apply the knowledge of aseptic and surgical technique, as well as the preparation of the operative site and draping of the sterile field. Students accomplish this through the performance of minor and major procedures to include pre- and post-surgical management of experimental animals for the purpose of developing a knowledge of the systems' behavior to surgery and infection. The necessity of correlating laboratory data with patient behavior is also presented. 2 s.h. *Simpson and Staff*

PA 160. *Pharmacology and Physiology of Contrast Materials.* A detailed twenty-four hour study of commonly used radiologic contrast media. Emphasis is placed on chemical ingredients, excretion rates by body systems, patient preparation, dosage calculation and administration and the recognition and initial management of hypersensitivity and chemotoxicity of various contrast media. In addition, the student is exposed to the individual actions of the various radiological compounds as they pertain to specific radiological procedures. 1 s.h. *Thompson*

PA 161. *Radiation Physics.* Presentation of the history, fundamental concepts and production and nature of roentgen rays. Emphasis is on modern X-ray tubes; generators; video tape recorders; and video systems including orthicon, vidicon, plumbicon, and cine. An in-depth experience is provided with the mechanisms and mechanics of an X-ray department. 2 s.h. *Thompson*

PA 162. *Radiobiology.* An introduction to energy transfer from radioactive materials to living tissue and basic cellular reactions to irradiation. The genetic and medical hazards of ionizing radiation to man, its relative biological effectiveness and latent biological reactions are stressed. Emphasis is also placed on the sources of natural radiation, dosimetry, dosage calculation of radiopharmaceuticals, and patient preparation and precaution. 2 s.h. *Thompson*

PA 163. *Radiation Protection.* A course designed to present a broad knowledge of irradiation. Emphasis is placed on nuclear science and radiographic terminology, natural radiation, radiation dosimetry and detection, maximum permissable radiation levels and dosages, protective shielding and its design, care of radiation workers and personal protection. 1 s.h. *Thompson*

PA 181. *Fundamentals of Electrocardiography.* Is designed to teach the student the principles of electrocardiography and use of the necessary equipment and to develop the student's ability to detect and diagnose abnormalities in the twelve lead electrocardiogram, and to recognize cardiac arrhythmia from a rhythm strip and/or on a monitoring cardiac oscilloscope. Through the use of audiovisual aids, slides, EKG tracings, bedside monitor readings, cardiac pacemaker units, and practical experience in the resuscitation of induced cardiac arrest in animals, the

student develops the ability to rapidly detect (via early warning signs with a complementary clinical picture) impending cardiac difficulty with the emphasis on precaution against complications. 1 s.h. *Staff*

PA 183. *Introduction to Radiology.* Introduces the student to modern radiology and its many procedures as they pertain to the diagnosis and treatment of certain illnesses. Students are exposed to various radiologic diagnostic techniques including procedural indications, patient preparation, procedural accomplishment, interpretation, limitatons, and possible side effects. Simultaneously the student receives an in-depth exposure to the radiologic interpretation of roentgen examinations of the chest. 1 s.h. *Thompson*

PA 185. *Community Health.* Twenty-four hours of seminars, discussions, and field trips to the community health organizations to acquaint students with local, state, and federal health agencies for the purpose of developing a sociological appreciation of communinty living, public health education for disease detection and prevention, and financial aid available to the community population for the acquisition of health care. 1 s.h. *Staff*

PA 187. *Basic Principles of Data Processing.* An introduction for the student with no previous exposure to the field of data processing. It presents the impact and future involvement of computers and data processing in medicine. Exposure to various hardware (computers and auxiliary machines) facilitates his learning the fundamentals of digital computers, the basic mathematical and numerical systems needed to utilize the computer, and the principles of flow charting and programming so as to enable students to develop simple programs at the completion of the course. 1 s.h. *Smith*

PA 189. *Patient Evaluation.* For the student with a background in anatomy, physiology, and pathology, the course provides an understanding of the historical development of a disease process through the proper methods and techniques of eliciting a patient history and accomplishing a physical examination. The relationship of patient historical and physical data is presented by repeated exposure to in-hospital patients upon whom a complete history and physical examination is accomplished with the completed work-up presented and evaluated by the physician in charge. 2 s.h. *McFarland*

PA 193. *Growth and Development.* Introduces the student to current theories of knowledge, particularly as they relate to the special complex problems of empirical meaning, objectivity, measurement, and the mind-body problem. Changes in personality due to biologic maturation and the influence of life roles are presented with emphasis on early childhood development, adolescence, and adulthood. The lecture material is correlated with the development of patient interview techniques, integrating both psychodynamic techniques and psychophysiological methods for handling psychosomatic diagnostic problems. 1 s.h. *Short*

Clinical Courses

Required Clinical Rotations

Students participating in medicine, surgery, pediatrics, and their subspecialties must take *one* inpatient and *one* outpatient rotation plus all other rotations listed in this group. Those students participating in radiology, pathology, or industrial medicine are required to take the courses outlined in the section on curriculum.

PA 201. *Medical Inpatient Service.* During this two month rotation, the student is expected to attend all work rounds, teaching rounds, noon conferences, and grand rounds of the Medical Service. He is responsible for taking complete medical histories and complete physical examinations on incoming patients; recording progress notes and performing inpatient diagnostic and evaluation procedures including: (1) lumbar puncture, (2) drawing pertinent blood samples, (3) insertion of venous intracatheter, (4) patient catheterization, (5) nasogastric intubation, and (6) intravenous medication and infusion. The scheduling of technical diagnostic and management procedures and performance of discharge physical examination with dictation of narrative summary for chart completion is accomplished by the student. All examinations and procedures performed and scheduled are subject to the ward resident's approval. 6 s.h. *Chief Medical Resident*

PA 231. *Surgical Inpatient Service.* During this two month rotation the student receives exposure to a wide variety of surgical problems. He attends all rounds and conferences required by the service. He must evaluate surgical patients by appropriate history and physical examination techniques and perform routine pre- and postoperative laboratory studies, suture removal, postoperative respiratory therapy, removal of cavity drains, intravenous medication and infusion, and pre- and postoperative patient care. He becomes knowledgeable of general surgical disease and the application and limitation of postoperative rehabilitation by following patients from admission to discharge. 6 s.h. *Surgical Resident*

PA 203. *Medical Outpatient Service and Emergency Room.* The student is responsible for the accomplishment of routine histories and physical examinations on both new and return patients to the medical clinic. He develops impressions of the patient's condition, suggests diagnostic tests, and directs the patient's therapy under the auspices and supervision of the medical resident assigned. The student becomes acquainted with emergency procedures and has the opportunity to discuss and understand the necessity for these procedures by association with the resident-in-charge. He is exposed to the emergency procedures required in status epilepticus, status asthmaticus, cardiac arrest, respiratory failure, and acute traumatic shock. The students are required to learn and understand the functions of equipment present in the emergency room. In

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addition, the students are exposed to and develop a knowledge of patient triage in multiple emergency situations. 6 s.h. *Lessen*

PA 233. *Surgical Outpatient Clinic and Emergency Room.* A two month rotation which exposes the student to a broad spectrum of surgical pathology, from both a clinical and emergency standpoint. The student assists the surgical staff by taking histories and completing physical examinations on clinic patients and initiating emergency care relating to patient triage. He undergoes exposure to the emergency procedures required in acute trauma and emergent surgical illness. He is required to learn and understand the type of equipment present in the emergency room, including an understanding of the procedures involved in venous cutdown, intravenous infusions, nasogastric intubation, lumbar puncture, paracentesis, thoracentesis, and tracheotomy. In addition, the student is exposed to and develops the ability to triage in multiple surgical emergencies. 6 s.h. *Mauney*

PA 205. *Pulmonary Function/Inhalation Therapy.* A one-month rotation which exposes the student to pulmonary disease and allows him to develop and display competence in the area of pulmonary functions and the procedures used in inhalation therapy, so that he may develop an understanding of the limitations and importance of these procedures. The students make rounds and attend all conferences required by the department. He participates in pulmonary function studies and in the follow-up of these studies by doing laboratory procedures associated with the studies. The student is expect to see patients, take histories and do physical examinations (with special emphasis on problems concerning patients with chronic respiratory disease), and to follow the patient through daily rounds; recording progress notes, throughout the entire rotation. In addition, the student becomes proficient at drawing venous and arterial blood samples and in performing blood gas evaluation on arterial samples. 3 s.h. *Ramirez-Rivera*

PA 207. *Health Administration.* A one month rotation divided into two sections: one of one-week duration and the other of three-weeks duration. The segment of three-weeks duration is spent with various state agencies. This includes one week in the agency offices to develop an understanding of their services (to whom they are available, the techniques of engaging those eligible into the system, and the administration and resources necessary for the delivery of these services to the population). The remaining two weeks of the three-week segment takes the student into the field for the purpose of observation and participation in the actual carrying out of the agencies' operations. The last week is used to investigate the application of health insurance through various types of insurance organizations. 3 s.h. *Howard*

PA 209. *Faculty Health Clinic.* A one month rotation for the purpose of exposing the student to the operation of a private patient health clinic which is operated by the Department of Community Health Sci-

ences. The students further develop and apply the knowledge and skills of patient evaluation under the direction of a physician. Patient workups are presented to the physician for evaluation and final patient disposition. In addition, the students are exposed to and participate in the use of pre-planned questionnaires for the purpose of converting the data to computer language. This data is developed further for use in a computerized approach for initial patient screening. 3 s.h. *McFarland*

PA 210. *Employee Health Clinic.* A one month rotation exposing the student to an employee health clinic population, functioning under the direction of the Department of Community Health Sciences. He further develops and applies the knowledge and skills of patient evaluation under the direct supervision of a physician. The student is exposed to a broad spectrum of occupational disease and injury and participates in the triage of injuries and the screening and referral of ill employees. 3 s.h. *Staff*

PA 211. *Library Research.* A library experience where the student is required to readily familiarize himself with the amassed medical knowledge and its locations and methods of access to it in the medical library. The student compiles historical, statistical, and medical research for a previously selected and approved topic. The data are scrutinized, selected, compiled, and finally developed into a paper for future seminar presentation. The rough-draft paper undergoes screening for sentence structure, grammar, and composition prior to being sent to physicians whose interest is specific to the area. The topic is then further reviewed prior to final preparation for seminar presentation. 1 s.h. *Staff*

PA 213. *Outside Physician.* A two-month clerkship that exposes the student to all the aspects of the practice of medicine, to include administration, in a community setting. In the hospital setting, the student rounds with the attending physician taking and recording notes, accomplishing and recording medical histories and physical examinations, and completing discharge summaries. He is responsible for initial and return patient visits after explaining the relationship in the clinic setting. In the performance of those duties outlined, the assistant, through the use of his education, knowledge, and time, aids in a more efficient and beneficial practice of medicine and has the opportunity to do those tasks for which he is trained while the physician can evaluate the advantages of using a well-trained assistant in his practice. 6 s.h. *Clinical Staff*

PA 215. *Pediatric Inpatient Service.* A two-month rotation developing an awareness and understanding of the spectrum of medical and surgical disease and its management on an inpatient basis. Through historical review, physical examination, and participation in patient management, the student becomes familiar with the variable therapeutic regimens and dispositions for the pediatric inpatient. He is responsible

for recording progress notes, drawing blood samples, nasogastric intubation, catheterization, insertion of intravenous catheters and infusion of intravenous medication, routine urinalysis, and complete blood counts. 6 s.h. *Pounds and Staff*

PA 216. *Pediatric Outpatient Service/Emergency Room.* A two-month rotation exposing the students to a broad spectrum of disease and its management for both clinic and emergent patient populations. The student accomplishes third person histories and physicial examinations on new and return outpatient clinic patients. The formulation of an impression, suggestion of diagnostic procedures and the direction of patient therapy are accomplished under the auspices and direction of the pediatrician assigned for the purpose of becoming acquainted with the numerous patient disposition of both clinic and emergency patients. 6 s.h. *Pounds and Staff*

Elective Clinical Rotations

During the preclinical year, detailed accounts of the content of each rotation are made available to the students. After counseling with the students, schedules for clinical experience are developed.

Medical Elective Rotations

PA 311. *Allergy and Respiratory Disease.* A two-month rotation that provides an in-depth exposure to patients with respiratory and allergic conditions through evaluation by special history and physical examination techniques, diagnostic and therapeutic management procedures to include allergy skin testing and eosinophilic nasal smear counts. The student participates in daily rounds and teaching conferences on respiratory disease and gains a knowledge of the therapeutic regimens, their indications, availability, reliability, and limitations in the treatment of respiratory and allergic disease. 6 s.h. *Sieker*

PA 312. *Cardiology.* A two-month rotation during which the student is taught the indications, limitations, and methods of accomplishing the necessary cardiologic diagnostic procedures and therapeutic regimens for the evaluation of these disorders. He attends all daily rounds and conferences, as indicated by the physician-in-charge, while on the cardiology service. Students evaluate patients by initial history and physical examination, performing certain diagnostic and therapeutic studies including the performance and interpretation of electrocardiograms and phonocardioscans. They follow patients from admission to discharge providing care and analysis of the hypertensive and infarct patient, recording progress notes, discharge physical examinations, and narrative summaries under the guidance of the physician-in-charge. 6 s.h. *Ruskin*

PA 313. *Cardiovascular Laboratory.* A two-month rotation during

which the student attends all required daily rounds and conferences. He is taught the indications, limitations, and methods of cardiac catheterizations and other cardiovascular diagnostic studies. He becomes acquainted with the electronic and laboratory equipment and is able to utilize this equipment with competence and skill. The student participates in the catheterizations of patients, performs cardiac catheterizations on laboratory animals, and does complete work-ups on clinic patients to develop a knowledge of the cardiac disease spectrum and the diagnostic role that cardiac catheterization plays. He participates in the management of cardiac patients in the postoperative state and provides treatment of procedural complications. Students are permitted to follow patients from admission to discharge in order to become acquainted with the variable dispositions for cardiovascular catheterization patients. 6 s.h. *Morris*

PA 314. *Endocrinology.* A two-month rotation designed to expose the student to endocrinological disease with the emphasis placed on the diagnosis and treatment of these diseases. Students attend all daily rounds and conferences while on the service. They are taught the indications, limitations, and methods of performing certain diagnostic procedures to include: glucose; insulin and tolbutamide tolerance testing; thyroid function studies, and nasogastric intubation for gastric analysis. The students evaluate and care for the endocrinologic patient by history, physical examination and narrative summary under physican supervision. 6 s.h. *Lebovitz*

PA 315. *Gastroenterology.* A two-month rotation designed to provide the student with an in-depth exposure to gastroenterology with emphasis on diagnosis and treatment of gastroenterologic conditions. Each student attends all conferences and daily rounds as required by the service. He becomes knowledgeable in history taking, physical examination, and diagnostic and management procedures. The student participates in inpatient care and takes progress notes on assigned patients. A proficiency at nasogastric intubation and gastric analysis; both with and without fluoroscopy, secretin tests, rectal and small bowel biopsy, proctoscopy, sigmoidoscopy, and gastroscopy is developed. A proficiency for the care of endoscopic instruments, biopsy instruments, and biopsy specimens is acquired. In addition, the student follows patients from admission to discharge with completion of the discharge physical examination and narrative summary subject to physician approval. 6 s.h. *Tyor*

PA 316. *Hematology.* A two-month rotation designed to acquaint the student with the broad spectrum of hematologic disorders. The student is required to attend all daily rounds and conferences while on the hematology service. Through patient evaluation by special history and physical examination criteria, he learns the indications, limitations, and methods of performing the necessary diagnostic procedures and therapeutic measures for treating these disorders. These procedures include a thorough understanding of the performance and screening of routine

blood work, blood culture, bone marrow biopsy, and electrophoresis. In addition, skills in paracentesis, thoracentesis, blood transfusion and blood banking and the intravenous infusion of chemotherapeutic agents are developed. Scheduling procedures in X-ray and nuclear medicine, collecting data from laboratories, finding X-rays and tracing reports, organizing ward charts and techniques in expediting patient studies are also required during this rotation. 6 s.h. *Silberman*

PA 317. *Hyperbaric Medicine.* A two-month rotation providing the student with the opportunity of developing techniques for the accomplishment of detailed patient work-ups specifically related to patients requiring the services of the hyperbaric chamber. He learns the indications, limitations, and scope of services provided and develops an understanding of the principles of hyperbaria. The student receives the necessary opportunities to develop competence and skill in the proper use of the hyperbaric chamber. He also evaluates and records the progress of patients under and/or following hyperbaria including pre- and post-treatment rounds. 6 s.h. *Saltzman*

PA 319. *Nephrology.* A two-month rotation exposing the student to nephrologic disorders with emphasis on diagnosis and treatment of chronic renal disease. Each student is required to attend all daily rounds and conferences. He develops an insight into the indications, limitations, and methods of accomplishing renal biopsies. The student receives exposure to a broad spectrum of acute and chronic renal disease by patient evaluation through history and physical examination, daily progress notes and evaluation of routine problems of a nephrology service, and follow-up on rehabilitation of nephrologic patients, with emphasis on determining guidelines for renal dialysis. 6 s.h. *Robinson*

PA 320. *Neurology.* A two-month rotation that provides the student with an in-depth exposure to neurological conditions through the in-patient and outpatient care and evaluation of patients by appropriate history and physical techniques during examination. The student performs certain diagnostic and therapeutic procedures including lumbar punctures, tolerance testing, intravenous infusion of medication as well as complete blood counts, spinal fluid analyses, and blood cultures. Scheduling procedures in X-ray, nuclear medicine, and EEG, lab, collecting data from laboratories, finding X-rays and tracing reports, organizing ward charts, and techniques in expediting patient studies is required during training. The student develops an understanding of miscellaneous neurologic procedures, including electroencephalography, brain scan, pneumoencephalography, and central nervous system radiologic dye studies. The performance of discharge physical examinations and narrative summaries to ensure chart completion are carried out as directed. The student attends all daily private, public, teaching rounds, and conferences. 6 s.h. *Appel*

PA 321. *Psychosomatic Medicine.* A two-month rotation exposing

the student to conditions with a primary psychosomatic ideology. Each student becomes acquainted with the broad spectrum of psychosomatic disorders and develops an understanding of the indications, limitations, and scope of diagnostic procedures for the psychosomatic patient. The student formulates techniques for patient evaluation and becomes knowledgeable of the therapeutic regimens, their indications, availability, reliability and limitations in the treatment of psychosomatic disorders. The above being accomplished through lectures and clinical experience. The student also follows the patients from admission to discharge and becomes acquainted with the various possible dispositions for the patient. Each student is required to attend all specified rounds and conferences. 6 s.h. *Reckless*

PA 322. *Rheumatology.* A two-month rotation that provides the student with an in-depth exposure to rheumatology for the purposes of: (1) developing techniques specifically related to rheumatology in accomplishing a detailed patient work-up and (2) providing the student with the necessary samples and equipment to develope competence and skill in accomplishing the diagnostic procedures required for the complete and accurate evaluation of the rheumatologic patient. The service exposes the student to the therapeutic regimens, their indications, availability, reliability, and limitations in the treatment of rheumatologic diseases. He is required to follow patients from admission to discharge to become acquainted with their possible and variable dispositions. The student attends daily rounds and teaching conferences as designated by the service. 6 s.h. *Kerby*

PA 323. *Dermatology.* A two-month rotation exposing the student to a broad spectrum of dermatologic disease from both an inpatient and outpatient standpoint. The student takes histories and performs physical examination, with special emphasis on problems concerning the patient with dermatologic disease. The performance of KOH preps, skin biopsies, and tissue scrapings is carried out by the student on prescribed patients. The student thus becomes familiar with the therapeutic regimens, their indications, availability, reliability, and limitations in the treatment of dermatologic disease. In addition, he follows patients from admission to discharge, and becomes acquainted with the various possible dispositions for the dermatologic patient and attends all daily rounds and conferences required by the service. 6 s.h. *Tindall*

Surgical Elective Rotations

PA 412. *General Surgery.* A two-month rotation designed to expose the student to a wide variety of surgical problems. Each student is provided the opportunity to gain facility in patient care through the management of patients. The student is expected to use his initiative under supervision in carrying out preoperative and postoperative care of the patient through history taking, physical examination, emergency

room and operating room exposure, and classroom learning in order to facilitate patient recovery. The student is required to attend all rounds and teaching conferences as designated. 6 s.h. *Mauney*

PA 413. *Neurosurgery.* A rotation designed to expose the student to the spectrum of neurological disease and methods of neurosurgical intervention. The student takes histories and performs physical examinations, participates in pre- and postoperative care, performs numerous routine laboratory studies, participates in the operating room, and assists with the special procedures as needed. The care of neurosurgical instruments and photographic and electronic equipment is required. Participation in stereotactic research studies is also required of the student. In addition, he attends all rounds and teaching conferences. Prerequisite: PA 320. 6 s.h. *Nashold*

PA 414. *Ophthalmology.* A two-month rotation to expose the student to a wide spectrum of ophthalmologic diseases. Through lecture, teaching rounds, and performance of special history and physical examination techniques, the student becomes proficient at determining visual fields, visual acuity, oculotonometry, and optical prescriptions. He becomes knowledgeable in the basic principles of refraction and the numerous medical and surgical therapeutic regimens available for the treatment of ophthalmologic disorders. In addition, the student participates in the routine care of ophthalmologic inpatients and outpatients. 6 s.h. *Anderson*

PA 415. *Orthopaedic Surgery.* A two-month rotation in which the ultimate goal for the student is to obtain the highest degree of knowledge and skill in caring for the many problems of the orthopedic patient, which is accomplished through adequate historical review and physical examination, delivery of emergency care to patients suffering from acute trauma, pre- and postoperative care of the surgical patient as desired by the attending physician, and the ability to maintain good sterile technique and operating room technique. He develops an understanding of the pathophysiology and the complications of bone and joint injury as well as the ability to fabricate and apply a variety of splints, traction, and casts. 6 s.h. *Goldner*

PA 416. *Otolaryngology.* A two-month clinical exposure to acquaint the student with a broad spectrum of ENT disease. The student becomes proficient in the recognition of emergency problems and initiates the first steps in the management of such problems. Evaluation of the ENT patient by history and physical examination, seeing the follow-up patient, following the course of the disease process, and evaluating the response to treatment for the physician is required of the student. The student learns and performs tracheostomy care, assists with the management of the pre- and postoperative patients, participates in the operating room, assists with special operating room procedures, and performs special audiometric techniques and testing. 6 s.h. *Hudson*

PA 417. *Urology.* A two-month rotation that exposes the student to the broad spectrum of urologic disease through the performance of a history and physical examination on clinic and hospital patients. He participates in all clinical rounds and teaching conferences to develop an understanding of the therapeutic regimens, their indications, availability, reliability, and limitations in the treatment of urologic disorders. The student develops an understanding of the applications of urologic disorders and the indications for cathetherization, cystoscopy, renal function studies, intravenous pyelograms, retrograde pyelograms, and urine chemical evaluations. He participates in the pre- and postoperative care of the urologic patient and the performance of discharge physical examinations and the writing of narrative summaries on patients assigned. 6 s.h *Glenn*

PA 418. *Plastic Surgery.* A two-month experience exposing the student to a wide variety of patients subdivided into head and neck surgery categories, including cancer patients and patients with facial anomalies. He acquires a broad exposure to patients with burns of electrical, chemical, and thermal origin. The objectives are many; however, the majority of these are covered in the preoperative and postoperative care of these patients consisting of preoperative history and physical examination, laboratory tests, and associated studies. Monitoring the postoperative course, following the patient closely during surgery, as well as performing numerous duties for the postoperative patient in the plastic dressing room is required of the student. Finally, the student develops an in-depth understanding of fluid and electrolyte balance as well as dressing changes. 6 s.h. *Thompson*

PA 419. *Rehabilitation.* A two-month rotation exposing the student to a broad spectrum of post-treatment disease and injury as it relates to the patient undergoing rehabilitation. The student receives training in patient rehabilitation through historical and physical evaluation; participation in both inpatient and outpatient physical and occupational therapy services and weekly medical-surgical-rehabilitation conferences. Instruction is oriented toward the early return-to-work of disabled employees and toward matching physical capabilities with job demands. 6 s.h. *Goldwater*

PA 420. *Acute Care Unit.* A one month rotation which teaches the student post-operative care of the surgical patient who has undergone major and complex surgical procedures or suffered massive and severe trauma involving multiple organ systems. Special emphasis is centered on ventillatory assistance problems, open heart cases, neurosurgical problems and trauma cases. Though the student's activities are somewhat restricted in actual patient management, this area provides the student with an indepth exposure to the complicated surgical patient and allows him to develop an understanding of the pathophysiology, physiology and reasoning for making major clinical decisions. 3 s.h. *Chief Surgical Resident*

PA 421. *Anatomy Lab.* A one month rotation that reinforces the student's exposure to anatomy for the purpose of becoming familiar with the anatomy that will be most useful during his clinical rotations. The student will work at his own pace under the direction of the physician in charge using the vast teaching aids in the anatomy department and supplementing this with selected readings. In addition, the student will attend all surgical and orthopedic conferences while on this rotation. 3 s.h. *Anatomy Staff*

Pediatric Rotations

PA 511. *General Pediatrics.* A two-month pediatric experience divided into three sections: newborn nursery, inpatient service, and outpatient clinic. The student attends all general pediatric conferences and those pertinent to the current area of experience. Emphasis is placed on the performance of peripheral venopunctures; starting and regulating intravenous infusions; complete blood counts; urinalyses; blood, stool, urine, and umbilical cultures; immunizations, PKU screening, vision screening, and electrocardiograms as they pertain to children and infants. The student is exposed to the spectrum of childhood illness and normal variations of growth and development through history taking and examinations. In addition, the student observes and examines normal newborns and through observation and experience in the intensive care nursery, learns techniques specific for the care of the immature and sick newborns. 6 s.h. *Pounds*

PA 512. *Newborn Nursery.* A two-month rotation that exposes the student to the evaluation of the newborn child and to those diseases and conditions which are prominent in the pediatric patient. The student further develops techniques specifically related to proper evaluation of a newborn child and in the performing of a detailed pediatric evaluation. The student has available the necessary samples and equipment to develop competence and skill in the accomplishment of routine pediatric diagnostic laboratory procedures. He is permitted to follow patients from admission to discharge for the purpose of becoming knowledgeable of therapeutic regimens and the various dispositions of the newborn. Prerequisite: PA 511. 6 s.h. *Pounds and Brumley*

PA 513. *Clinical Research Unit.* A two-month rotation that exposes the student to a diversified research patient population. The student developes a proficiency in a wide variety of research and routine clinical procedures as applicable to the evaluation of each patient. He attends all daily morning and evening clinical rounds of each service and carries out the studies on patients as denoted by the attending staff. These tests include: routine laboratory analyses, tolerance testing, including intravenous glucose, insulin and tolbutamide studies; intravenous catheterizations, venous cutdowns on pediatric patients; nasogastric intubation of the pediatric patient and gastic analyses. The student is responsible for

recording and reporting clinical laboratory data while acquiring experience in the correlation of clinical signs and symptoms with laboratory data. 6 s.h. *Sidbury*

PA 514. *Pediatric Cardiology.* A two-month rotation exposing the student to the broad spectrum of cardiovascular disease, particular to the pediatric population, through the evaluation of patients by physical examination, assisting in the performance of diagnostic and therapeutic studies, and the interpretation of electrocardiograms and radiographic procedures. He follows patients from admission to discharge assisting in the care and analysis of patients with congenital and rheumatic heart disease, recording results of laboratory data and keeping progress notes under the guidance of the physician. Emphasis is placed on the origin, indications, and prognosis of disease states and the indications, limitations, and reliability of the methods available for the diagnosis and treatment of varying cardiovascular disorders. 6 s.h. *Porter*

PA 515. *Chest and Allergy—Pediatrics.* A two-month rotation providing the student with an in-depth exposure to patients with allergic and respiratory conditions through evaluation by special physical and diagnostic techniques. This exposure allows the student to compound a knowledge of the therapeutic regimens, their indications, availability, reliability and limitations in the treatment of respiratory and allergic disease. The student develops a proficiency at collecting the necessary diagnostic samples and carrying out numerous indicator studies on the involved pediatric population. 6 s.h. *Pounds*

Radiology Rotations

PA 601. *Gastrointestinal Radiology I.* A one-month rotation which reviews exposure factors, image formation and intensification, hypersensitivity and chemotoxicity of contrast media, patient preparation and precautions, and procedural methods involved in radiographic examination of the gastrointestinal tract. Emphasis is placed on proper study performance and the fluoroscopic and radiographic anatomy of the gastrointestinal tract and biliary tree with consideration given to the identification of normal and pertinent pathophysiologic abnormalities. 6 s.h. *Thompson and Staff*

PA 602. *Gastrointestinal Radiology II.* A three-month clerkship during which the student performs barium swallows, upper G.I. series with follow-through and barium enemas using cine and fluoroscopy for the identification of both normal and pathophysiological abnormalities in the anatomy of the gastrointestinal tract. The student, under radiologist supervision, is responsible for the study and preliminary interpretation of all procedures performed. Pertinent radiographic anatomy and pathologic abnormalities are presented to the student in conferences and by lecture from the radiology house staff. 9 s.h *Thompson and Staff*

PA 603. *Uroradiology.* A two-month experience in the performance

of intravenous urograms. Sufficient radiographic anatomy and pathophysiology is given to assist in the presentation of the completed intravenous urograms to the radiologist. Consideration is given to patient preparation, study technique, patient precautions, and the dosage calculation and administration of contrast media. 6 s.h. *Thompson and Staff*

PA 604. *Trauma of Soft Tissue and Bone.* A one-month rotation placing emphasis on the recognition of changes in bone density, presence of excessive bone destruction, soft tissue injury and infection and the dislocation and fracture of bones and joints. In addition, the student develops an in-depth understanding of boney maturation and the pathophysiological influences on bone growth. 3 s.h. *Thompson*

PA 605. *Chest Roentgenography I.* A one-month review of basic techniques for the roentgenographic examination of the chest. Emphasis is placed on patient preparation and the proficient performance of laminagraphic, tomographic, fluoroscopic, and isotopic examinations of the chest. An introduction to lobar and segmental anatomy, silhouette signs, lobar and segmental collapse, and pleural signs is presented to the student. 3 s.h. *Thompson and Staff*

PA 606. *Chest Roentgenography II and III.* Two two-month segments during which the student performs numerous fluoroscopic, laminagraphic, roentgenographic, angiographic, and isotopic examinations of the chest. Emphasis is placed on procedural techniques, radiographic quality, patient management, recognition and prevention of toxic reactions due to overexposure and hypersensitivity, and the recognition of normal and abnormal radiographs based on lobar and segmental changes, silhouette signs, and pleural and extrapleural signs. All preliminary screenings of abnormal radiographs and interpretations are subject to approval by the radiologist. 6 s.h. *Thompson and Staff*

PA 607. *Outside Radiologist.* A two-month experience with a community-based physician in the private practice of radiology. Participation in and the performance of numerous roentgenographic studies via fluoroscopy, laminagraphy, cine, nuclear scanning, and radiotherapy is required of the student. Emphasis is placed on initial screening and interpretation of chest roentgenograms and bone films to aid the radiologist in a more efficient practice of his specialty. In addition, the student receives exposure to a broad spectrum of pathophysiologically abnormal roentgenographic studies to enhance his knowledge and understanding of the normal and abnormal state. 6 s.h. *Thompson*

Industrial Medicine Rotations

PA 700. *Environmental Health.* A one-month rotation exposing the student to the basic principles of environmental health, including industrial toxicology, workmen's compensation laws, and labor and industrial relations via a seminar setting. This instruction will be supplemented by extensive readings in the aforementioned areas. 3 s.h. *Goldwater*

PA 701. *Industrial Hygiene Laboratory.* A two-month rotation exposing the student to the numerous methods of air sampling and analysis, and analysis of blood and urine for heavy metals and other toxic agents. A knowledge, understanding, and proficiency in the use of these methods is developed through practical application in both a laboratory and community setting. 6 s.h. *Staff*

PA 702. *Industrial Hygiene Survey Methods.* A two-month rotation that develops an understanding and proficiency in the evaluation of occupational hazards including chemicals, light, noise, dust, radiation, gases and other harmful agents. The student is taught the care and use of field survey instruments, the application of findings to epidemiological studies, and general principles of plant sanitation. 6 s.h. *Staff*

Pathology Rotations

PA 800. *Microbiology.* A one-month rotation that exposes the student to a wide variety of clinical material and presents the characteristics of numerous pathogenic bacteria and fungi as they relate to a broad spectrum of infectious disease processes. He learns to differentiate between normal flora, potentially-harmful flora, and highly virulent pathogens, and correlate these findings with the clinical manifestations of selected patients. In addition, antibiotic sensitivity patterns of bacteria are determined and interpreted on all pathogenic or potentially pathogenic bacteria isolated from clinical specimens. 3 s.h. *Osterhout*

PA 801. *Histology.* A two-month rotation that acquaints the student to the purpose of histology and presents the equipment necessary for the preparation of tissue slides following which the student is taught the basic principles of tissue processing, including fixation, decalcification, hand and automatic processing, blocking, embedding, cutting and staining; specific staining and histochemical procedures; cutostat and other frozen section methods; tissue manicuring for processing; and certain election microscopic and cytologic techniques to better acquaint the student with these areas. 6 s.h. *Pathology Staff*

PA 802. *Medical Photography.* A two-month rotation that presents, by lecture and practical assignment, basic photographic theory and principles including lighting, optics, photochemistry, camera handling techniques, color film selection, exposure determinations, and film processing as applied to pathology. 6 s.h. *Pathology Staff*

PA 803. *Pathology.* A six-month rotation in gross and microscopic pathology. A detailed consideration of the morphologic, physiologic, and biochemical manifestations of disease is presented. In addition, the student participates in the gross dissection, histologic examination, processing and analysis of morphologic, biochemical, and microbiological data, and the final interpretation and correlation of these results. 18 s.h. *Pathology Staff*

Appendix

A. Statutes of North Carolina Pertaining to the Possession and Use of Alcoholic Beverages

G.S. 18-90.1. Sale to or Purchase by Minors.
It shall be unlawful for:

1. Any person, firm or corporation knowingly to sell or give any of the products described in G.S. 18-64 to any minors under 18 years of age.
2. Any minor under 18 years of age to purchase or possess, or for anyone to aid or abet such minor in purchasing any of the products described in G.S. 18-64.
3. Any person, firm or corporation knowingly to sell or give any of the products described in G.S. 18-60 to any minor under 21 years of age.
4. Any minor under 21 years of age to purchase or possess, or for anyone to aid or abet such minor in purchasing any of the products described in G.S. 18-60.

G.S. 18-64. Definitions.
The term "beverages" as used in this article shall include:

1. Beer, lager beer, ale, porter, and other brewed or fermented beverages containing one-half of one per cent (1%) of alcohol by volume but not more than five per cent (5%) of alcohol by weight as authorized by the laws of the United States of America.
2. Unfortified wines, as used in this article, shall mean wine of an alcoholic content produced only by natural fermentation or by the addition of pure cane, beet, or dextrose sugar and having an alcoholic content of not less than five per centum (5%) and not more than fourteen per centum (14%) of absolute alcohol, the per centum of alcohol to be reckoned by volume,

which wine has been approved as to identity, quality and purity by the State Board of Alcoholic Control as provided in this chapter.

The term "person" used in this article shall mean any individual, firm, partnership, association, corporation, or other groups or combination acting as a unit.

The term "sale" as used in this article shall include any transfer, trade, exchange or barter in any manner or by any means, whatsoever, for a consideration.

G.S. 18-60. Definition of "Alcoholic Beverage."

The term "alcoholic beverage," as used in this article, is hereby defined to be and to mean alcoholic beverages of any and all kinds which shall contain more than fourteen per centum of alcohol by volume, and this article is not intended to apply to, or regulate, the possession, sale, manufacture or transportation of beer, wines or ales containing a lower alcoholic content than above specified, and whenever the term alcoholic beverages is used in this article, it shall be construed as defined in this section.

B. Statutes of North Carolina Pertaining to the Possession and Use of Certain Drugs

Under the provisions of G.S. 90-87 (General Statutes of North Carolina) (1) d. marijuana is defined as a narcotic drug.

G.S. 90-87 (9) further defines narcotic drugs: "Narcotic drugs" means coco (coca) leaves, opium, cannabis, peyote, mescaline, psilocybe maxicana, psilocybin, lysergic acid diethylamide, or other psychedelic drugs or hallucinogens, or any derivatives of any of these which possess hallucinogenic properties, and every other substance neither chemically nor physically distinguishable from them; and other drugs to which the federal narcotics laws may now apply; and any drug found by the State Board of Health, after reasonable notice and opportunity for hearing, to have an addiction-forming or addiction-sustaining liability similar to morphine or cocaine, from the effective date of determination of such finding by said State Board of Health.

G.S. 90-88. provides that "it shall be unlawful for any person to manufacture, possess, have under his control, sell, prescribe, administer, dispense, or compound any narcotic drug except as authorized in this article." (The authorization referred to is with respect to licensed druggists, pharmacists, physicians, and others, who can legally possess and dispense narcotic drugs.)

G.S. 90-111. Penalties for Violation. (a) Any person violating any provision of this article or any person who conspires, aids, abets, or procures others to do such acts shall upon conviction be punished, for the first offense, by a fine of not more than one thousand dollars ($1,000.00) or be imprisoned in the penitentiary for not more than five

years, or both, in the discretion of the court. For a second violation of this article, or where in case of a first conviction of violation of this article, the defendant shall previously have been convicted of a violation of any law of the United States, or of this or any other state, territory, or district, relating to the sale or use or possession of narcotic drugs or marijuana, and such violation would have been punishable in this State if the offending act had been committed in this State, the defendant shall be fined not more than two thousand dollars ($2,000.00) and be imprisoned not less than five nor more than ten years. For a third or subsequent violation of this article, or where the defendant shall previously have been convicted two or more times in the aggregate of a violation of any law of the United States, or of this or any other state, territory, or district relating to the sale, use or possession of narcotic drugs or marijuana, and such violation would have been punishable in this State, the defendant shall be fined not more than three thousand dollars ($3,000.00) and be imprisoned in the penitentiary not less than fifteen (15) years nor more than life imprisonment.

(*b*) Upon conviction for a second or subsequent offense the sentence provided by this section shall not be suspended and probation shall not be granted unless the presiding judge shall find that the violation for which the defendant was convicted did not consist of peddling, selling, bartering or otherwise distributing narcotics to others in violation of this article, or the possession of narcotics for the purpose of peddling, selling, bartering or otherwise distributing narcotics to others in violation of this article. For the purpose of making the finding provided in this subsection before a sentence may be suspended, the defendant shall have the burden of proving that the violation for which he was convicted did not consist of peddling, selling, bartering or otherwise distributing narcotics to others in violation of this article or the possession of narcotics for the purpose of peddling, selling, bartering, or otherwise distributing narcotics to others in violation of this article. The charge contained in the warrant or bill of indictment shall not be considered in making such finding for the purpose of suspending the sentence.

(*c*) If the offense shall consist of the sale, barter, peddling, exchange, dispensing or supplying of marijuana or a narcotic drug to a minor by an adult in violation of any provision of this article, such person shall upon conviction be punished by a term of not less than ten years nor more than life imprisonment and shall be fined not more than three thousand dollars ($3,000.00) for the first and all subsequent violations of this article, and the imposition or execution of sentence shall not be suspended, and probation shall not be granted.

C. Federal Statutes Pertaining to the Possession and Use of Certain Drugs

Marijuana is regulated by the Treasury Department and hallucinogenic drugs by the Bureau of Drug Abuse Control (Pure Food, Drug and

Cosmetic Act) of the Department of Health, Education and Welfare. Different statutes apply to each.

1. *Marijuana*

Title 26, *Section* 4741 imposes a tax on all transfers of marijuana of $1.00 per ounce or fraction thereof upon those who have paid a special license tax and who have complied with regulations. A tax of $100.00 per ounce or fraction thereof is imposed upon those who have not paid the special license tax and/or have not complied with the regulations.

Title 26, *Section* 4742 (a)—It shall be unlawful for any person, whether or not required to pay a special tax and register under section 4751 to 4753 inclusive, to transfer marijuana, except in pursuance of a written order of the person to whom such marijuana is transferred, on a form to be issued by the Secretary or his delegate. (Except by one engaged in professional practice, by prescription, or by an officer of the U.S.)

Title 26, *Section* 4744 makes it unlawful for a person (without license and tax) to acquire or obtain marijuana and to be unable, after reasonable notice, to produce the order form for this marijuana required by Section 4742. Proof that a person has had possession of marijuana is presumptive evidence of guilt.

Title 26, *Section* 7237 (1966) fixes the following penalties for violation of Section 4742 (a) and 4744:

Under Section 4744	*Fine*	*Imprisonment*
1st Conviction	Not more than and/or $20,000.00	Not less than 2 or more than 10 yrs.
2nd Conviction	Not more than and/or $20,000.00	Not less than 5 or more than 20 yrs.
3rd Conviction	Not more than and/or $20,000.00	Not less than 10 or more than 40 yrs.
Under Section 4742	*Fine*	*Imprisonment*
1st Conviction	Not more than and/or $20,000.00	Not less than 5 or more than 20 yrs.
Other Convictions	Not more than and/or $20,000.00	Not less than 10 or more than 40 yrs.

If the offender has reached his 18th birthday at time of the offense of selling, bartering, or giving away an (illicit) drug or marijuana to one *not* 18, or conspiring to do so, the imprisonment is not less than 10 or more than 40 years and/or a fine of not more than $20,000.00.

2. *Hallucinogenic Drugs*

Title 21, *Section* 321 (V), (1966)—The term "depressant or stimulant drug" means . . . any substance which the Secretary (Health, Education and Welfare), after investigation, has found to have, and by regulation

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designated as having, a potential for abuse because of its depressant and stimulant effect on the central nervous system or its hallucinogenic effect; except the Secretary shall not designate under this paragraph . . . marijuana as defined in Section 4761. (This section defines marijuana as marijuana and practically all of its components, from seed to dried leaf.)

Title 21, *Section* 360 (a), (1966)—No person, other than an exempt person (see next paragraph) shall possess any depressant or stimulant drug otherwise than for personal use or for a member of his household or for his animal.

(An exempt person, referred to in this section, is one in the legal business of selling, treating with, or transporting these drugs. Also, one who is using the drug in research, teaching, or chemical analysis and not for sale.)

Title 21, *Section* 360 (a), 7., (1966)—No person, unless licensed or authorized and acting in the ordinary and authorized course of his business, profession, occupation or employment . . . shall sell, deliver, or otherwise dispose of any depressant or stimulant drug to any other person.

Title 21, *Section* 333 (1966) fixes the following penalties:

	Fine	*Imprisonment*
1st Conviction	Not more than and/or $5,000.00	Not more than 1 yr.
2nd Conviction	Not more than and/or $10,000.00	Not more than 3 yrs.

Any person who has attained his 18th birthday when the offense was committed who sells or disposes of depressant or stimulant drugs to one who has not attained his 21th birthday is subject to these penalties:

	Fine	*Imprisonment*
1st Conviction	Not more than and/or $5,000.00	Not more than 2 yrs.
2nd Conviction	Not more than and/or $15,000.00	Not more than 6 yrs.

MEDEX—A DEMONSTRATION PROGRAM TO EXTEND THE PHYSICIAN'S CAPACITY

NEW HELP FOR THE DOCTOR

The MEDEX* project is designed to respond to two, contrasting characteristics of American medicine: (1) There is a serious shortage of trained manpower to deliver primary health care. (2) There is a large and almost untapped source of such manpower in former military medical corpsmen.

The health-manpower shortage is being felt in many urban communities and is particularly acute in rural areas, both in Washington state and across the country. Physicians are overworked, many are leaving rural practice, and relatively few young physicians are attracted to practices in this setting.

What is needed is a new kind of health professional who can help these doctors increase their productivity. MEDEX is designed to provide this by: (1) relieving the physician of certain tasks that can be performed by a person trained to do them under the physician's direct supervision, thereby freeing the doctor to perform those functions for which he is uniquely qualified, and (2) drawing upon a pool of trained personnel whose skills can be enhanced and adapted to serve the civilian population as they have been serving military needs for many years: the military corpsmen, many of whom already have had as many as nineteen hundreds hours of formal medical training.

MEDEX is an important and unique innovation in the delivery of health care. It offers the creation of a new civilian health professional to meet a widespread need.

PHYSICIAN PLUS MEDEX

Preceptors: Fourteen general practioners (eleven of them practicing in rural communities) who expressed a desire to increase their capacities to provide primary-care services were selected to act as teacher-trainers during the preceptorship phase of the training. Criteria for selection of preceptors include: (1) overwork to the point of constant fatigue, (2) unavailability of time for adequate family life and continuing education, (3) consideration of plans to leave rural practice, (4) willingness to innovate in the health-manpower field, and (5) desire and ability to train nonphysicians. An essential criterion was the willingness of the preceptor to hire the Medex upon the completion of the Medex's period of preceptorship.

Medex: Fifteen former military corpsmen from the Air Force, Navy, and Army, including Special Forces, were selected after a specially designed recruiting effort and an intensive interview-selection process. All of the Medex either served on independent duty or received advanced training that qualified them for independent duty. Their formal medical training ranges from the 640 hours of the "Navy A" corpsman, the 900 hours of the Air Force corpsman, the 1,400 hours of the Special Forces medic and the "Navy B" corpsman, to the 1,900 hours of formal medical training of the corpsman classified in the 91C series by the Army. Their practical experience ranges from two years to twenty years in the provision of primary medical care within the defense system's medical operations. They range in age from twenty-two to fifty-five years, and their educational experience varies from high school equivalency to a bachelor's degree in vocational agriculture and education. Geographically, their origins include Indiana, Louisiana, California, and Washington, as well as other states.

THE MEDEX TRAINING PROGRAM

The effective utilization of a trained, but formerly wasted, pool of health manpower is a pioneering effort of such forward-thinking organizations as the Washington State Medical Association and the University of Washington. The development of such a model, which can be replicated in, and transferred to, many geographic and socioeconomic locations in the nation, required the kinds of complementary skills and leadership found in these two bodies.

The MEDEX demonstration program is divided into three phases: (1) a preparatory phase, (2) a University training phase, and (3) a preceptorship phase.

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*Médecin Extension = Physician's Extension. The project is jointly sponsored by the Department of Preventive Medicine, School of Medicine, University of Washington, State Medical Education and Research Foundation (Washington State Medical Association).

Steps taken during the preparatory phase (September, 1968, to May, 1969) were the recruitment of preceptors, former medical corpsmen, and staff; establishment of the operational framework; and development of the training site and faculty.

The University training phase, which began in June, 1969, and ended in September, 1969, consisted of a mix of didactic and clinical teaching with an orientation pointing toward the performance of tasks. Heavy emphasis was placed upon pediatrics, geriatrics (chronic disease), history-taking, physical examination, and transition from the field of military medicine to the setting of civilian medical practice.

The preceptorship phase began in mid-September, 1969, and will be completed in September, 1970. Additional training will take place in the physician-preceptor's office, rather than in an academic setting. For the first few months of this assignment, the Medex will assist the physician by learning and applying primary medical-care skills under the physician's close supervision. When the physician has developed enough confidence in the Medex, he can be used in a variety of ways: screening patients to be seen by the doctor, making screening house calls, taking emergency calls, assisting at surgery, applying and removing casts, performing laboratory work, taking histories, performing parts of physical examinations, or aiding in other tasks that do not require a physician's extensive training. All of these activities will be directed toward extending the physician's capacity.

A continuing education program is part of the preceptorship phase. Approximately once each month clinical conferences-seminars will be conducted over a three-day weekend by physicians in private practice. These meetings are geared toward filling gaps in the Medex's knowledge as they are identified in addition to developing a model for the continuing education of this new civilian health professional.

At the end of this demonstration program, the preceptor will hire the Medex to aid in his practice, thereby adding a pair of skilled hands that will function under the physician's constant supervision. The Medex will have been training for general practice, but more specifically for each physician's particular setting. The twenty-four-hour-a-day supervision of the Medex by his preceptor will be facilitated by a two-way radio, with which each is to be equipped.

ADMINISTRATION OF THE PROGRAM

This demonstration program is being funded by the National Center for Health Services Research and Development, Health Services and Mental Administration, United States Public Health Service, Department of Health, Education, and Welfare. During the fifteen-month training period, the Medex are being paid stipends of $5,400 per year, plus dependents' allowances. It is anticipated that their starting salaries upon completion of the training will be $8,000 per year to $12,000 per year.

Legal status and insurance coverage are under consideration at this time.

A certificate was awarded to each Medex trainee upon completion of the eleven-week academic training phase at the University of Washington School of Medicine; another certificate will be awarded to each Medex upon completion of the year of preceptorship.

Staff:

Richard A. Smith, M.D., Project Director
Gerald R. Bassett, M.D., Deputy Director
William L. Freeman (Medic), Associate Director
Carnick A. Markarian, Administrator
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MEDEX

(By Richard A. Smith, M.D.)

The state of Washington, like many other states in this nation, is faced with a severe manpower shortage in the medical profession. Much of the shortage can be explained by distribution patterns; that is, there are certain population seg-

ments in the state which have difficulty obtaining adequate medical care when and where they need it. In some areas, this difficulty is due primarily to a lack of physician manpower. According to the Washington State Medical Education and Research Foundation, this fact is true especially in the rural parts of the state where the physician-patient ratio is constantly decreasing due to the urban migration of physicians and replacement failures. In addition, the age of general practitioners in these rural areas is steadily increasing.[1] Thus efforts are needed to be directed to increasing the capacity of practitioners already in the areas, as well as making general practice more attractive to physicians seeking new work settings.

There are many programs in this country, operational or in the planning stages, which are designed to train subprofessionals whose place on the health professional ladder is not clearly defined. Many of these subprofessionals perform a role of relieving the physician or his nurse of much of the uncomplicated parts of medical practice. However, the majority of highly technical procedures involved in primary contact care still remains the sole responsibility of the practicing physician. Thus, there remains the need to relieve physicians of more of the time-consuming procedures, that is, to help physicians become more efficient by extending their capabilities.

The defense system has developed ways of rapidly training medical personnel to meet its specific needs which are similar to those of the civilian medical care system. Thousands of medical corpsmen leave the military services annually who have had extensive training and experience in the provision of primary medical care within a military framework.[2] Of the 30,000 discharged annually from the military with some medical training, more than 6,000 of them leave the Army, Navy, Air Force, and Coast Guard where they have been providing primary medical care. They return to a civilian setting which is unable to utilize their extensive training and proved talents. Some with specialized training take allied health jobs; the majority find that there is no way that they, as civilians, can use the 75 hours of didactic and laboratory training they received in human anatomy and physiology, the hundreds of hours of medicine, surgery, pharmacology, orthopedics, training in taking histories and performing physical examinations, etc. Some, such as Special Forces and Navy "B" Corpsmen, receive 1,400 hours of formal medical training, which may include nine weeks of a supervised "clerkship." Army corpsmen of the 91C series may have up to 2,000 hours of such formal training.

Most of these men have had 3 to 20 years of experience, including independent duty on the battlefield, aboard ship, or other isolated stations. Many have some college background (Special Forces "medics" average 1½ years of college). After at least 2 and up to 20 years in uniform, these men have certain skills and knowledge in the provision of primary care. Once discharged, however, the investment of public funds in medical capabilities and potential care are lost, as they work as detail men, insurance agents, burglar-alarm salesmen, or truck drivers. The majority of this vast manpower pool is unavailable to the present medical care delivery system because, up to this point, we have not devised a civilian framework in which their skills can be put to use. It is from this pool that personnel for MEDEX has been drawn.

This program is designed to utilize the products of the military system which have heretofore not been adequately adapted to the civilian health setting. The purpose of the MEDEX (médecin extension=physician's extension) Project is to develop an extension of the physician—another pair of skilled hands under his supervision and available to help him 24 hours a day, a person trained by and for a specific physician. MEDEX is a model of nonphysicians extending primary medical care transferrable to rural, suburban, or urban settings. It is anticipated that this model will demonstrate that former military corpsmen with additional practical training can perform many tasks, presently performed by civilian physicians, which do not require the extensive and sophisticated education obtained in medical schools. There are a few physicians who presently employ men in analogous practice settings.

In the initial phase (preparatory phase) of the project, a number of general practitioners in rural Washington were visited. Prior to the visits, these men had been identified as practitioners who were overworked by an increasing patient

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[1] Kinney, R.: *Data Bank of Washington State Physicians, 1968.* Seattle, Washington State Medical Education and Research Foundation, 1968.

[2] *Allied Health Personnel,* Ad Hoc Committee on Allied Health Personnel. Washington, DC, National Academy of Sciences, 1969, pp 8–10.

load burden unable to find time to take continuing education courses, unable to spend more than three or four days each year away from their communities for leisure activities with their families, or planning to leave their practices for a elss demanding scene in "urbania."

Most of these physicians have had military service and were able to list a number of tasks which the Medex (the former military corpsmen to be trained for this project) could perform for them in their practices. Their experience with military corpsmen, in conjunction with their obvious need for help, produced a combination which made MEDEX appropriate in their communities.

Discussions were held with the Washington State Medical Association and the medical faculty at the University of Washington. In addition, meetings with members of the nursing profession in the state pointed up some of the potential problem areas, resulting in productive input into the design of the project. It was decided that the MEDEX demonstration program should be a joint effort of the Washington State Medical Association through its research arm (the Washington State Medical Education and Research Foundation) and the School of Medicine at the University of Washington. It is apparent that the complementary capabilities of these two organizations are integral to the MEDEX concept.

Visits were made to a number of Army, Navy, Air Force, and Coast Guard installations to inform groups of corpsmen about the proposed project and to elicit applications. Funding was obtained from the National Center for Health Services Research and Development (Health Services and Mental Health Administration) of the Public Health Service (Department of Health, Education, and Welfare). A core staff was assembled, and development of an intensive task-oriented curriculum was initiated in May 1969.

Initial screening of the 80 applicants on the basis of former training and experience, geographic desires for relocation, references from physicians, and dates of discharge produced 26 corpsmen-applicants to be interviewed for the 15 positions chosen for this demonstration project. Fourteen physicians, who indicated they would be willing to train 15 Medex in a 12-month preceptorship in their offices and subsequently to hire them, volunteered to participate in the program. On the last two weekends of May, the corpsmen were brought to Seattle in two groups to meet with the staff and the physician-preceptors (half of them were present each weekend) for intensive interviewing and selection conferences. Hour-long interviews with potential preceptors and MEDEX staff were followed by subjective testing and seminars. On June 3, 1969, 15 corpsmen were selected as the first Medex.

Criteria for selection include the following: applicant's knowledge of his limitations, judgment under varying circumstances, interpersonal relationships, medical task proficiency and knowledge, and satisfaction with the projected role of Medex. The Medex trainees selected varied in age from 22 to 55 years and educationally from holding a high school diploma to a bachelor's degree.

The second phase (university training phase) began on June 30. During the first week of this period and on three subsequent weekends, each Medex trainee visited a total of at least five potential preceptors in their practice settings to facilitate the process of matching Medex to physicians, which occurred four weeks later.

During the first three months of training, emphasis was placed upon pediatrics, geriatrics (chronic diseases), histories and physical examinations, and psychiatry. Much of the training was in these areas in which the preceptors and staff believed the Medex should have competence and in which the Medex themselves thought they had the least amount of experience. Heavy emphasis was placed upon the psychologic adaptation the trainees would undergo in their transition from military medicine to the civilian practice setting. The selection process and curriculum development were greatly enhanced by the presence on our staff of a former Special Forces medic (who, prior to his Vietnam experience, had received a BA degree in English literature and had served as a Peace Corps volunteer in community development in Colombia) and a community psychiatrist (whose ten-year military experience was that of a meteorologist in the Air Force). Additional professional input resulted from the presence on our staff of an educator with broad planning and operational experience.

The MEDEX faculty was composed of faculty members of the School of Medicine as well as physicians in private practice in Seattle and elsewhere in the state. A description of the curriculum will be available at a later date.

The preceptor phase began in the middle of September 1969, after the three-month university session was completed. Twelve Medex are in rural Washington; two are in an urban setting, and one is with a suburban general practitioner. During the 12 months following the university phase, the Medex will be performing tasks (many of which he performed in the military) under the immediate supervision of his preceptor, thereby increasing the physician's capacities. For the first months of his preceptorship, the Medex will assist and extend the physician by learning and applying primary medical care skills under his close supervision. When the physician has developed enough confidence in the individual, he could be used in a variety of ways—all activities geared toward extending the physician's capabilities. Tasks that this new professional could perform include screening patients to be seen by the physician, history taking, performing parts of physical examinations, the application and removal of casts, assisting at surgery, suturing minor lacerations, taking roentgenograms and performing laboratory tests during non-office hours, assuming certain administrative responsibilities, and being available to provide the physician with assistance any day of the week, any hour of the night. The full extent of the Medex's task capabilities are as yet undefined. Consideration will be given to future requirements for skills in other areas as needs develop.

A certificate was awarded each Medex upon the completion of the three-month university training phase, and an additional certificate will be awarded upon completion of the preceptor training phase.

Special attention has been paid to the selection of the corpsmen, the matching of Medex and preceptors, psychologic adaptation to the civilian medical scene, and the development of the Medex's self-image, identity, and status. Based upon our experience with this program thus far, the MEDEX staff feels that any large-scale attempts to utilize former military corpsmen in civilian settings should pay particular attention to these areas.

In addition to the in-practice training the Medex receive during the 12-month preceptorship, the design of the program includes ten three-day-weekend continuing education seminars. These seminars will occur in varying locations around the state and will be geared toward filling gaps in knowledge identified as the program progresses. Instructors at these seminars will be preceptors in the program and other private practitioners. Unlike the university training phase, the medical school faculty will play a relatively minor role in this third phase.

Three tools are being used in the evaluation of MEDEX. Engineers from the Department of Industrial Engineering at the University of Washington completed the pre-Medex, Time-Motion-Task Study in each of the preceptor's offices during July 1969. An outside consulting group completed its pre-Medex Outside Evaluation Study in each of the offices in August 1969. The former is an objective study of how medical care is provided in the preceptor's community; the latter is a subjective study of what medical care is provided. The second part of each of these studies (post-Medex) will take place in the summer of 1970. After the Medex have been in their preceptorship for approximately nine months, a retrospective survey will be conducted in each of the communities involved. Selected populations will be questioned regarding the impact of this innovation on the delivery of medical care in the communities involved.

COMMENT

The conditions which produced the setting for MEDEX in Washington state are not totally unique. The state medical association's pioneering spirit to provide leadership and its expressed concern for its members were two important factors leading to the selection of this time and place for the demonstration program. Another important element was the very obvious need for help in rural Washington where dedicated general practitioners are growing increasingly concerned about their ability to maintain the quality and quantity of care for their patients. Of major importance, also, is a medical school evolving to meet the needs of the community it serves.

There will be other efforts to use corpsmen in civilian medicine. This program undoubtedly is not the only way to utilize this manpower pool. Conditions in other states will not be exactly the same and other pathways may be identified. However, in MEDEX we have attempted to design a program which is realistic and practical in this part of the Northwest. As this program continues, it will probably produce additional information which will be of assistance to other groups with an interest in improving the delivery of primary medical care in their areas. Subsequent writings will attempt to communicate such information.

Domestic implications of MEDEX should be obvious. Not so apparent, however, are the international developments that could result from American utilization of this available manpower pool. Although we are becoming more aware of our own health manpower needs, the worldwide perspective is one of acute crisis, with no relief visible on the horizon. The changes MEDEX or MEDEX-type programs might possibly effect in this country potentially could open numerous possibilities in other nations which spend considerable sums to maintain sizable defense systems.

Finally, MEDEX is not a radical innovation in health manpower, nor is it a new training program being developed within a university. It is a joint project of potential uses of the MEDEX personnel and the developers-trainers-evaluators of the MEDEX program. It is an overdue effort resulting from a global perspective to pull together existing resources to meet a growing need in community health.

NOTE: This investigation is supported by Public Health Service contract HSM–110–69–183 from the National Center for Health Services Research and Development, Health Services and Mental Health Administration.

This demonstration program is jointly sponsored by the School of Medicine, University of Washington, and the Washington State Medical Education and Research Foundation (Washington State Medical Association).

[From the Seattle Post-Intelligencer, Sept. 14, 1970]

FIRST MEDEX GRADS AT UW

Fourteen men walked out of a University of Washington building yesterday, diplomas in hand.

All had served their country as military medics. Now they will serve society as Medex graduates, assisting physicians by taking over routine medical duties, freeing the doctors for more vital tasks.

The University of Washington's Medex program—first in the nation—has stirred the interest of medical authorities across the country. Several other states have followed suit on the program. The bold plan, conceived by Dr. Richard Smith of the UW School of Medicine, is designed to utilize the training of former military medical corpsmen, rather than let it go unused.

The fourteen men who were graduated from Medex yesterday spent three months training in didactic and practical medical care under supervision of the UW School of Medicine's faculty.

The past year was devoted to on-the-job training (preceptorships) with practicing physicians. All of the 14 now have been hired by their supervising doctors.

The program is continuing at the UW, with a big backlog of applicants.

At yesterday's graduation ceremony, Dr. J. Thomas Grayston, dean of the UW's School of Public Health and Community Medicine, told the 14:

"You have the opportunity to become pioneers in a field that will grow rapidly."

Dr. Richard Greenleaf, noted that Medex will enable society to "save a talented pool" of medical training possessed by the ex-corpsmen.

Dr. John R. Hogness, executive vice president of UW, who in a week becomes director of the school's Health Services Center, told the 14:

"You are graduates of the most innovative and significant professional health training program in the nation."

Medex is a joint venture of the UW School of Medicine, the Washington State Medical Education and Research Foundation and participating private physicians.

[From the Hospital Tribune, Sept. 24, 1970]

MEDEX: A BREAKTHROUGH IN MEDICINE

(By Rodney N. Powell, M.D.*)

Startling discoveries in the basic sciences have consistently captured the headlines in medical research. More elusive has been the development of new technological tools to *relate* medical knowledge to the care of patients. A significant

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breakthrough in the area of applied medical research has occurred at the University of Washington School of Medicine in Seattle. A research and development program called Medex is breaking down barriers to extending the capacity of physicians to provide more and better care to patients.

Early in 1969, Medex (*Méd*ecin *Ex*tension—extension of the physician—recruited a group of former military medical corpsmen. These men have become the prototypes of a totally new health professional to help ease the manpower crisis in the delivery of medical services.

Advanced corpsmen receive 600 to 2,000 hours of formal medical training in the military health system (including anatomy, physiology, pharmacology, medical and surgical procedures, and psychiatry). Heretofore, this knowledge has been wasted when corpsmen left the military, since civilian medicine did not have a receptive framework for their skills in primary care.

Fifteen former corpsmen were selected on the basis of past medical performance to undergo three months of intensive training in the summer of 1969 at the University of Washington School of Medicine. Fourteen physicians in family practice were selected to be preceptors for them during 12 months of on-the-job training which followed the University Training Phase. These physicians interviewed and selected the corpsmen applicants, outlined the tasks they were to perform in the physicians' offices, and agreed to employ them at the end of the 15-month training period.

The University Training Phase program was based on the needs outlined by these prospective preceptors. History taking, physican examination, pediatrics, geriatrics, and other problems of ambulatory practice were emphasized. It was during this initial training phase that the imagery of this new professional received considerable attention by the Medex staff employing techniques of community psychiatry. The development of a work ethic, a specific identity as they relate to patients and other professionals, and the internalization of controls to promote public confidence and acceptance occupied a prominent place during that period.

Fourteen Medex men have ended their preceptorship with an equal number of physician-preceptors in solo or group practice. Four are in metropolitan areas; the majority are in small rural communities.

Medex recruits are performing many physician tasks that do not actually require a physician's sophisticated training and intricate decision-making experiences. They are taking histories, doing parts of the physical examination, applying and removing casts, making hospital and nursing home rounds, assisting at surgery, performing selected diagnostic and therapeutic procedures, making house calls—on the same schedule as the physicians with whom they are working. They extend the physicians' capacities at any time of day or night, seven days a week.

Having completed their 15 months of training, all 14 are remaining in this new profession to improve the delivery of primary medical care services. They are working under the supervision of their employing physicians, who in most instances have quite an investment in their training.

Although the evaluation is not yet completed, the assumption of a significant number of physician tasks by Medex has engendered unexpected enthusiasm by the physicians and nurses with whom the men work. More important, however, is the almost universal patient acceptance of this new professional.

Many patients are aware that some physician-preceptors had previously tried unsuccessfully to find other physicians to join them in practice to help shoulder increasing medical service burdens. Many realize Medex has been the salvation for medical care in some communities about to lose their physicians because of the exhausting pace of practice.

Dr. Richard A. Smith, Associate Professor of Preventive Medicine, conceived the Medex idea and is director of the Medex program at the University of Washington School of Medicine. He had anticipated that public acceptance would be a major obstacle. He and his staff feel that community preparation by prospective physician-preceptors preceding arrival of the recruits contributed greatly to acceptance of the innovation.

Although Medex has produced a new health professional, the importance of this research and development program is more far-reaching than the superficial coverage given to the program on recent television broadcasts and in other public media. The importance to medicine and medical education is expected to extend beyond the sudden impact of the new professional on the scene as depicted in earlier professional journals. Probably of far greater significance are the technological tools developed as a result of this experience.

The barriers to innovation in health services are complex. To avoid losing time and obviate obsolescence of plans developed over many years of preparation, the approach utilized in Medex was *involvement planning* (confront and solve the problems as they arise; learn how to do the job while doing it).

Crucial to Medex's involvement-planning approach was the development of a *collaborative model*, consisting of groups with active concern for the delivery of medical care: practicing physicians, organized medicine (the Washington State Medical Association), and the University of Washington School of Medicine. The latter two institutions are cosponsors of the program, which is funded by a grant from the Department of Health, Education, and Welfare.

State hospital and pharmaceutical associations were also consulted early in the program. Constructive discussions were held by the Medex staff with organized nursing in the initial stages. In addition, the preceptors and the Medex staff met with representatives in the communities where the men would be working.

Thus, those groups with vested interests in medical care have been involved in the program from the beginning. They have since worked together to solve numerous problems which such an innovation would be expected to encounter. The problems of legalization and insurance are being handled by this model, with the State Medical Association providing leadership, linkages, and legal expertise. The usual planning techniques would be more difficult to apply in this instance without the experience of an operational program. Thus, the collaborative model is producing the necessary *receptive framework* for the trainees.

Another facet of the MEDEX technology is its use of a *competency-based education* program. Training is based upon competencies achieved through previous education and work experiences. Also, training is not geared towards degrees but, rather, towards development of competency in the performance of tasks determined by a *needs assessment* and *task analysis*.

Following a careful analysis of programs in the United States and many other countries and with the basic design elements described above, MEDEX has developed an approach to health manpower that can be used for trainees with or without medical background. It is an approach that has stimulated three other states to begin MEDEX programs this year, and has drawn three additional states into the final planning stages to produce this newest member of the health profession.

MEDEX represents a significant break with the traditional methods of providing health care services. Its impetus has been the growing problem of developing adequate health manpower in this country. The program has demonstrated that physicians are willing and able to delegate to others medical tasks which heretofore have been performed only by physicians. Further, it indicates that patients are receptive to new ways of providing medical care if such modalities merit the confidence of physicians.

The technology described is also now being applied to other kinds of health manpower. It is a method that has adaptation possibilities for highly industrialized countries and for many of the developing nations as well. To those of us who have been involved in the delivery of health services in a number of countries, the technological tools developed by MEDEX take on additional significance as the gap continues to widen between the need and the capacity to deliver health care services. It represents one of the few hopes many nations have of extending quality medical care to more of their people.

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Mr. ROGERS. Dr. Carter?

Mr. CARTER. I think you have an excellent statement, Doctor, and I feel like that certainly the program at the University of Washington should be expanded. I feel that it offers a great help to the physician and to the people and can certainly expand the work of the physician by such trained personnel.

Mr. ROGERS. Thank you.

Mr. Kyros?

Mr. KYROS. Thank you, Mr. Chairman. Dr. Johnson, I certainly agree with everything that you have said, and I think it is central to what we are trying to do here. One of the points you made is your concern about how to relate productivity of the medical schools to the current health needs of the American people. That certainly makes us pause. A young man going into medical school might want to become a surgeon or a specialist, and I think that your statement on page 3 gives us real record indication how, if we have these programs available, we can help direct these young men into family practice. Is that right?

Dr. JOHNSON. Yes, sir.

Mr. KYROS. Is that what you are saying there?

Dr. JOHNSON. Yes, sir.

Mr. KYROS. And the bill before us will really assist in doing that?

Dr. JOHNSON. Yes, it will.

Mr. KYROS. You don't have to coerce the people?

Dr. JOHNSON. No, sir. There is nothing coercive in any of this. There are more students, as you will learn from some of the others who will testify, more students now interested in going into this area of provision of services than we have anything proximating adequate programs to train them at the present time.

Mr. KYROS. Could you have a medical school that just specialized in family practice, or would it be better to have it by departments in medical schools?

Dr. JOHNSON. It must of necessity be by departments, because much of the basic and fundamental education that goes into training the family physician in the broad spectrum area that Mr. Carter spoke about must be taught to the family physician by the internist, by the pediatrician, by the psychiatrist, and by other specialty disciplines within the confines of the medical school. But it must be taught within the area of a specialty department of family practice with which the student can identify.

It is so important, because we tend to want to create in our own image, and those who are surgeons want to create surgeons more and more, and those who are internists or psychiatrists and whatever, and if there is not an active ongoing productive department of family practice in the medical schools for the students to identify with, they are apt to be seduced into going into the areas of the available specialties. And that is a fact of life that we have to face.

Mr. KYROS. Thank you. Thank you very much, Doctor.

Mr. ROGERS. Thank you, Mr. Preyer.

Mr. PREYER. I just would like to welcome Dr. Johnson and say we are proud of him in North Carolina. We think some of our experimental programs there have been on the leading edge of things, and Dr. Johnson is largely responsible for them.

Dr. JOHNSON. Thank you, sir. I would say, to correct one thing that was said, I believe unintentionally. The legislation in North Carolina did not mandate a department at the University of North Carolina. We used the carrot rather than the stick, and we set up funds in our legislature that were available as of July 1 this year, for a coequal department of family practice, family medicine at the University of North Carolina. The university took the funds that were available and brought them in and used them. They were not required to do that.

Mr. ROGERS. Thank you very much, Dr. Johnson. We appreciate your being here today.

Our next witness is Dr. Lyle Voge, California Academy of General Practice, Orange, Calif.

Dr. Voge, we welcome you to the committee and we are pleased to receive your statement.

STATEMENT OF DR. LYLE VOGE, CALIFORNIA ACADEMY OF GENERAL PRACTICE

Dr. VOGE. Thank you, Mr. Chairman.

Mr. Chairman, I am sorry; these hearings caught me a little short so I wasn't able to bring my statement.

Mr. ROGERS. Yes. If you will just give us your comments, that will be just fine, Doctor.

Dr. VOGE. I would like you to consider me as wearing several hats today. I am Dr. Lyle Voge of Orange, Calif. and I do general practice. I have for the last 12 years. I was certified by the American Board of Family Practice this year. I was one of the lucky ones who passed the exam. I do teach family practice at the University of California; and I also happen to be the current president of the Orange County Medical Association in California. So I want to bring what I like to think of as grassroots feelings about this bill to the committee. I also just finished a term as president of our local community action council which is a group of citizens responsible for administering the so-called war on poverty, and I have, I think, gained some insights working in that program that are valuable in this particular area.

In California as of 1970–71 we have tabulated the requests for doctors, and the request for family doctors in California is over double the amount of requests for all other doctors, all other specialists. In my county at our county medical association headquarters, which is a county of a million and a half people and 1,500 doctors, we tabulated just in July the number of phone calls we got asking for doctors. And in an average day we received 75 calls to the county medical association asking where can I find a doctor? Seven out of eight of those calls are for family doctors. Unfortunately, in my own practice I have to sometimes have my secretary say to new patients, "I am sorry, we can't take you today. Dr. Voge is too busy." I know this is happening with my colleagues. So I want to impress upon the committee that in my county

and in my town and in my State there is a crying need for family doctors.

In my working with the community action council I had the privilege of chairing a special conference on health care for the poor, and we spent some 4 hours discussing what are the real problems; why don't the poor get adequate health care. Throughout the 4 hours we heard, there isn't any care available. There aren't family doctors that we can go to.

Why don't the poor and even some not so poor go? One of the reasons, one of the rather cryptic remarks I heard is you have to be awful sick to be $25 sick, doctor. That is how much it costs to go to the county emergency room or the hospital emergency room. I am convinced and so are my colleagues in California that we can prevent some of this episodic emergency care and hospitalization if there are adequately trained and competent doctors available to the public when they need them on a regular basis.

The other thing I hear all the time not only from the poor but in my contacts in the chamber of commerce, and the Rotary Club, is we like to identify with a doctor, a family doctor. We realize he doesn't have to do everything, but when we hurt we want to know who we can call. We don't want to have to call the wrong person at 11 o'clock at night and have him say I am sorry, that is not my specialty. We want to know that when we call, either he will take care of it or he will see that we get to somebody who can. I think this is something that we all have to recognize. As you have heard in previous testimony, the number of family doctors is decreasing. We are dying and retiring faster than we are being produced. This is terrible, because this is the foundation of decent medical care for all economic levels in this country.

I think this has been brought out, too, but I want to emphasize the fact that—and I hear this so often—people want to know and be able to identify with a doctor; even if they are not hurting too badly. They would like to know, can I go and talk to my doctor about something that I think may be wrong. We have heard about prevention here. We know that just treating the acutely ill is not satisfactory anymore. This is very expensive and very painful and very costly to the patient. We have to be finding diseases earlier and preventing complications.

You have heard many definitions of a family doctor today and I will just give you mine briefly. In my opinion, a family doctor is a physician who assumes the primary responsibility for restoring and maintaining the health of all the members of the family that he treats. Now, he may do this himself or he may find other specialists to help him. But he assumes that responsibility. I think this is a critical thing for this committee to understand. The average specialist doesn't assume responsibility for the total patient. He assumes responsibility within his field, and too often I hear, well, I have been going to this or that specialist, but when I had this problem he said, oh, I am sorry, I can't take care of that. This is one of the reasons they need family doctors, and this will cut down on the cost.

As a teacher, I have the opportunity to deal with medical students and residents and interns, and I would like to give you some very current information about a program in family practice and what it can do.

At the University of California, Irvine, we have some 56 medical students in each class. We have had a program in family practice. By a program, I mean we have established a preceptorship. Out of 56 students last, not this year, in 1969, 48 opted on their own time to spend 2 weeks in the office of a family doctor. This year the same class had a hundred percent, and the freshmen and sophomores are beating on our doors saying we want the same thing. We are having trouble finding enough family doctors to take all these students.

In the four classes at the University of California, Irvine, since we have put in a program 2 years ago, in the senior class there is 10 percent interested in family practice. In the freshman class, there is 60 percent. In the sophomore class, there is 60 percent. In the junior class it is up to 65 percent. These are the kids that we had in our offices last summer and this summer. So I think it is very important that you realize that a department of family practice is important contact with a doctor, with a person that the student can identify with as somebody he wants to identify with and be like is very important.

Up until very recently medical students didn't have any family doctors around. They didn't see them. I went through 4 years of medical school and the only time I saw a family doctor is when I got sick and went to his office. So it is very important. This is a very impressionable age; and students identify with the people who are around them.

One other quick point. I have, in talking to these students, been impressed with the zeal and their concern for human beings. I think we are really on the brink of a tremendous opportunity. I think, unfortunately, maybe my generation was more concerned with things; and I have four teenagers in my own family, and am proud to say I think they are more concerned with people. I think at all levels, in the college, the medical school, these students want to take care of sick people. They are concerned with human problems.

Along those same lines, I think that the Federal Government has very generously supported research into scientific problems concerning health and into development of technology. But we aren't applying that to the day-to-day needs of the sick people in my county, in my city, in my State. The only way we are going to apply this knowledge, the technology, is by providing the manpower, the people, the family doctors who can deliver that.

Now, they have to be well trained. They have to be competent. But as you can see from our survey, we need to get to the students early in their medical training, I mean as freshmen, and that means having family doctors on the faculty talking to them and available so they can visit with family doctors, see what it means to be a family doctor and a respected member of your community. We found that in California. We used to have a preceptorship between the junior and senior year. We have now moved it up to freshmen. By the time they are juniors and seniors most of them are already committed to specialty practice because they hadn't seen family doctors.

One other final point. I had the privilege of hearing Dr. Sanders, the former chancellor of the University of California Medical School, give an interesting talk at one of our postgraduate lectures just last

year and the title of his talk is "Medicine is for Man." And I would just like to reemphasize that. All the research, all the guinea pigs, all the test tubes, all the buildings don't mean a thing if the people aren't getting health care, and in the opinion of the doctors, the family doctors and most of the doctors in California, I would say one of the best ways to bring these benefits to the people is to provide more family doctors.

Mr. ROGERS. Thank you very much, Doctor.

Mr. ROGERS. Mr. Kyros?

Mr. KYROS. No questions, Mr. Chairman.

Mr. ROGERS. Mr. Preyer.

Mr. PREYER. No questions. Thank you. I thought that was an excellent statement, and I hope you will have the chance to elaborate on it.

Dr. VOGE. Yes. I am sorry; your committee hearings caught me at the convention in San Francisco and my statement is in Orange.

Mr. PREYER. Thank you very much.

Dr. VOGE. And my office is locked today.

Mr. ROGERS. I think your statement was excellent. I agree with you that young people are concerned. They are placing different values, and not to be critical of the generation that we are a part of necessarily, I think money has been stressed more than people as you say.

Dr. VOGE. Well, I think Sputnik was partly responsible for that.

Mr. ROGERS. And so I think we are having a different attitude and I think this will be reflective of people going into general practice. And, of course, too, the fact that you are now specializing in general practice, family practice will give respectability.

Dr. VOGE. Right. That is very true. I was amazed, you know, I haven't changed my sign or I haven't changed my stationery but I have been really impressed. Now, when I talk to the students and they say, "Did you take the board?" and I say, "Yes, and I passed it," they listen a little more. They can identify with me for whatever reason.

Mr. ROGERS. It is good to be in a specialty, isn't it?

Dr. VOGE. Well, I don't really feel too much different, but I think the main reason I took the board exam is because I want to get to the students.

Mr. ROGERS. I agree with you and I think——

Dr. VOGE. And if that is important to them, then it is important to me.

Mr. ROGERS. Well, of course. Thank you. Your testimony has been most helpful.

Our last witness this morning is Dr. Jack Hall, who is president of the Association for Hospital Medical Education, Methodist Hospital, Indianapolis, Ind.

Dr. Hall, we welcome you to the committee. We will be pleased to receive your statement and I see you have with you Mr. Ted Kummer——

Dr. HALL. That is correct.

Mr. ROGERS (continuing). Is that correct, executive director of the association. We welcome you both and will be pleased to receive your statement.

STATEMENT OF DR. JACK H. HALL, PRESIDENT, ASSOCIATION FOR HOSPITAL MEDICAL EDUCATION; ACCOMPANIED BY THEODORE G. KUMMER, EXECUTIVE DIRECTOR

Dr. HALL. Thank you. You are very kind. I would like to tell a small anecdote. In 1962 as director of medical education we had established a family practice program, and had an outstanding young man that had graduated in the top 10 in his medical school class as one of our first family practice residents. He was so good that all the other specialty programs, and we have 11 other specialty programs in our hospitals, wanted to recruit him into the program. So one day he was being severely hazed by his colleagues in internal medicine who were saying, "Pete, you really don't want to be a general practitioner. You really ought to be a super specialist like us in internal medicine," and so forth. And Pete gave them the best answer that I know of, and he turned around and he said, "Well, the difference is that you want to doctor disease and I want to doctor people." And I think this is very, very pertinent to the discussion of the day and fits right into the trend of the previous discussions.

I would like to identify just a little bit about the association that I have the pleasure of serving as president.

The Association for Hospital Medical Education represents the medical education programs in approximately 500 community hospitals. The hospitals are fairly large and average 450 beds.

These hospitals have in their graduate education programs—intern and resident education—approximately 40 percent of the intern and resident education positions available in our country. Over 125,000 practicing physicians in the United States belong to or relate to the medical staffs of these hospitals. These are community hospitals with approved graduate education programs.

There are now 46 approved family practice residency programs. Twenty-seven of these are in community hospitals, and 19 are in medical schools. And Dr. Kowalewski made comment and made part of the record some of these facts. Twenty-three of the community hospitals and two of the medical schools are represented by members of the Association for Hospital Medical Education.

I wonder why it is that family practice residency programs have developed in community teaching hospitals? Development of these programs in community hospitals has been rapid and natural because it is in community hospitals that the majority of practicing physicians are represented and there is less dissipation of effort when teaching occurs where the physician teachers work and practice. Further, a significant portion of the practice of family medicine is carried out in hospitals, and a majority of hospital health care is delivered through community hospitals that have provided a milieu for care and education in family practice. In other words, the community hospital is the front line of health care delivery. What better learning environment could there be?

When the student has an opportunity to see family practice and primary care, many recognize this as a real reward of medicine. Because of this, they will pursue family practice at a higher level if they have an opportunity to participate in it in their community hospital.

The major factor that has inhibited the establishment of family practice training programs in hospitals is that financial crisis that is faced by most institutions. Many simply do not have funds available to implement new programs or to reimburse faculty, either on a part-time or full-time basis. Inauguration of a graduate program in family practice is difficult and costly. In other areas of medicine, physicians have had experience in teaching their specialty during the years of residency education. Since established family practice residency programs are relatively new, and of short duration, 3 years, the pool of available experienced teachers of family medicine is comparatively small. Furthermore, family physicians are often overwhelmed by patient care demands which leaves them little time to learn to teach, and to teach.

It is the firm conviction of the Association for Hospital Medical Education that the family practice movement can contribute enormously to solving the major problem we face in the delivery of health services. But to succeed, it must receive adequate financial support. Further, leaders in medical education commonly agree that a good residency and continuing medical education program in the hospital is a necessary antecedent to a good medical education program for students. Solid graduate and continuing education programs are the needed foundation to a good undergraduate program. Thus, provision of financial support for family practice residency programs in community hospitals must accompany provision of support for departments of family medicine within the medical colleges. Additionally, we believe that the funds should be provided in such a way as to stimulate creation of separate and distinct departments of family medicine within the medical colleges. Otherwise, we fear, the funds may become dissipated into other needy programs.

Funds made available through H.R. 15793 and Senate bill 3418 will contribute substantially to development of additional family practice training programs, both in community hospitals and in medical schools. These funds will stimulate development of faculty education programs. They will provide reimbursement to part-time faculty and stimulate development of full-time physicians interested in family practice education, and they will enable institutions to construct model ambulatory patient-care centers.

We hear often and, indeed, we are confronted with a crisis in health care delivery in this country, partially as a result of manpower shortage, partially as a result of inadequate distribution of available physician manpower and partially as a result of manpower specialty. Millions of Americans do not have access to primary medical care, not through any fault of their own, but simply because there are not enough qualified practitioners to provide primary care. Present programs in graduate education seem to be yielding physicians doing more and more for fewer and fewer. By the very nature of family practice, techniques of preventive health care and management and control of practice become perfected and serve as models in family practice units for efficient delivery of health care for large numbers of people.

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Management responsibility has led to the establishment of our great Nation as the productive leader of this world. I believe unequivocally, that the manager of health care should be the physician educated to assume comprehensive continuing responsibility for the health of the family. This is the family physician. The active programs now functioning have led the Nation in the development of doctor assistants to increase their ability for the delivery of health care. You have heard the testimony of Dr. Amos Johnson about the exciting development of physician assistants in the State of Washington and the State of North Carolina. We have had a similar experience at Methodist Hospital in Indianapolis, Ind. Dr. Johnson told you about his pioneering efforts as a family physician and the development of a doctor's assistant program 30 years ago. I think that this is a tribute to where the new experiments in the delivery of health care services have started. They have started in the family practice area, and we owe a great debt to men like Dr. Johnson for their leadership in this.

The community hospital and the community delivery of health care in the home base of family physicians, and educational experience gained in this environment is most realistic. The funds provided by grants authorized by this legislation will stimulate development of community hospital-based family practice training programs. The support of the family practice movement has been a major position of the Association for Hospital Medical Education over the past decade and we look upon enactment of H.R. 15793 as vital to improved health care for all our citizens.

I would like to talk just a minute about a question that Representative Nelsen brought up relative to the loss of physicians from some States. Indiana, as many areas in the Midwest, had suffered from this brain drain of physicians leaving our State. We established, through our State legislature some time ago, an assistance to the development of graduate education programs in our State. They provide really less than 5 percent of the funds necessary to conduct these programs. But they do provide a stimulus to the hospitals to establish them. We did establish increasing numbers of internships and residencies. Nine out of 10 of these residencies have been in family practice.

We have improved our position by 106 physicians, I believe that is the correct number, in the State of Indiana over the past 3 years that come to our State now to participate in graduate education. Thus, we think that we have reversed the tide of the brain drain from our State. And we have done it by providing an attractive program that the students desire.

I would only amplify what has been said before. The bright students are looking for family practice and for delivery of primary health care that relates to the needs of the people. And I believe that programs that provide this will grow, will protect their States against this loss.

Mr. Chairman, we thank you for the opportunity to comment and we would appreciate any questions.

Mr. ROGERS. Thank you, Dr. Hall. I appreciate your testimony.

Mr. Kyros.

Mr. KYROS. Thank you very much, Dr. Hall.

Thank you, Mr. Chairman.

Mr. ROGERS. Mr. Preyer.

Mr. PREYER. I have no questions. Thank you, Mr. Chairman. That is a very helpful statement.

Mr. ROGERS. What about your emergency room? Is it being used more and more by people for primary care?

Dr. HALL. Yes, sir. Yesterday, I had a man come down to my office and say that he plans on going into family practice, and the fact that he had just finished a 2-month tour in the emergency room he felt was an excellent experience because what he really saw there was a general practice or family practice of medicine.

Mr. ROGERS. Have you expanded your emergency room?

Dr. HALL. Yes; by demand, and I think this is because——

Mr. ROGERS. Is this the trend everywhere?

Dr. HALL. Yes. I think it is the fault of not really meeting the needs of the people. They no longer have a family physician that can meet these needs. Thus, they impose themselves on a relatively artificial system in our emergency room which takes care of them only one time, does no prior planning to prevent diseases and I think it is kind of tragic that we have allowed our system to slide into this.

Mr. ROGERS. Do you have any clinics, outlying clinics, that feed into your hospital?

Dr. HALL. Yes, sir. We started, 3 years ago, community health clinics. These were started at the request of the people in these communities. These were communities in Indianapolis in areas of 15,000 to 30,000 people who by their mode of transportation took an hour or more to get to a physician. We told them that if they wanted to come down to our hospital we would provide free care. And the county hospital did the same thing. But by the bus system it took a long time for these people to get there. So they really were severely deprived of access to good health care. In establishing this, we experimented with various kinds of physicians to work in there, and we tried pediatricians, and internists, and so forth. But we have only been really successful in it when we took one of the residents that completed our family practice program and made him the director. And he has built a program that is exciting.

Now, the medical students are signing up to participate with him in this program, more than he can accommodate. I have many residents in family practice who want to go out and work with him in it. It has been an exciting venture.

Mr. ROGERS. Isn't this going to be pretty much the pattern that is going to have to develop, have outlying clinics in the areas where you have family practitioners, perhaps group practice in that area?

Dr. HALL. Yes, sir. I would think so. I would hope that as we are subsidizing these clinics out of our hospital basically from what our charges are on the hospital patients, that as we have these fine young men both in medical school and in their graduate training that go out and see the needs and enjoy the experience of taking care of these people, that they will set up practices there in a group sense. I do not believe that we will see too many independent men go out into practice as solos any longer.

Mr. ROGERS. That is passing quickly, isn't it?

Dr. HALL. I believe so.

Mr. ROGERS. Thank you very much. We appreciate your presence, Mr. Kummer, you being here. Thank you very much. And the committee will stand adjourned until 10 o'clock tomorrow morning.

Thank you.

(Whereupon, at 12:30 p.m., the subcommittee adjourned to reconvene at 10 a.m., Wednesday, September 30, 1970.)

TRAINING OF FAMILY PHYSICIANS

WEDNESDAY, SEPTEMBER 30, 1970

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON PUBLIC HEALTH AND WELFARE,
COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE,
Washington, D.C.

The subcommittee met, pursuant to notice at 10:20 a.m., in room 2325, Rayburn House Office Building, Hon. John Jarman (chairman) presiding.

Mr. JARMAN. The subcommittee will please be in order as we continue the hearings on H.R. 15793 and other bills amending the Public Health Service Act with regard to family medicine practice.

Our first witness this morning is our colleague from Illinois, Congressman John Anderson.

STATEMENT OF HON. JOHN B. ANDERSON, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ILLINOIS

Mr. ANDERSON. Thank you, Mr. Chairman.

Mr. JARMAN. It is a pleasure to have you with us, John.

Mr. ANDERSON. Mr. Chairman, I have a statement some 12 pages in length which more fully states my views, but I would ask permission to have that incorporated as a part of the record of the hearings and then proceed to try in less than half that space to summarize.

Mr. JARMAN. The committee will be glad to accept the full statement.

Mr. ANDERSON. It is a privilege to appear before this distinguished subcommittee this morning. And I would certainly want to make it clear at the outset that I come as one who has no mere academic interest in the bills now pending before your committee, but as one whose district suffers from an alarming shortage of doctors, and particularly family practitioners. Therefore, I feel strongly that we must undertake substantially expanded efforts to secure the training of more family doctors.

This morning I would like to touch on just one aspect of the statement that I have filed or will file with the committee because I think it has a particularly important bearing on what you are doing.

I am not going to try to make the case for aid to family medicine departments in our medical schools or to cite the figures on the decline in the portion of our doctors who are engaged in family practice. This has already been done more than once by individuals who carry more authority on these matters than do I. The real issue in my view is how shall we go about stimulating our medical schools to expand

their output of primary care physicians. Is there sufficient authority and resources in our present programs, and in particular in the Health Professions Educational Assistance Act or do we need new categorical education aimed more precisely at the family doctor target?

As one member of the Republican congressional leadership I have tried to keep in close touch with and given my full support to key administration officials seeking to develop positive programs to meet our Nation's health care needs. In this regard I feel in all candor that I should say to this subcommittee that I think that the testimony that was offered last July by Dr. John Zapp, an HEW official, before the Senate Labor and Public Welfare Committee did not really do full justice to the Nixon administration concern for health care problems and, indeed, left several important points unclear. In recommending against the Senate counterpart of the Rooney bill, Dr. Zapp argued that there was sufficient authority for the support of primary care training under the Health Professions Education Assistance Act. However, every succeeding witness and a number of them prominent in family practice units in medical schools vehemently denied that any significant amount of funds from the NIH Bureau of Health Professions Educational Training was available for family practice programs. Dr. Francis M. Land, head of the division of family practice at the University of Nebraska Medical Center said, and I quote:

> I can assure you that a thorough search of the NIH records will show that no grants have been given for this primary purpose.

Dr. E. M. Hansen, assistant dean of the Wisconsin Medical School, similarly asserted and again I quote from the record of those hearings, "We have been able to secure no Federal support whatsoever" for family practice programs.

And as it turned out the HEW official that I referred to was talking about two factors as being evidence that health professions education assistance funds are available for family practice programs. One, he was speaking of the formula grant money that goes to all qualifying medical schools under the act, and secondly, special grant funds worth $1½ million to 17 different family practice programs.

Let me point out that since only 23 schools have family practice programs worthy of the name, formula grants could at best total around $500,000, because each school receives only a basic grant of $25,000. But in medical schools that are dominated by research and specialism, who can really believe that struggling family practice departments are receiving one-half or one-quarter of this very small amount of formula money?

Moreover, it appears that the special grants for family practice programs were oriented toward exposing specialists to the nature of the family practice discipline and not really training family practice physicians per se. So when you net all of this out then it seems to me that not much more really than $1 million of health professions educational assistance money was available during the past fiscal year for the direct support of family practice programs. And if I were to use a formula that has been developed by Dr. Edward Kowalewski, president of the Academy of General Practice, I would compute that spending at this level would produce the grand total of 16 additional

family practitioners annually. And gentlemen, my own 16th Congressional District in Illinois could use that many. How can we possibly be led to believe, therefore, that this is adequate to meet the overwhelming national need?

This takes me back to the central issue of this legislation, which I think stated simply is this: Should we enact yet another categorical Federal-aid program? Now, ordinarily I would respond to that question with a resounding no. It seems to me that prior Congresses literally went mad during the 1960's in authorizing and in proliferating categorical grant programs. And as a result the areas of health, welfare, education, and manpower have become, to borrow a metaphor from William James, "A blooming, buzzing mass" of confusion and overlap. The Nixon administration vowed to impose some managerial order and logic on this categorical chaos by consolidating programs and moving wherever possible from categorical to general grants. I have most enthusiastically supported this effort and will continue to do so.

But having said this and having, I would hope, established credentials as no uncritical friend of the categorical mania that does afflict some of my colleagues, I would also remind you that for every rule or general principle that there is an occasion at times for an exception, and I think this is one of them. The matter can be put quite simply. Since 1948, the preponderant portion of the Federal support for medical schools has been in the form of research funds distributed by NIH, an institution which reflects and is indeed the very epitome of the present specialty research-oriented trend in medicine. NIH is organized largely by disease or physical attributes. Its advisory bodies are composed of eminent specialists and researchers. Its top administrators are products of what might be called, might be termed "high medicine."

I do not for a moment regret the fact that we have established NIH and that Congress has chosen to fund it generously. The flowering of modern medical science and the brilliant progress that we are making in overcoming some of the worst afflictions known to mankind would not have been possible without it. But like any other human organization it has its history, it has certain bureaucratic rigidities and biases, and these are such as to make it, I think, not really the proper setting for the rapid development and expansion of a program of large-scale Federal aid for the production of family practice physicians.

Moreover, this is only half of the story. The other half is that as a result of "specialization" and "sciencization" of medicine, and the fact that for 15 years Federal aid was available only for medical research, the great majority of our medical schools have been literally transformed in the post-World War II years from teaching institutions to research institutions producing medical specialists as a by-product. As Dr. Kowalewski has noted—

> The medical school curriculum has been geared to accommodate research, with the result that few if any of the medical school faculty have been general practitioners with a primary interest in training family doctors.

So, in attempting to provide a new funding input into our medical education system for the training of family physicians we are con-

fronted with powerful, entrenched countercurrents on both ends of the spectrum. I must frankly express the fear that to merely increase HPEA funding hoping that some of the funds will find their way into family practice curriculums and departments might well be an utopian gesture. Again to quote Dr. Kowalewski:

> By simply increasing the amount of funds available to medical schools one has no reason to expect that medical schools are automatically going to establish departments of family medicine. Rather the supposition would logically be that medical schools would tend to strengthen those departments and programs already in existence.

Because of the nature of the institutions at both the providing and the receiving ends, I think we are going to need a new and more finely honed instrument welded by those sympathetic to the needs and purposes of the family practice medical education at both ends of the system if we are going to deal effectively with this very critical problem.

Mr. Chairman, I believe that the Rooney bill provides this by first, making grants contingent on the approval of an advisory council on family medicine composed of 12 individuals, four of them family practitioners and four of them teachers of family medicine; secondly, by providing that funds shall be granted to medical schools to operate as an integral part of their medical education program separate and distinct, and I have underlined those words, separate and distinct departments devoted to providing teaching and instruction in all phases of family medicine. Though there has been some question as to whether this explicit stipulation of separate and distinct departments is necessary, I think that given the institutional setting, the history of medical education in recent years, and the urgent need to undertake a dramatic expansion of support for the training of family physicians, that the proponents of the separate department and categorical grant route have the best of the argument.

Mr. Chairman, let me make just two very brief concluding points. First, I have been informed by HEW that they will be introducing an omnibus health manpower bill next year which would adequately cope with the need to produce more primary care physicians. By supporting this legislation I certainly don't close myself off to the possibility that this option will be offered to the Congress, although as I said today, I think perhaps there would be great difficulties in taking that route rather than focus, as I think we are doing with this particular bill, on a particular part of the problem.

And secondly, in my more detailed written statement, I have expressed the hope that in considering this bill, this legislation, that you might also consider including with it as a part of the legislation a scholarship section in part (*a*) of the bill along the lines of the Senate bill that has already been introduced on the other side of the Capitol by Senator Murphy, of California, and many of his colleagues on the Senate Labor and Public Welfare Committee. And again, I think that this would be a logical complement to the other part of the legislation which I am urging.

Mr. Chairman, that concludes the summary that I have prepared of my written statement.

(Mr. Anderson's prepared statement follows:)

STATEMENT OF HON. JOHN B. ANDERSON, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ILLINOIS

Mr. Chairman: It is a privilege and a pleasure for me to appear before this distinguished Subcommittee this morning. I would make it clear from the outset that I come here with no mere academic interest in the bills before this committee. As is the case with a growing number of my colleagues, the District I represent suffers from an alarming shortage of doctors—particularly family practitioners. Twelve communities in the Illinois 16th District, according to the state AMA, are desperately seeking doctors. Some of these communities have not had an active physician in 10 years; others are experiencing considerable economic and population expansion and are in a quandary as to how the growing medical needs and demands of their communities are to be filled.

And this is not only true of small communities and rural areas, but of large urban areas as well. Rockford, the principle city in my district with a population of almost 150,000, is in desperate need of more physicians. I am told that Chicago, the nation's second largest city has experienced a net loss of over 1,700 physicians in the past decade. Because of these alarming trends, I cannot but applaud this subcommittee for holding these hearings and express the hope that we can get speedy action on these measures to expand federal support for the training of primary-care physicians.

Mr. Chairman, I would like to consider with your subcommittee today three broad aspects of this problem. First, the dimensions of the physician manpower shortage and the severe maldistribution problems associated with it. Secondly, some of the causes of the seeming inability of our medical schools to substantially increase their output of physicians. And thirdly, my reasons for supporting this categorical legislation despite my general preference for avoiding any further proliferation of categorical grants.

This committee has, no doubt, been fully apprised of the statistical dimensions of the doctor shortage in this country. Though I could not presume to add anything which is really new or startling, I do want to briefly suggest a number of the instances of maldistribution in our medical manpower system that, in my view, demand immediate attention.

If we were to look at the aggregate or total supply of physicians in the United States, it would appear that there is really not much of a problem at all. In 1931, there was one doctor for every 818 persons in the nation; by 1949, this ratio had dropped to one for every 787 persons; and by 1967, the figure stood at one doctor for every 677 individuals. On the surface, at least, the appearance of progress.

However, if we probe a little deeper the picture begins to change. In 1931, fully 90% of active physicians were in private, patient-care practice; by 1949, the number had decreased to 78% and by 1967 the figure was only 65%. Moreover, there has been an even more precipitous decline in the percentage of doctors engaged in the particular area of general or family practice. In 1931, over 75% of physicians were in this type of practice; by 1949 less than 50% were; and today the figure is at a phenomenal low of 20%, and still declining because less than 15% of recent medical school graduating classes have expressed an intention of going into this field.

What these figures seem to indicate is that the traditional points of "entry" or "intake" into the health care system are rapidly disappearing. In 1931, there was one primary care physician for every 1,000 persons in the nation; today there is scarcely one primary care physician for every 3,000 persons. As a result, we have an increasingly effective network of quite often brilliant specialist care once serious illnesses or other major maladies have been incurred; but at the same time we are being left with an increasingly sparse, uneven, gap-filled and ad hoc system for diagnosing illnesses in the early stages and for providing effective preventive treatment.

Ordinarily, discussion of the physician shortage focuses on the aggregate number needed to meet the health care needs of the American people; a common figure cited is 50,000 additional doctors. But I am afraid that this obscures an even more urgent problem: namely the need to create a system of primary or general care services equal to the growing sophistication and quality of our specialist care. For without upgraded and improved primary care services and adequate and accessible points of "entry" into the total health care system, we are never going to make significant headway in improving the health of the American people or controlling the costs of providing health care services. As Dr. William

Stewart, former Surgeon General and present Chancellor of the Louisiana State University Medical School, has argued:

> . . . we have gone overboard in institutionally based medical care. We have been obsessed with the rare and the dramatic. We have grafted and transplanted for the few at the expense of the many. We have passed the necessary plateau in the development of medical care in this country, which rightfully concerned itself with the dramatic, lifesaving, crisis-oriented, special disease-entity phase, and balanced effort, of course, will have to be continued in this area. But now we have to come to realize that if we are going to further improve medical care for more people, we will have to devote increasing efforts toward the improvement of the quality of life, and this could best be done through the family practice concept of medical care.

Another type of maldistribution—regional and socio-economic—also plagues the delivery of health care services in the United States. Region-wise, the South has only 96 physicians per 100,000 residents while the Northeast has 155. The average for isolated rural areas is 47.7 in contrast to an average for major metropolitan areas of 159 per hundred thousand. New York City, for example, has one doctor for every 500 persons; primarily rural North Dakota has one for every 1500. To bring the other regions of the country up to the level of the metropolitan areas of the Northeast would require 50,000 additional doctors immediately.

And, of course, doctor ratios for poverty areas or low-income groups are even worse. The National Advisory Commission on Health Manpower reported in 1967 that to bring per capita expenditures for physician services for poverty families up to the level enjoyed by families with incomes between $4,000 and $7,000 would require nearly a 10% increase in total national spending for physician services. Yet, we know that even the $4,000 to $7,000 group does not generally receive the full range of physician services necessary for optimum health. So when we talk of providing an adequate supply of doctors for all socio-economic levels, we are speaking of a quite substantial increase in the output of services. Though some of this output increase may come from improved productivity most of it will depend on greatly expanding the supply of practicing physicians.

A third problem closely connected with the supply of physicians is the growing "doctor drain" from foreign medical schools into the United States. Approximately 7,000 graduates of foreign medical schools enter the United States each year; this group accounts for 28% of new interns and residents and 17% of new licentiates. Theoretically, these students come to this country to take advantage of our superb facilities and programs for advanced medical training. However, over 50% of these students remain in the United States to establish practices after their training has been completed. As a result, in 1967 they accounted for 14% of the active physicians in the country.

In my view, this growing dependency on foreign medical school graduates raises the most serious moral problems for the United States. To be sure, some of these foreign medical school graduates are Americans who did not gain admittance to the limited classes of our medical schools and went abroad for their first medical degree. But ultimately, most of this number is comprised of persons from developing countries who come directly to the United States, or of Europeans who are in turn replaced in their home countries by medical school graduates whose origins are in the developing world. It seems hardly conscionable to me that the richest nation on earth should be dependent for almost one-sixth of its doctors on individuals from nations so desperately in need of trained medical personnel. Indeed, rather than importing doctors we should by all reasonable standards of international moral obligation be helping to provide medical services and personnel to developing countries. And I am sure the members of this committee are aware, there has been much discussion recently of the unfavorable U.S. balance of trade. It seems to me this excessive inflow of medical manpower is the most egregious imbalance of all.

There are still at least two other considerations to factor into the physician manpower problem. One is the fact that many of our hospitals and other institutional health care services are severely understaffed. For instance, it has been estimated that 25% of the available intern and residency positions alone go unfilled each year. In nine states, less than 60% of the positions are filled. To fill these positions would require 3,500 additional medical school graduates each year.

Another debit on the physician supply ledger is the fact that our increasingly sophisticated medical knowledge and technology makes continuing education nearly an absolute necessity if the unparalleled quality of American health care is to be preserved. Yet, to free all American doctors for just two weeks per year for continuing education would require a 5% increase in the supply of manpower.

In light of these tremendous needs and considering the seeming inability of our medical schools to significantly step-up their output of doctors, I must say that I find the bills introduced by my colleague from Pennsylvania, Mr. Rooney, most timely and welcome. They zero-in right to the heart of the health care crisis in this country by providing significant new amounts of federal aid for the training of primary care physicians. I was most surprised to learn from a perusal of the Senate hearings on similar legislation that of our approximately 100 medical schools only 9 have full departments of family medicine and only 14 have divisions devoted to the training of primary care physicians. If this is the case it is no wonder that our primary health care system is faltering so badly in this country!

At the same time it is interesting to note that 15 medical schools have family medicine departments in the planning stage and another 19 are conducting feasibility studies. If in the immediate future all of these schools could establish functioning departments it would represent an increase of 55%. The problem seems to be that there just is not the funding available to move, in many instances, from the planning to the construction and operation stage. And that is why this legislation is so vitally important.

We desperately need new federal financing to get these departments off the ground, expand existing ones, and establish still further family medicine departments because the money simply is not available anywhere else.

As a member of the Republican Congressional leadership, I have kept in close touch with and given my full support to key Administration officials who are seeking to develop positive programs to meet this nation's pressing health care needs. In this regard I feel obliged to say that the testimony offered before the Senate Labor and Public Welfare Committee in July by Dr. John Zapp, an HEW official, did not do justice to the Nixon Administration's concern for health care problems, and indeed left several important points unclarified. In recommending against the Senate counterpart to the Rooney bill, Dr. Zapp argued that there was sufficient authority for the support of primary-care training under the Health Professions Education Assistance Act. However, every succeeding witness, a number of them heads of family practice units in medical schools, vehemently denied that any significant amount of funds administered by the NIH Bureau of Health Professions Education and Training was available for family practice programs. Dr. Francis M. Land, head of the Division of Family Practice at the University of Nebraska Medical Center said, "I can assure you that a thorough search of the NIH records will show that no grants have been given for this primary purpose." Dr. E. M. Hansen, assistant dean of the Wisconsin medical school, similarly asserted, "we have been able to secure no federal support whatsoever" for family practice programs.

As it turned out, the HEW official was referring to two factors as evidence that HPEA funds were available for family practice programs—(1) the formula grant money that goes to all medical schools under the act; and (2) special grants worth $1.5 million to 17 different family practice programs. Yet, since we noted that only 23 medical schools have family practice programs worthy of the name, formula grant aid could at best total about $500,000, as each school receives a basic grant of $25,000. But in medical schools dominated by research and specialism, who is to believe that struggling family practice departments are receiving even one-half or even one-fourth of this formula money? As Dr. Zapp noted, "we do not have information on the specific programs for which the schools use these funds." Moreover, it appears that the special grants for family practice programs were oriented toward exposing specialists to the nature of the family practice curriculum and not really training family practice physicians per se. So when you net all of this out, it appears to me that not much more than $1 million of HPEA money during the past fiscal year was available for direct support of family practice programs. Using a formula developed by Dr. Edward Kowalewski, President of the American Academy of General Practice, I compute that spending at this level in future years would produce the grand total of 16 additional family practitioners annually. My heavens, gentlemen, my own district could use that many! How are we to be led to believe that this is adequate to meet the overwhelming national need?

And this takes me to the central issue of this legislation. Stated simply: should we enact yet another categorical federal aid program? Ordinarily, I would respond with a resounding no. The Democratic Congresses of the mid-nineteen sixties literally went mad authorizing and proliferating categorical programs. As a result, the areas of health, welfare, education, and manpower have become literally, to borrow a metaphor from William James, a "blooming, buzzing mass" of confusion and overlap. The Nixon administration vowed to impose some managerial order and logic upon this categorical chaos by consolidating programs and moving wherever possible from categorical to general grants. I have most enthusiastically supported this effort and will continue to do so.

But having said this, and having established my credentials as no friend of the categorical mania that afflicts some of my colleagues, I must also remind you that with every rule or principle there is occasion for exception, and I think this is one of them. The matter can be put quite simply. Since 1948, the preponderant portion of federal support for medical schools has been in research funds distributed by the National Institutes of Health—an institution which reflects the epitome of our present specialty-research oriented trend in medicine: It is organized by disease or physical attribute; its advisory bodies are composed of eminent specialists and researchers and its administrators are professional products of what might be termed "high medicine."

Now I do not regret for a moment the fact that we established NIH and that the Congress has chosen to fund it generously; nor do I wish to criticize the many fine professionals associated with it. Indeed, the flowering of modern medical science and the brilliant progress we are making in overcoming some of the most recalcitrant afflictions known to man would have been impossible without it. But like any human organization it has its history, its bureaucratic rigidities, its biases. And these are such as to make it a most inimical setting for the rapid development and expansion of a program of large scale federal aid for the production of family practice physicians.

Moreover, this is only half of the story. The other half is that as a result of "specialization" and "sciencization" of medicine, and the fact that for 15 years federal aid was available only for medical research, the great majority of our medical schools have been literally transformed in the post-World War II years from teaching institutions to research institutions producing medical specialists as a by-product. As Dr. Kowalewski has noted:

> The medical school curriculum has been geared to accommodate research, with the result that few if any of the medical school faculty have been general practitioners with a primary interest in training family doctors.

So, in attempting to provide a new funding input into our medical education system for the training of family physicians we are confronted with powerful, entrenched counter-currents on both ends of the spectrum. To merely increase HPEA funding hoping that some of the funds will find their way into family practice curricula and departments is at best a utopian illusion. Currently the funding agencies at the providing end and the medical schools at the receiving end are institutionally incapable or at least unlikely to produce the dramatic overhaul of medical education that we so desperately need. Therefore, in distributing the federal largesse, we need a fine-honed instrument manned by those sympathetic to the needs and purposes of family practice medical education at both ends of the line.

I believe the Rooney bills provide this by first, making grants contingent on the approval of an advisory council on family medicine composed of 12 individuals, four of them family practitioners and four of them teachers of family medicine; and second, by providing that funds shall be granted to medical schools, "to operate as an integral part of their medical education program *separate* and *distinct* departments devoted to providing teaching and instruction in all phases of family medicine." Though there has been some question as to whether this explicit stipulation of "separate and distinct" departments is necessary, I think given the institutional setting, the history of medical education in recent years, and the need to undertake a massive, dramatic expansion of support for the training of family physicians, that the proponents of the separate department qualification have the best of the argument. Similarly on the broad question it appears that a categorical grant program rather than extension of the present general program is what is required by the crisis situation we face.

Mr. Chairman, it is imperative that we bring some semblance of proportion and balance into federal aid to medical education through the institution of an extensive new categorical program for family medicine because there are growing signs that this is what the new generation of medical students desire. I was most heartened to read these words by a leading representative of the Student American Medical Association:

> I can state with conviction that the activism and commitment that mark today's students in their efforts to face and solve many of today's health problems will provide a strong stimulus to devote their professional lives to the practice of high quality patient oriented family medicine.

I need not remind you that a considerable portion of our youth already harbors strong suspicions about our society, and particularly the purposes and capabilities of the federal government. But if we were to begin to lose the allegiance, trust and commitment of our future professionals—doctors, lawyers, engineers and scientists—then we would really be in for difficult times. I do not believe that there is as yet any widespread alienation among students with these professional orientations, but I do know that the currents of idealism and commitment to a more just and humane social order that suffuse much of our student population are beginning to make a strong stir among our young professionals. It is for this reason imperative that we give them some outlet for this idealism and commitment to constructive social change by providing a clear option for young medical students to go into family practice and community medicine. Family practice oriented medical educators attest that there is already much enthusiasm for some of the more innovative programs in family medicine. It would seem that the least we can do is provide adequate support for this new trend, for ultimately society will be the biggest gainer.

In this regard, I would like to raise one question about this bill. Under section (b) funds for scholarships, fellowships and stipends are provided for intern and residency training but there is no provision for funds for similar purposes in part (a), the medical school section. It is my understanding that attending medical school is an enormously expensive proposition averaging as high as $4,000–$5,000 a year. Because of this, many students go into the specialities in order to extricate themselves from the enormous burden of debt accumulated during their long period of medical schooling. Now if we are to encourage students to go into often lower paying family medicine, especially into low income ghetto and rural areas, must we not remove some of the financial barriers and impediments?

Perhaps it is intended that family practice students avail themselves of the loan and scholarship funds provided by HPEA. If so I would remind you that the loan section works in such a way that the federal government merely matches on a 9 to 1 basis funds placed into each medical school loan fund controlled by the school itself. Can we be assured that fledgling family medicine departments will receive their fair share, let alone a positive preference, from these all-school loan funds? And since loans averaged only $877 per year during 1966–7, can we believe that present support levels are really adequate to provide incentive to enter lower paying family practice? Moreover, the situation with scholarships is even less encouraging. In this past fiscal year there was only a total of $15 million HPEA scholarship funds available for the whole array of health professions, including dentists, pharmacists, optometrists, podiatrists, veterinarians and public health personnel. How much of this went to students at medical schools and of that sum how much was available for students in the area of family medicine? It does not take much imagination to conclude that it was a mere pittance.

As this committee may be aware, the Republican members of the Senate Labor and Public Welfare Committee, led by Mr. Murphy, have introduced a bill which would eventually provide 1,000 federal scholarships annually for students of family medicine; these scholarships would provide up to $5,000 a year per student. A condition of these grants is that students would spend one year in a physician shortage area, rural or ghetto, for each year of support. In light of the egregious regional and socio-economic maldistribution of medical manpower that I mentioned earlier this seems to me to be a most appropriate provision. The bill also provides that preference in distribution shall be given to low income students from physician shortage areas. Considering the fact that as recently as 1967 only .18% of medical students in non all-black medical schools were Negro, this also appears to be a most commendable condition.

The bill further provides 500 fellowships for interns and residents, but this is covered by section (b) of the House bill. Since Dr. Kowalewski has estimated that funding at the hundred million dollar level as provided by both the House and Senate bills would support the production of about 1,500 new family practice M.D.'s annually, could we not replace the 500 fellowships in the Murphy bill with 500 more medical school scholarships and thereby assure that we are indeed filling these new family practitioners training slots each year? I would urge this committee to give most serious attention to incorporating the Senate Family Physician Scholarship Program bill into part (a) of the bills now under consideration.

Mr. Chairman, I would make one concluding point. The proposal for comprehensive, compulsory National Health Insurance recently introduced has generated much interest and is being hailed in many quarters as the panacea to solve our acute health care problem. But as Under Secretary Veneman noted in his testimony: where is the massive new funding to come from to support this noble program? What will happen if we precipitously and massively intervene into something so delicate and complicated as our $70 billion a year health care system? May not the disruptions, the rending of old relationships and practices, and the uncertainty created by this massive government intervention make the cost of this venture greater than the alleged benefits?

Since we have neither the resources, manpower or knowledge to immediately undertake such a massive transformation of our health care system, I believe we can accomplish the most good with the resources we do have available by zeroing-in on the most strategic problem areas in the health care system. By all reasonable criteria, this is the inadequate supply of family physicians and the gap-filled system of primary health care delivery which deprives so many Americans of the medical attention they need, and drives up the national cost of providing health care because of an almost total neglect of preventive care and early stage diagnosis and treatment.

Let us then push forward to deal with this strategic problem by the sharply aimed categorical tool contained in this legislation. Perhaps consideration should be given to providing even higher funding levels than those contained in section 762. In any event, if we can begin to make substantial progress on this critical front, perhaps we can then look forward to some of the other reforms contained in the NHI proposal. But we cannot do everything immediately and in my view the production of large new numbers of primary care physicians must unequivocally hold the first priority. For this reason I give my wholehearted endorsement to this legislation.

Mr. JARMAN. This is an excellent and comprehensive statement on a subject of tremendous importance to this country, and we appreciate your helping make the record on this, John.

Mr. Hastings?

Mr. HASTINGS. I just want to congratulate our colleague for his statement and ask one question as to the dollar amounts.

Are you in agreement that the figures of $50, $75, and $100 million for the next 3 fiscal years are realistic in fact?

Mr. ANDERSON. Do I feel that those are realistic amounts to recommend at this time?

Mr. HASTINGS. Yes.

Mr. ANDERSON. Yes, I think they are. I think really what I am most interested in, as my statement has probably made clear, is having it clearly indicated in the law that we want these separate departments and that we want this focused on as a separate categorical program that we are funding. And I would frankly leave to others with far greater expertise than I would claim to possess, the precise amounts that could be effectively and efficiently used.

I am certain, as I have already indicated, that we can use far more money than could possibly be made available under the Health Professions Education Act at the present time. But the precise amounts I think would be something I would leave to the judgment of this committee.

Mr. HASTINGS. Thank you. No further questions, Mr. Chairman.

Mr. JARMAN. Mr. Kyros.

Mr. KYROS. Mr. Chairman, thank you.

Mr. Anderson, I certainly welcome you here, and I am delighted to hear your testimony this morning. Occupying a position of leadership that you do in the Republican Party, I think it is a very courageous and important step that you took to come here today, not only to endorse this bill, but to endorse the sums of money involved in it. I am also delighted to see in your statement your complete awareness of the doctor shortage throughout the country, whether it is in Maine or Illinois. This committee has had testimony in that regard. So I welcome you to the committee and thank you very much for your testimony.

Mr. ANDERSON. Thank you.

Mr. JARMAN. Mr. Preyer.

Mr. PREYER. Thank you, Mr. Chairman. I want to commend Mr. Anderson also for his initiative and his imagination. I am sorry I didn't get to hear all of the presentation, but this looks to be extremely effective. We appreciate your appearance.

Mr. JARMAN. Thank you for being with us.

Mr. ANDERSON. Fine, Mr. Chairman.

Mr. JARMAN. Our next witness is our colleague from New York, Congressman Robert McEwen.

We are pleased to have you with us on this important bill, Bob.

STATEMENT OF HON. ROBERT C. McEWEN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW YORK

Mr. MCEWEN. Thank you, Mr. Chairman, gentlemen of the committee.

"Everyone wants more and better medical care and are willing to pay for it. A shortage of anything tends to create higher prices and so it is with the charges which we are having to pay for medical care."

"We just have not graduated doctors in proportion to the population growth and demands which our society has for better health."

The two statements that I have just read were taken from the letters of two constituents.

It was in response to scores of such letters and appeals of communities for assistance in locating a medical doctor that I joined as a cosponsor of the legislation offered by my friend and colleague from Pennsylvania, Representative Rooney. For the same reason, Mr. Chairman, I welcome this opportunity to appear before you and the members of this committee.

Having first quoted to you from the letters of two constituents who reside in the same village, let me say just a word about them and their community. The one writer is the proprietor of a clothing store and the other is the secretary of the local chamber of commerce. Their village, two neighboring villages, and the surrounding rural areas have a population that they estimate of between 8,000 and 10,000. This area and population is served by one doctor, who is described by one of writers as "capable and very busy."

The situation facing this community is not unlike the situation in scores of other communities in my congressional district. In fact, this community is a more fortunate than some for they do have a doctor. Some communities have none.

I think we would all agree with the writer, who said "Everyone wants more and better medical care * * *," but the hard fact, Mr. Chairman and gentlemen, is that I cannot see more and better medical care available in these communities in the future, at least, not unless something is done to change the present trend.

Many of the physicians serving in our smaller communities are men who, by virtue of their age and years of service that they have rendered, are deserving of retirement. In fact, I know to my own knowledge that many of our physicians have continued in active practice solely from a sense of community obligation because they knew there was just no one to take their place.

We in this Congress have given considerable attention and action to programs aimed at improving medical and health care and services. In large part, our approach has been to provide more dollars for the bricks and mortar of new hospitals and the dollars to assist our senior citizens and less affluent population in paying the cost of needed services. But all of the hospitals and all of these dollars will not make available the needed medical care unless we have the doctors, nurses, and all of the paramedical personnel.

I have said why I welcomed the opportunity to cosponsor H.R. 16360, but I do not suggest that this legislation is the sole and exclusive remedy to the problem that we are facing.

I do believe that this legislation, in recognizing the need for training of paramedical personnel, could provide additional means and stimulus to some interesting new programs that have and are being developed for the training of that new paramedical group sometimes referred to as the "doctor's assistant."

While we strive for the best, we should not forget the old admonition, "that the best is often the enemy of the good." If we cannot place a licensed physician in every village and hamlet. I submit that we should then consider what is the next best service that can be provided.

The program for the doctor's assistant was given added impetus by the trained medical corpsmen coming out of the Vietnam conflict—both by their desire to work in a paramedical occupation and the recognition of the competent work performed by these men under the most adverse of conditions—on the field of battle.

From our experience in Vietnam, we also have learned much about air evacuation by means of helicopter. This prompted a group of people, in one of the communities of my district, to suggest that if we cannot bring doctors to our smaller communities, we should then explore this means of getting our sick and injured by the quickest possible means to where the doctors are. I would hope that demonstration projects employing helicopters for this purpose might be explored.

Finally, I would submit some figures, from my own congressional district, that evidence the need of more medical doctors in general, and the need for more physicians who specialize in providing professional care and treatment to families. In the six counties, wholly or partially contained in my congressional district, there are presently 393 physicians serving over 450,000 people. In one county, there

are but 55 doctors for almost 100,000 people, and, in one city, whose population and surrounding area is approximately 35,000 there are but four doctors engaged in general practice or family medicine. It is undoubtedly the prevalence of this situation that prompted one American Medical Association official, quoted in the American Medical News of September 21, 1970, to say, "If the patient is to receive maximum benefits from medical science, his total health care must be evaluated and managed efficiently. This cannot be done efficiently if the patient must first diagnose his own ailment to determine the specialists he should use."

Again, Mr. Chairman, and members of this committee, I thank you for this opportunity to present my views and the views of my constituents on what is a basic need and critical problem for all our people.

Mr. JARMAN. Thank you very much, Bob. I think the figures you give as to your own congressional district reflect the problem nationally and the great need for an all-out effort to try and solve this family doctor problem.

Mr. Hastings.

Mr. HASTINGS. I would like to congratulate my colleague from New York particularly for entering his statement. As you know, we are very seriously involved with this legislation, and I know that your district represents the problem, as the chairman stated, of most of our districts, and thank you very much for this fine statement for the record.

Mr. JARMAN. Mr. Kyros.

Mr. KYROS. Thank you, Mr. Chairman. I, too, would like to congratulate our colleague from New York for pointing out the problem in rural areas which we are experiencing apparently throughout the country. I want to commend him for his testimony and for the fact that he has also cosponsored the legislation which we are considering.

Mr. JARMAN. Dr. Carter.

Mr. CARTER. Mr. Chairman, I want to congratulate the distinguished gentleman on his presentation. Certainly we realize the need of physicians in both rural areas and crowded ghetto areas, physicians who can take over patients and guide them through the maze which sometimes they must be sent through to arrive at a proper diagnosis and definitive treatment. We support this bill and want to do something to assist areas such as the distinguished gentleman from New York represents.

Thank you, Mr. Chairman.

Mr. JARMAN. Mr. Preyer.

Mr. PREYER. Thank you, Mr. Chairman.

We appreciate your testimony, Mr. McEwen. When you hear the word "New York" most of us think of New York City, but I see the problems in your district are about the same as they are in mine. And I suppose this is true over most of the country, except perhaps for some of the big cities.

Mr. MCEWEN. Mr. Preyer, I would say my district is rather nonmetropolitan. It is quite different from New York City. It covers almost 9,000 square miles stretching from the Great Lakes across to New England. It takes in eastern Lake Ontario and all of the St.

Lawrence Valley, the high peaks of the Adirondack country and over to Lake Champlain. It is an area of five small cities and scores of villages and hamlets. So that it is quite rural in its complexion.

Mr. PREYER. Has everything for good living except doctors?

Mr. MCEWEN. That seems to be about our No. 1 need, I would say. I didn't count up, Mr. Chairman, gentlemen, how many communities but I know they would number in the dozens which have committees actively working on recruiting a doctor. I am sure many, if not all, of you have had the same requests—where can they write to find out from the military services, from whatever source where there may be doctors that will be coming available for private practice, They have met, very frankly, with very limited success. A few of the communities have obtained one doctor. I can't add two. I don't know of any community that has gotten two doctors. A few have attracted one doctor.

Mr. PREYER. This has been very much the story in my district also.

Thank you very much.

Mr. JARMAN. Mr. Skubitz.

Mr. SKUBITZ. Good morning. Mr. Chairman, I have no questions at this moment.

Mr. JARMAN. Good to have you, Bob.

Mr. MCEWEN. Mr. Chairman and colleagues, thank you.

Mr. JARMAN. Our next witness this morning, our colleague from Iowa, Congressman Kyl.

STATEMENT OF HON. JOHN KYL, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF IOWA

Mr. KYL. Mr. Chairman and gentlemen, I want to take just a very few minutes to relate the situation in my area which I think epitomizes the problem that we face in consideration of the legislation of this kind.

I live in a small community of 3,000 people which has 18 doctors. They are all busy. They treat more than 80,000 people a year. The staff includes a clinical psychologist. We have a 104-bed local hospital which operates at above 100 percent use and occupancy. Within a 100 yards of the hospital we have a 110-bed extended care nursing home with five doctors on the staff of that nursing home, and yet because there are more towns in my congressional district of 19 counties than there are in many States, we have an extreme shortage of doctors in the district. We have a feast in my hometown and we have a famine in the rest of the area.

Now, the University of Iowa has tried to adjust to the need by making a specialist of the family practitioner, and they have adjusted their medical training program to emphasize family practice. This was done incidentally at the complete urging of the doctors of the State rather than any other element. I know the problems that the university faces at this time so far as finances are concerned as it shifts to this emphasis and also as it increases the size of the entrance classes to the university in the hope that they can turn out more doctors.

I think perhaps one of the real basic arguments here resolves around the matter of categorical grants. Generally, like Congressman Anderson who testified a moment ago, I don't like categorical grants. There are times when if we are to set the priorities we have to emphasize certain fields of study, certain fields of practice, whether it be in medicine or anything else. And earmarking which can be done administratively, if there is sufficient money in the overall program, must be demanded some way. And if the administrators will not put the emphasis where it belongs, then I believe that we must do that job legislatively.

The highway program, the land and water conservation fund are earmarking programs. They have accomplished the purpose for which they were designed.

I know that in public health we have tried to get away from categorical grants, and I think with good effect, because it does enable the individual State or community to put the money where it is most needed to meet the local need.

But I don't think that that is an analogous situation. I don't think there is any question about the need for increasing this family care proposition, and I know that you people here are much more erudite in this field than I. But having reviewed the situation in my own area as well as moving up to the problems of medical practice and health delivery in the Nation as a whole, I think that the only way we can get the flexibility we need in the medical service program, regardless of how many doctors we have available, is through an emphasis on this family practice matter.

I joined in sponsoring this bill because I think it is necessary. You had a question of Mr. Anderson concerning the amounts of money that are available and here again, I would yield to your superior knowledge in knowing the specified amounts. If administratively we can put this kind of money into the family practice matter, that is fine. But if we can't do it administratively, then I think we must legislate. And I thank you gentlemen very much.

Mr. JARMAN. Thank you for a very effective statement. Let me ask one question. You referred to the University of Iowa Medical School. Does it actually have a department that features family practice? You mentioned a specialty.

Mr. KYL. Yes, sir. It is a two-fold proposition actually, sir. The first thing, they are trying to upgrade family practice by specifying that it is a specialty education. They are trying to get rid of any kind of connotation that somehow a family doctor is something less than a specialist in a particular field. They are increasing the number of entrants hoping to graduate more doctors. And the desired emphasis is on family practice so that we can get a better distribution of doctors through the State communities which otherwise have particularly no emergency care available.

The medical association in the State with its own programs of help for students has sought to keep those students in the State if they receive some contributions from the medical profession scholarship funds and so on.

The answer to your question is yes. At the same time, they are trying to upgrade and increase, to update the nurses training and increase the number of nurses available and paramedical people who are available.

We now have a program in Iowa, sir, in which the man or woman can take the first 2 years of training in one of the area technical schools and then transfer to the university to complete the last 2 years of nurses training for the baccalaureate degree in that specialty. In other words, the university is making what I think is a concentrated attempt to do the kind of thing that this bill suggests.

Mr. JARMAN. Has there been an increase at the medical school in the number of medical students expressing interest in the family practice?

Mr. KYL. Yes, sir; there has. And without any decrease in the qualifications of the entrants I might add. Right now there is a building program underway. We will not be able to get into full operation on this new concept until we do have new construction completed. But the goal is there, and we are moving toward that goal of increasing the number of family practitioners for our particular area.

Mr. JARMAN. Thank you.

Dr. Carter?

Mr. CARTER. I want to congratulate my distinguished colleague on his excellent statement. Does the medical profession in Iowa finance a rural scholarship fund, or is that done by your legislature?

Mr. KYL. The emphasis is on practice in Iowa, and it is assumed that therefore part of it at least would be rural. I don't believe, Dr. Carter, that there is a specification that the people who receive these grants are going to practice in a small community as against a larger community.

Mr. CARTER. Yes, sir.

Mr. KYL. I don't know that I am technically qualified to answer that completely, but I believe that is the emphasis.

Mr. CARTER. In some cases the medical profession and other groups have united together and created a loan fund which goes to help certain students through medical school and in return they go to a medically deprived area to serve a minimum of 3 years, and they get some forgiveness for the debt they have incurred by so doing. I think it is a rather good plan.

You spoke of this regional hospital in a town of 3,000 of 142 beds. I suppose it is a regional hospital.

Mr. KYL. It is a county hospital, sir.

Mr. CARTER. A county hospital?

Mr. KYL. In a county with about 6,000 people.

Mr. CARTER. Six thousand people. But it serves a region definitely, does it not?

Mr. KYL. Well, it serves more than a region because the clinic I mentioned draws patients from 28 different States every 6 months.

Mr. CARTER. But you have many rural areas that don't have facilities for emergency treatment, is that true?

Mr. KYL. That is correct; yes.

Mr. CARTER. And you have many small hospitals, say 25, or 30-bed hospitals in that area?

Mr. KYL. We do have a number of small hospitals, sir, most of them with troubles, financial troubles.

Mr. CARTER. Yes, sir. Are they of great help to the areas in which they are located?

Mr. KYL. Yes, sir. But again, we are so very short of doctors that the hospitals do not function as they should.

Mr. CARTER. Yes, sir. Well, do you want to continue these smaller hospitals, too, or would you——

Mr. KYL. I think probably that as we move in this hospital program we are going to have to; until we get the kind of situation we seek through this bill we are going to have to stop proliferating the hospital care. This may sound like kind of a harsh thing for a number of small communities who would like to have a hospital, but if we do not have the funds, if there is insufficient income for these hospitals to operate, we are not really doing any of these communities a favor by making more and more hospitals where we don't have medical personnel available to man them.

Mr. CARTER. Do you think a well-trained young physician—in this case the requirement for general practice is at least 3 years of training above his schooling, his time in medical school. Do you think he would be willing to go to a small community without a small hospital or clinic there?

Mr. KYL. Of course, everyone wants the facilities with which we can work full capacity to do the most good. And I know that has to be a factor. However, every county in my district has a hospital. We have a rule of thumb in Iowa, it is 25 miles across each county, so we will always have a facility available within that distance, at least. We have, of course, a couple of situations now, doctor, where, for instance, a young doctor had moved to a small community and had established for himself a very fine facility. He died of a heart attack. We can't even get a doctor to move into this place where there is sufficient practice to keep the many busy 24 hours a day, with a fine office, with a very elaborate, sophisticated individual doctor office-clinic situation. And we have been unable to get anyone. As a matter of fact, the community had asked me to try to secure citizenship for a foreign doctor who was seeking a location. And in this case we found out that the fellow who was shopping around had made a similar application to about 20 different communities in the United States, and, finally, I believe because of some other factors, was even sent out of the country. But these people are desperate, willing to go to any length to get a doctor.

Mr. CARTER. I would suggest that one of the basic causes of this inability to get physicians into these rural areas is the number of graduates which we have. It is just too small. We have got to do something to enlarge and expand our medical schools. And if we can't do that, then we should develop paramedical personnel who can assist. But I believe you will find that you are not going to get physicians in rural areas, even when we do graduate them in sufficient number to go to these communities, unless they have adequate facilities—that is one of the things—particularly for emergency treatment.

Mr. KYL. May I add this, doctor, at this point.

Mr. CARTER. Yes, sir.

Mr. KYL. I have two dozen communities right now where the people of the community would build an office and equip the office the way an incoming physician would like to have it equipped if they could get a body to put into the facility.

Mr. CARTER. Well, I think that my answer to your question is we have got to graduate more people. And I still think that the community hospital offers a great service. It is my feeling in most cases if you have physicians available, they will go there.

In one community I know of similar to yours, one county of 11,000 people, at the time their hospital was constructed there were only three physicians there. Since that time the number has increased to eight, and a small hospital which was about 22 beds to begin with now has 50 beds. I believe, as a usual thing, if you offer them a community hospital and an office—an office is just not enough because in general practice they must do a variety of things and they must be equipped to take care of many emergencies.

Mr. KYL. You see—may I repeat——

Mr. CARTER. Yes, sir.

Mr. KYL (continuing). Every one of my counties has a hospital, and the doctor in the farthest corner of that county would not be more than 15 miles from that hospital.

Mr. CARTER. Well, in such a case, I think you are in pretty good shape.

Mr. KYL. Except we don't have the doctors, sir.

Mr. CARTER. Well, I don't know whether you are going to get many 15 miles from a 142-bed hospital. I would like to say you would, but to get them is rather difficult.

Mr. KYL. Well, the interesting thing is we have a lot better prospects of getting more specialists to this clinic than we do of getting a doctor in the community where there is no doctor.

Mr. CARTER. Yes, sir.

Mr. KYL. Because there are such factors as half days off and on-call situations and so on which are appealing also.

Mr. CARTER. Thank you, Mr. Chairman.

Mr. JARMAN. Mr. Kyros.

Mr. KYROS. Thank you, Mr. Chairman. I welcome our friend from Iowa and his statement today. It almost seems from your remarks that we take better care of our animals in the Midwest than we do people. I hope that that will no longer prevail if we approve this bill.

Mr. KYL. Well, I would not want to endorse that statement at all. I am extremely proud of the Iowa University Medical School and of the doctors we have in Iowa. For instance, their peer review group, their ethics group is tremendous. I think we have a great medical practice in the State. And we do provide excellent care for people in terms of the availability.

Now, of course, with the animals I might also go on to say this following your comment. My wife used to remark as we balanced the ration for the dairy cattle or for the feeder cattle that we paid more attention to the diet of these animals than we did to our children, which is probably right because they ate their share of greasy tenderloin and cukes when they probably should have been eating cereal, and milk, and so on. But I don't think that it is fair at all to compare those two factors.

Mr. KYROS. Well, I just hope that when these bills do come to the floor you will lend your great support to making sure that whatever comes out of this committee will be properly funded.

Mr. KYL. You may count on it, sir.

Mr. KYROS. Thank you, sir.

Mr. JARMAN. Mr. Skubitz.

Mr. SKUBITZ. Good to have you with us, Mr. Kyl.

Did I understand you to say you have 18 doctors in a town of 3,000 people?

Mr. KYL. Yes, sir, including—most of them are specialists. The internists are the closest we have to a family practice physician.

Mr. SKUBITZ. What about the—in this county, Mr. Kyl, how many people in the county?

Mr. KYL. I believe 6,000 to 6,500 people, according to the new census.

Mr. SKUBITZ. For the entire county?

Mr. KYL. Yes.

Mr. SKUBITZ. These doctors, do they go into the other counties in your district?

Mr. KYL. As a matter of fact, a number of them do surgery and are on the staff of a hospital also in a larger city which is 18 miles away, which city also has an excellent ratio of doctors to patients. But it is an area where I think this situation is epitomized here. We have here the specialists, the hospitals, the care we need so people come from 28 States to the area to get care, and then a short distance away we have no facilities whatsoever.

Mr. SKUBITZ. We have the same problem as you, Mr. Kyl, but we don't have sufficient doctors even in our cities.

Mr. CARTER. Mr. Chairman, would the distinguished gentleman yield?

Mr. SKUBITZ. Yes.

Mr. CARTER. On that I would say if you have 18 physicians for 6,000 people, it is my feeling that those physicians should get out and get their backs wet a little bit going to the rural area. You have plenty of physicians.

Mr. SKUBITZ. That is right.

Mr. CARTER. And 15 miles is certainly not too far to go. As a former country doctor, I have been 20 to 25 miles time after time during the night. I am afraid our profession is letting you down there.

Mr. KYL. No; I am not going to say that either. These people do go out. But here, suppose we take the clinical psychologist out of this clinic and put him out in general practice in some community. We wonder about whether he would do a total work commensurate with what he does now with the extra dozens, hundreds of people who come to this clinic from great distances because he is there. The same way with a number of other specialists. We have a fine radiologist and we have a fine radiological setup for him. He would probably not perform as great a total service if he were out somewhere. And in his particular case, he does have all of these facilities right there. We need this kind of a center, too, but at the same time we lack the general practitioner out in the other area.

Mr. CARTER. I might also ask how many general practitioners do you think you need in that county?

Mr. KYL. In that county, none. But I have 19 counties. It is 275 miles from one corner of that district to the other, Doctor.

Mr. CARTER. Yes, sir. Are your other counties poverty stricken for doctors?

Mr. KYL. Yes.

Mr. CARTER. They don't have any?

Mr. KYL. In one county we have one doctor, in another I recall we had no doctor.

Mr. CARTER. Yes, sir. Well, in the other counties, of course, you do need physicians, but your county——

Mr. KYL. See, the reason we are so fortunate in that situation, Doctor, we had five brothers who were doctors who started together. You don't find that situation often. And the clinic grew from that group.

Mr. CARTER. Yes, sir.

Mr. KYL. And now we have cousins and uncles and nephews, the rest of the family and friends of the family coming there to practice.

Mr. CARTER. I would say you were indeed fortunate in that particular county.

Mr. KYL. Yes, we are.

Mr. CARTER. Thank you, Mr. Chairman.

Mr. SKUBITZ. Dr. Carter, may I borrow some of my time.

Mr. CARTER. I yield back to you the balance of your time.

Mr. SKUBITZ. The thing that bothers me, Mr. Kyl, is that we have a provision in this bill to provide financial assistance for scholarships, fellowships, and so on, to assist boys through medical schools. There is no assurance that they will go into any one of the 19 counties that you are talking about. There is no assurance that any of them will go into any rural community. There is no assurance that they will practice medicine. They may go into straight research work. Have you any suggestions to offer to help solve this problem?

Mr. KYL. Of course it isn't only rural areas that need these doctors, number one.

Mr. SKUBITZ. That is right.

Mr. KYL. I have joined in sponsorship of another bill which would make this a more pointed proposition of getting people to practice in areas of greatest need. But I think this is certainly moving in the right direction, plus the fact that, as I say, you get more flexibility if you are training general practitioners than if you train the researchers and the specialists.

Mr. SKUBITZ. But there is no assurance that they will go into general practice. They will get their education in this field, and then decide after graduation, I would like to specialize.

Mr. KYL. That is a possibility.

Mr. SKUBITZ. What do we do about that? This is what has happened in the past. We haven't been getting doctors. We have been getting researchers and specialists in different fields. Our committee has been interested in getting general practitioners into the field.

Mr. KYL. Well, I will comment to this extent. We have one doctor in my town of 4,000 who comes from New York City. We have another

doctor who came from Cleveland, another who came from Milwaukee, another from Chicago. They were not country boys. I think they are happy.

Mr. SKUBITZ. You are lucky. This is the complaint that we get though generally.

Mr. KYL. You talk about the Women's Liberation Movement. We also had two girls from my home county who graduated from the University of Iowa Medical School as doctors in one class.

Mr. SKUBITZ. That is all, Mr. Chairman.

Mr. JARMAN. Mr. Preyer.

Mr. PREYER. I have no questions, Mr. Chairman. Thank you, Mr. Kyl, for a very knowledgeable statement.

Mr. KYL. Thank you, Mr. Preyer.

Mr. JARMAN. Mr. Hastings.

Mr. HASTINGS. I would just like to commend the gentleman from Iowa on his statement and his interest and concern on the legislation. I have somewhat the same reservations that the gentleman from Kansas does in getting the doctor back in the proper place. Sometimes I wonder where there has been a legislative reapportionment, where you find a heavy concentration of doctors in a small area, whether we shouldn't have a physician reapportionment to get them somehow spread around in rural areas. I know that is not practical and I say that facetiously, but I think eventually we are going to have to come to the time when we through legislation perhaps are going to have to provide for doctors in rural areas specifically and somewhat beyond the scope of legislation which just creates more doctors. I appreciate your views.

Mr. KYL. We have sponsored a bill which would accomplish that purpose.

Mr. HASTINGS. I might say that the State of New York does this now by granting scholarships directly to students who must come back into the community.

Mr. SKUBITZ. Will the gentleman yield? How is it working?

Mr. HASTINGS. It is fairly new. They are absolutely required by the provisions of the scholarship to go back to that community.

Thank you, Mr. Chairman.

Mr. SKUBITZ. Mr. Chairman. I think the State of Georgia has a program of this nature, and I think we ought to get one of the Representatives from that State to testify before this committee concerning their system program.

Mr. JARMAN. I think that would be very interesting to hear. Of course, our hope is that as we train more doctors with emphasis on the family doctor category, they will go to the areas of need in the country. And, of course, that is one of the prime objectives of the legislation.

Mr. KYL. Yes, sir.

Mr. JARMAN. Thank you very much.

Mr. KYL. Thank you very much, Mr. Chairman.

Mr. JARMAN. We have a few more colleagues with us this morning who wish to present statements for our consideration.

The Honorable Thaddeus J. Dulski of New York is our next witness. Welcome, sir.

STATEMENT OF HON. THADDEUS J. DULSKI, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW YORK

Mr. DULSKI. Mr. Chairman, I commend you for arranging these hearings on this fundamental problem of the acute shortage of doctors to practice family medicine.

For the record, I am Thaddeus J. Dulski, a Representative from the 41st District of New York.

Last February 16, I introduced H.R. 15880, which has been referred to your committee. The text is identical with several pending measures and similar in ultimate aim to others.

H.R. 15880 would amend the Public Health Service Act so as to provide for the making of grants to medical schools and hospitals. The intent is to help and encourage these medical institutions to educate larger numbers of physicians to practice family medicine.

Forty years ago three-fourths of all practicing physicians were general practitioners. Today only 1 in 5—just 20 percent—of practicing physicians are general practitioners. The rest are specialists in surgery, pathology, radiology, internal medicine, psychiatry, pediatrics, and so forth.

In today's sophisticated and rapidly growing field of medicine, it is quite true that we need specialists. But the need is no less for family doctors—physicians who can provide general medical care for the entire family, from childhood to old age.

It is true that some medical schools are finally beginning to recognize the need for training family doctors. But the supply is only a drop in the bucket as compared with the need.

The family doctor needs to be trained in particular in preventive medicine, taking into account the family makeup and surroundings.

A second function is to advise families whom to consult when it is apparent the illness requires the counsel of a specialist—the average family does not understand the medical specialist and needs the advice of a close family friend, the family doctor.

My bill would authorize the appropriation of $50 million for the fiscal year beginning next July 1, another $75 million for the following fiscal year, and then $100 million for each of the next 3 fiscal years.

These appropriations would be for the purpose of making grants to medical schools and hospitals to establish departments and programs in the field of family practice and to encourage the training of medical and paramedical personnel in the field of family medicine.

Mr. Chairman, the overall shortage of physicians, nurses, and medical personnel is worsening all the time. Corrective action is essential.

I hope, sincerely, that these hearings will provide you with the legislative background to develop meaningful Federal help in the matter.

Mr. Chairman, I appear in support of my bill, H.R. 15880, but, more importantly, I support and urge action which will bring a return of the family doctor to our society.

Thank you.

Mr. JARMAN. Thank you, Mr. Dulski.

Next we will hear from the Honorable Edward J. Derwinski of Illinois. Proceed as you see fit, sir.

STATEMENT OF HON. EDWARD J. DERWINSKI, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ILLINOIS

Mr. DERWINSKI. Mr. Chairman, as a co-sponsor of H.R. 16359, which would amend the Public Health Service Act to provide grants for the establishment of department and programs in the field of family practice, I appreciate this opportunity to present my views in support of this legislation.

For too long the problems of family medical practice and the related shortage of physicians has been discussed in a manner of complacency. I feel that we now have enough evidence to warrant action on this legislation which would establish new programs in the field of family medicine.

With the obvious growing population, an increased need for medical doctors is recognized. While we have acted with initiative in furthering research, surgery, and treatment of all types of diseases, we must not overlook the ever-increasing need for skilled personnel. Certainly family doctors and/or general practitioners are a key to an effective national health service.

Mr. JARMAN. Thank you, Mr. Derwinski for your very brief statement.

Mr. DERWINSKI. Thank you, Mr. Chairman.

Mr. JARMAN. The Honorable Tom Bevill of Alabama will be the next witness.

Come forward, Mr. Bevill. Proceed as you wish, sir.

STATEMENT OF HON. TOM BEVILL, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ALABAMA

Mr. BEVILL. Mr. Chairman and members of the subcommittee, I appreciate this opportunity to express my views on legislation before you which would increase the number of physicians in the field of family medicine.

While the legislation before you deals with every aspect of family practice, I would like to direct my comments to one specific problem—the chronic shortage of physicians in our rural areas.

In recent years there has been a drastic decline in the number of doctors in rural America. Young doctors are not replacing general practitioners in sufficient numbers to meet increasing health care needs.

Less than 5 percent of today's medical school graduates will enter general practice. Of those who do, only a few will go to the rural areas where the need is greatest.

Something must be done to reverse this trend.

A very high proportion of physicians now practicing in rural areas are more than 50 years of age. In Cullman County, Ala., in my congressional district, there are 18 physicians to care for a population of 50,770. Five of these are over 65 years of age.

In Fayette County, Ala., with a population of 15,699, there are only six doctors, two of which are over 65.

In Marion County, which has a population of 23,125, there are nine physicians, one over 65. Winston County has five doctors to care for 15,940 people. One is over age 65.

In my home county of Walker, the situation is just as critical. Since 1952, Walker County has lost a total of 51 doctors.

An obvious conclusion is evident from these figures which are representative of counties throughout Alabama. The latest figures show that each Alabama doctor must provide patient care for an average 1,300 people, while the average doctor in the United States provides care for 765 people.

Recruitment of family physicians has not kept pace with attrition. Unless some solution is found, a major crisis will occur within the next 10 years. Many communities in Alabama are without the services of a doctor at this time.

I will not attempt to go into the many causes which have brought about the present dilemma. Members of the subcommittee have spent many hours hearing testimony from experts in every field of medicine and studying every aspect of the complex problem.

I would, however, like to say that I am contacted regularly by family doctors and community leaders expressing the urgency of the situation. The situation in many areas of Alabama is a critical one. I am convinced that our present system for the delivery of health care to the rural areas has become outmoded. To avoid a real health crisis, we must come up with effective programs to get general practitioners to locate in the rural areas of our Nation.

I pledge my strongest support to a nationwide effort which will assist medical schools and hospitals in training more family doctors.

Thank you.

Mr. JARMAN. Mr. Bevill, we thank you for your thoughtful statement.

Mr. BEVILL. Thank you, Mr. Chairman, for affording me the time to present my views on this important legislation.

Mr. JARMAN. Our next witness is the Congressman from Mississippi, the Honorable Charles H. Griffin. It is a pleasure to have you with us today, Mr. Griffin.

STATEMENT OF HON. CHARLES H. GRIFFIN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MISSISSIPPI

Mr. GRIFFIN. Mr. Chairman, it is indeed a pleasure for me to be afforded this opportunity to offer testimony before this subcommittee as to the need for increased aid in the field of family medicine.

Of course, you already are quite aware of the needs in this area; but my district and, indeed, the entire State of Mississippi, presents a situation in which these needs are perhaps more acute than in some other areas of our country.

We are, to begin with, essentially an agricultural State. The result, as in many other States, is that the huge majority of our citizens live in small towns—that is, towns of less than 5,000 population.

It is unfortunate, but nevertheless true, that fewer and fewer physicians feel the call of smalltown life in this day and age. It is likewise true that for some period of time fewer and fewer students of medicine have devoted themselves to the subject of family medicine—that area of the discipline often known as general practice. Now almost all students enter some specialty area.

The obvious result is that the general needs of patients throughout the Nation, particularly those in small towns, have greatly suffered in the past several decades. The smalltown doctor, the general practitioner, is a diminishing breed—if not completely a thing of the past.

Indeed, the American Medical Association has even seen fit to introduce a new field of specialization—that of the general practitioner—in order to counteract this trend. However, the need is so great that the American Medical Association, the established hospitals and medical schools, and well-known charitable foundations so far have not met the problem. Enactment of legislation is urgently needed to stimulate the movement of physicians into this special field and into the areas where they are needed.

A national policy is needed to provide such physicians and to get them into the areas where the need is.

Several legislative efforts have been begun to give aid and support to the, so far, uncoordinated existing programs. I have introduced H.R. 16209 which is identical to the proposals before this subcommittee today: H.R. 15793, H.R. 16359, and H.R. 16400.

We can aid the medical schools and hospitals in research and in the training of physicians. We can make money available for research facilities, training facilities, and treatment facilities. We can make money available for teaching personnel, research personnel, and for students by providing special incentives through scholarships, grants, and loans, to get family medicine practitioners trained and into areas where they are needed.

Mr. Chairman, I urge the adoption of a comprehensive program to deal with the critical shortage of knowledge and personnel in this area of family medicine.

We must act favorably on a workable and effective method of solving these problems—for, if we don't, the decline in general family medical care will continue at an ever-increasing rate. It is already reaching alarming proportions and there seems to be very little light on the horizon except that which we create ourselves.

Thank you.

Mr. JARMAN. Thank you, Mr. Griffin, for sharing your views with us this morning.

Mr. GRIFFIN. Thank you, Mr. Chairman.

Mr. MOSS. We are also honored this morning to have with us Senator Robert Dole of Kansas.

Welcome, Senator Dole, please proceed as you wish.

STATEMENT OF HON. ROBERT DOLE, A U.S. SENATOR FROM THE STATE OF KANSAS

Senator DOLE. Mr. Chairman, thank you for the opportunity to appear before this subcommittee in support of title III of S. 3418. Title III would establish a national information and resource center for the handicapped within the Department of Health, Education, and Welfare which will greatly improve the quality of life for 42 million handicapped Americans. These 42 million people constitute an exceptional group which I joined 25 years ago as a consequence of a world war. This group consists of men, women, and children who cannot

achieve full physical, mental, and social potential because of a disability.

The provisions of title III were originally encompassed in S. 4002, a bill I introduced on June 23, 1970.

On many occasions I have commented on the severe difficulties and unique problems confronted by this Nation's handicapped citizens. A significant and prevailing problem is that of information.

The intent of this legislation is to insure that all the knowledge and information regarding services be consolidated and made available to the handicapped person in the form he can best use and at the time when he most needs it. Presently, no one source exists. There is a lack of coordination and centrally available information.

Greater availability and coordination of knowledge is essential to achieving meaningful solutions and progress for the disabled. Information is frequently incomplete, inaccessible, or nonexistent. Too often those in great need do not know where to obtain the information they so desperately need.

A tremendous number of resources, public and private, are available to help meet the needs of these millions of handicapped persons. The many services provided by the Federal Government in conjunction with the State governments have helped many disabled Americans live normal and productive lives. Much also has been done to aid the handicapped through the great voluntary agencies.

However, information on rehabilitation facilities and services is incomplete and often available only through professional channels. Much the same can be said for information on employment, health care, and economic aid. In other words, the knowledge about resources, research findings, technical assistance, reports and information about what other governmental units, communities, businesses, professional groups, agencies and universities have done to accommodate the handicapped is diffused and completely lacking in coordination and centralization. The national information and resource center for the handicapped would provide a point of contact for individual citizens, families of the handicapped, the handicapped themselves, as well as private organizations, professional organizations, city and State officials who desire information or direction.

In the framework of the many available services and resources for the disabled, the mounting demand for knowledge about the programs, research and services for the handicapped has resulted in the creation of a variety of highly valuable, though specialized, information systems. Many information sources are available, but most are not comprehensive and are more accessible to professionals in the field than to the handicapped and his family who really need the guidance and information.

The national information and resource center can cope with need for information most effectively as a coordinating operation which, while developing programs and a data bank of its own, relies mostly on existing information activities. The center would develop and evolve a coordinated network of existing information efforts. The center would not duplicate the function of any program in the Government or private sectors, but would coordinate information, fill gaps in information, and assure that responsive and comprehensive information is available to the handicapped and their families.

The multifaceted, multidisciplined, multiagency coordinative role of the national center would deem it most appropriately located in the office of the Secretary of Health, Education, and Welfare. This would allow the center the necessary identity, visibility and latitude to provide comprehensive and responsive information and resource services without agency jurisdictional limitations.

The establishment of the national information and resource center for the handicapped is the answer to a well-defined need, and it will meet this need at a reasonable cost. The 42 million Americans who belong to the handicapped minority will be the immediate and long term beneficiaries of the center's services. America will be the ultimate beneficiary through increased contribution and well-being of the handicapped.

This field truly knows no partisanship. The handicapped are an untapped resource with a tremendous potential for proving an asset rather than a liability to society. Working together, we in the Congress, as well as all interested and concerned individuals and groups, can do much to promote meaningful and productive lives for the handicapped. The national information and resource center for the handicapped will greatly contribute to the realization of this goal.

Mr. Moss. Thank you, Senator Dole. for sharing your thoughts with us this morning on this important legislation.

Senator DOLE. Thank you, Mr. Chairman, it has been my pleasure, I assure you.

Mr. JARMAN. Our next witness is the Director of the National Institutes of Health, who has been of real assistance to our subcommittee on many matters within our jurisdiction, Dr. Robert Q. Marston. It is good to have you back with us.

(Discussion off the record.)

Mr. JARMAN. Proceed, Dr. Marston.

STATEMENT OF DR. ROBERT Q. MARSTON, DIRECTOR, NATIONAL INSTITUTES OF HEALTH, DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE; ACCOMPANIED BY DR. KENNETH ENDICOTT, DIRECTOR, BUREAU OF HEALTH MANPOWER EDUCATION; DR. ROBERT BUCHER, DEPUTY DIRECTOR, BUREAU OF HEALTH MANPOWER EDUCATION; DR. BENJAMIN BURTON, ASSOCIATE DIRECTOR, NATIONAL INSTITUTE OF ARTHRITIS AND METABOLIC DISEASES AND MRS. KATHLEEN ARNESON, SPECIAL ASSISTANT TO COMMISSIONER, REHABILITATION SERVICES ADMINISTRATION, SOCIAL AND REHABILITATION SERVICE

Dr. MARSTON. Mr. Chairman, along those lines, I have a full statement which I would like to submit in full to the committee, but there are three parts of this bill, and I would prefer to present to the committee orally my full statement on the family practice part and to summarize parts two and three, if this is all right with you.

Mr. JARMAN. I think that is an excellent procedure. The committee would be glad to receive the entire statement in the record.

Dr. MARSTON. All right, sir. I have with me today Dr. Kenneth Endicott, who is the Director of the Bureau of Health Manpower Education, and Dr. Robert Bucher, who is the Deputy Director of that Bureau, the Bureau that has the primary responsibility at NIH for the programs under consideration. In addition, I have Dr. Benjamin Burton, who is the Associate Director of the National Institute of Arthritis and Metabolic Diseases, and is an expert in the area of nutrition, and Mrs. Arneson, who is special assistant to the Commissioner of Social and Rehabilitation Service, who is prepared to answer any questions that the committee may have on title III of the bill before you.

Mr. Chairman and members of the committee, it is a pleasure for me to appear today to testify on S. 3418, a bill to amend the Public Health Service Act to provide for the making of the grants to medical schools and hospitals to assist them in establishing special departments and programs in the field of family practice, and otherwise to encourage and promote the training of medical and paramedical personnel in the field of family medicine, and to alleviate the effects of malnutrition, and to provide for the establishment of a National Information and Resource Center for the Handicapped, and related bills.

FAMILY PRACTICE

Title I of S. 3418 would authorize a new 5-year program of grants to medical schools:

(1) to operate separate departments devoted to teaching and instruction—including continuing education—in all phases of family practice;

(2) to construct facilities appropriate to carry out family practice training programs whether as a part of a medical school or as a separate outpatient or similar facility;

(3) to operate or participate in special training programs for paramedical personnel in the field of family medicine; and

(4) to operate or paramedical personnel to head departments of family practice or otherwise teach family practice in medical schools.

This title would also authorize grants to public or private nonprofit hospitals which train medical students interns, or residents;

(1) to operate special professional training programs—including continuing education—in family medicine for medical students, interns, residents, or practicing physicians;

(2) to construct facilities appropriate to carry out these programs whether as part of a hospital or as a separate outpatient or similar facility;

(3) to provide scholarships, fellowships, to stipends to interns, residents, or other medical personnel who are in need of such assistance to participate in accredited training programs in the field of family medicine and who plan to specialize or work in the practice of family medicine; and

(4) to operate or participate in special programs for training paramedical personnel on the field of family medicine.

For the purpose of making the grants to medical schools and to hospitals, the bill would authorize appropriations of $50 million for fiscal

year 1971, $75 million for fiscal year 1972, and $100 million each for fiscal years 1973, 1974, and 1975.

We are in full accord with the objective of encouraging and promoting the training of physicians and paramedical personnel to help to meet the needs of each patient for personalized care of his health needs. At a time of continuing increasing specialization and with a variety of types of personnel and facilities often contributing to the care of a single patient, educational programs for health manpower at all levels must emphasize coordination and continuity for the health needs of individuals.

Comprehensive health care includes preventive, diagnostic, therapeutic, rehabilitative and health-maintenance services, and requires appropriate referral of patients for selected specialized and supporting services. This implies and requires effective coordination among physicians within the various specialties and with personnel in the nursing and allied health fields. It also requires adequate interpretation to the patient and his family of the nature and progress of the patient's illness and the services being recommended and provided in the context of the patient's expectations.

Continuity of care may be provided by several physicians working together in formal or informal association with each member having access to the patient's records. Continuity may also be facilitated by the appropriate use of nurses and other allied health personnel under proper supervision, in situations where continuing attention by the same physician is not possible.

Methods of achieving the goal of comprehensive and personalized services for each individual are in a state of experimentation and change. A variety of terms are used to describe the kind of care or practice, or the type of practitioner, that is wanted: family practice, general practice, personal medicine, primary care, first-contact physician, generalist, comprehensive medical care are some of them. Many physicians have been, of course, providing this kind of care right along. You are familiar with the manner in which general practitioners, internists, and pediatricians perform these roles.

In addition family practice is being increasingly recognized as a new medical specialty. The specialty has its own examining board, the American Board of Family Practice. The specialty requires a 3-year post-M.D. program of training. Like the specialties of pediatrics and internal medicine, it is patient and family oriented rather than disease or system oriented.

The emergence of the new specialty of family practice provides one more evidence of the response to the need for personalized and comprehensive health care, and for encouraging concepts of personalized service and continuity of care across the board in medical training.

Increasing numbers of medical schools are teaching aspects of family care. In the last few years or so, substantial numbers of schools have recognized the need to develop a more concerted effort to give students, interns and residents the opportunity to learn firsthand more about the medical care of the patient as an individual, and as a member of the family, and about community resources that are available to augment the physician's efforts to provide effective care to all members of families.

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We are very much interested in the development of programs that provide medical students with experiences in comprehensive health care and in family practice.

Under the health professions educational assistance construction program we are assisting in the construction of medical schools and their teaching hospitals. Space for family practice activities—both the teaching and clinical practicum—is being constructed as an integral part of the teaching facility. This committee is aware that we also administer authorities for construction for nurse training facilities and for allied health training centers. The Hill-Burton medical facilities construction program provides support for the construction and modernization of private, nonprofit medical facilities, including ambulatory care facilities of the type required for family medicine teaching programs. In addition, one of the priorities provided under the new Hill-Burton legislation is for projects for the construction of facilities which will provide training in health or allied health provisions. In view of these authorities, the construction authorities proposed in this bill are unnecessarily duplicative and overlapping. We feel strongly that, particularly in the case of construction aid, it is more reasonable, feasible, and economical to provide general rather than categorical construction assistance.

In addition to the authority for the construction of teaching facilities under the health professions educational assistance construction program, there is presently authority under the health professions educational assistance improvement grants programs for grants to medical schools for special projects to plan, develop, or establish new programs of education or modification of existing programs; to effect significant improvements in curriculums of such schools; to develop training for new levels or types of health professions personnel; to expand training programs; or to strengthen or improve programs of education. Health professions educational assistance institutional (formula) grants may also be used by the schools, at their discretion, for teaching purposes relating to family medicine.

A number of schools of medicine and osteopathy and their teaching hospitals have used, or have indicated their intention to use, at least a portion of their formula grants or their special project grants under the health professions educational assistance program to support the teaching of continuity, primary, or family-oriented care through a variety of means. Some of these grants have been used to establish or strengthen departments of family medicine; others, to support family practice or continuity care teaching programs on an interdepartmental basis; and still others, across-the-board exposure of students to family care.

Among the medical schools that have been awarded special project grants for expansion of enrollment (including physician augmentation projects) under the health professions educational assistance program, a number will give additional emphasis to the teaching of family medicine in the course of achieving the goal of increased output.

I should particularly like to address myself for a moment to the provision (section 761(a)(1)) of S. 3418 which would authorize grants to medical schools to operate separate and distinct departments devoted to the teaching and instruction in all phases of family practice. There is an implication in this provision that the only way for

a medical school to emphasize family practice is to establish and operate a separate department of family practice. We question that implication. Our experience has shown that some schools are concentrating their educational program on the production of family physicians; other schools are developing family practice or continuity care programs on an interdepartmental basis, so that the concepts of family practice become an integral part of the teaching program of many departments. We feel that such efforts also have great potential and are making major contributions to both concepts and practice of family medicine. These contributions should also be recognized.

While a strong administrative mechanism for family practice teaching in the medical schools is desirable, a separate department is only one type of administrative unit. The AMA Ad Hoc Committee on Education for Family Practice, in its report entitled "Meeting the Challenge of Family Practice," has stated in discussing medical school administrative units form family practice:

> There are various ways in which this need—that is, for an administrative unit—might be satisfied: An academic department of family medicine is one way; another is the creation of a division of family medicine within a major department such as medicine; a third way might be the creation of an interdepartmental unit; and there might be other approaches which would serve satisfactorily in a given setting.

We are aware that the legislative flexibility for the support of family medicine activities through a variety of kinds of administrative units is provided in some of the other bills now pending before your committee, for example, H.R. 18716 and H.R. 13064. However, this legislative flexibility presently exists in the health professions educational assistance special project authority (cf. section 772 of the Public Health Service Act). This broader authority permits the support of a variety of administrative mechanisms within the medical school for carrying out family practice teaching programs and is especially suited to modification of training programs to coincide with changing patterns of organization of medical services.

In any event, we strongly oppose legislating the organizational structure within medical schools for teaching family medicine, especially when some schools are successfully developing such programs without separate departments.

With respect to the provisions of the bill for grants for special training programs for paramedical personnel in the field of family medicine, several other legislative authorities already exist under which such activities may be aided. Authority for Federal support of training of physician assistants and other new types of paramedical personnel has been provided under the allied health professions personnel training authority for developmental grants (section 794 of the Public Health Service Act). As you know, bills to extend and broaden this authority are presently in conference. This authority has real potential for the preparation of new types of personnel to assist in providing the type of care toward which this bill is directed.

The allied health legislation would also provide authority for grants to a variety of agencies, institutions, and organizations for planning, developing and establishing new programs of training paramedical personnel or effecting significant improvements in curricula. We feel

that this legislative authority is sufficiently broad to cover the purposes of this bill and is the more appropriate vehicle for their accomplishment.

A number of projects involving the preparation of nurses to play a role in the provision of family-oriented medical care have been conducted under nurse training and public health training authorities. These have included, among others, projects to plan and evaluate experimental training programs for such clinical nursing specialists as pediatric nurse practitioners.

Mr. Chairman, with respect to internship and residency training, we must remember that the cost of salaries of interns and residents (and to somewhat less extent teaching costs for these training programs) are now met largely out of payments for patient services, including reimbursements for care rendered by such interns and residents under medicare, medicaid, and other third-party payment plans.

In view of the evolving character of the concept of family medicine, there are advantages to aiding activities in this field under broad, flexible legislative authorities such as those contained in the Health Professions Educational Assistance Act. This type of authority permits the support of alternative approaches to training in the provision of comprehensive and continuing care to individuals and families, pending further evaluation of the various mechanisms for educating personnel and organizing medical services in this field. It also allows aid for training in family medicine to be provided in conjunction with aid directed toward another purpose such as expansion of enrollment of medical schools.

The health professions educational assistance authority is due to expire June 30, 1971. The Department is in the process of developing its legislative recommendations for modification and extension of that act and other health manpower legislation. Because of the close relationship between the family medicine activities proposed in S. 3418 and the health professions educational assistance programs, we recommend against enactment at this time.

In any event, the Administration strongly opposes the enactment of educational categorical grant authorities such as those embodied in this bill which would duplicate authorities or mechanisms which already exist and under which the purposes of this legislation could be achieved.

Now, I will condense my fuller statement in the area of nutrition, if that is agreeable.

Mr. JARMAN. Yes, it is.

MALNUTRITION

Dr. MARSTON. Title II of S. 3418 would authorize the Secretary of Health, Education, and Welfare to (1) make grants and contracts with medical schools, appropriate graduate schools, and nursing schools to establish courses dealing with malnutrition; (2) make grants and contracts with institutions and individuals for research into malnutrition; (3) establish special projects to provide practical training and experience for students of courses in malnutrition; and (4) provide fellowships and financial assistance to students to encourage and enable them to pursue studies and engage in activities in poverty areas relating to malnutrition.

Title II also directs that, in selecting educational institutions to carry out its purposes, priority be given to those located in poverty areas and authorizes appropriation of $32 million for fiscal year 1971 and the four years following to carry out these programs.

The Department is in accord with the basic objectives of title II, which we understand to be (1) the creation of an effective force of field workers trained in malnutrition and nutrition to deal directly with this problem, especially in poverty areas, and (2) to encourage high-quality biomedical research in the area of malnutrition and nutrition.

With regard to training programs, we would point out that both the Nurse Training and Health Professions Educational Assistance Act improvement grant authorities provide the statutory mechanisms under which components of medical and nursing education may be strengthened.

We also call your attention to the fact that special training—both long- and short-term—in public health nutrition may be provided under the existing authority of sections 306 and 309 of the Public Health Service Act to professional health personnel including physicians, nutritionists, health educators, and social workers.

We cannot endorse enactment of the categorical educational grant authorities such as those embodied in this bill which would duplicate authorities or mechanisms which already exist.

Although completely in accord with the second objective of title II—support of research and research training in nutrition—the Department would point out that adequate authority now exists in the Public Health Service Act for all of the functions provided in this session and more. These are are now being discharged competently and extensively by the National Institutes of Health which is supporting a very substantial research and training effort pertaining to malnutrition and nutrition both in the laboratories and clinics of several of the National Institutes in Bethesda and at numerous medical centers throughout the country. These activities cover the full spectrum of nutrition from fundamental studies concerning the metabolic and physiologic actions of the various nutrients and their requirements in man, to practical, applied research aimed at alleviation of malnutrition and nutrition-deficiency diseases both in the United States and abroad. In addition, the NIH finances and administers a substantial and comprehensive program providing research fellowships and research training grants in nutrition. At the NIH, we are now spending in the neighborhood of $24 million for nutrition research and $2.9 million for nutrition research training and fellowships. Such levels of support are strong evidence that research in the field of malnutrition/nutrition is being given a very high priority by the NIH.

No doubt the primary tool for nutritional improvement is financial improvement such as would be provided by the enactment of the President's proposed family assistance plan. While the first objective of title II appears to be the provision of better nutrition education for health workers and members of the public, we believe the means chosen are duplicative of existing authorities. The second objective of title II, that related to biomedical research on malnutrition, though relevant, is being carried out broadly and effectively at present. The authorization in subsection (2) of the bill would be an unnecessary duplication of existing authorities.

For the reasons outlined above, we recommend against enactment of title II of S. 3418.

(That portion of Dr. Marston's prepared statement dealing with malnutrition follows:)

MALNUTRITION

Title II of S. 3418 would authorize the Secretary of Health, Education, and Welfare to (1) make grants and contracts with medical schools, appropriate graduate schools, and nursing schools to establish courses dealing with malnutrition; (2) make grants and contracts with institutions and individuals for research into malnutrition; (3) establish special projects to provide practical training and experience for students of courses in malnutrition; and (4) provide fellowships and financial assistance to students to encourage and enable them to pursue studies and engage in activities in poverty areas relating to malnutrition.

Title II also directs that, in selecting educational institutions to carry out its purposes, priority be given to those located in poverty areas and authorizes appropriation of "such sums as may be necessary" to carry out these programs.

The Department is in accord with the basic objectives of Title II, which we understand to be (1) the creation of an effective force of field workers trained in malnutrition and nutrition to deal directly with this problem on the community level, especially in poverty areas, and (2) to encourage high-quality biomedical research in the area of malnutrition and nutrition.

The first objective is that of creating an effective force of field workers to deal directly on a community level with parents and children in vulnerable population groups, particularly in poverty areas. For this purpose, Title II would support the establishment of courses in medical, nursing, and graduate schools dealing with malnutrition, its causes and effects, and its early detection and effective treatment. The students taking such courses would receive practical training and experience through special projects, particularly in poverty areas. In order to encourage enrollment in such courses, fellowships and financial assistance would be provided.

The Department feels that there is a distinct need for providing education on malnutrition on a *practical* level to enable workers emerging from such an educational effort to engage in down-to-earth community public health activities such as counseling mothers what foods to buy with a severely limited poverty budget, how to feed infants and preschool children, how to plan meals and budget expenditures for several days ahead, and the like. In this connection, the Department of Agriculture is devoting approximately $50 million to an outreach program to bring nutrition information to low-income families.

It is our judgment, however, that grants to the type of schools specified in this bill will not solve the problem of malnutrition among the poor. Even if we could assume that the people who most need help would come into contact with physicians and registered nurses—a not too likely prospect in present circumstances—the pressures to expand medical and nursing curricula and the demands of practice have produced a situation where physicians and nurses have necessarily become dependent upon specialists in nutrition to counsel patients and prescribe diets.

We have no reason to believe that adding nutrition courses to training programs of these health professionals would ease the pressures on their time that lead them to depend on nutritional specialists. We feel that the goal of enhancing community health activities in this area can best be met by focussing training on auxiliary personnel who are most likely to be dealing with nutrition problems on a day-to-day basis. One example which holds great promise is the development of community health workers operating out of the neighborhood health centers. These workers are in tune with the culture in which they are operating and can, after some training, be very effective in communicating the basics of good nutrition.

If we are to deal successfully with the problem of malnutrition, several elements of the problem must be taken into account. First, and most importantly, the poor are malnourished because they cannot afford the foods they need for a nutritious diet. Without the assurance of a reasonable minimum income, such as would be provided by enactment of the President's Family Assistance Plan, we cannot expect education to have much impact. Secondly, many people, rich and poor alike, are malnourished because they are ignorant of what constitutes good nutrition. In order to alleviate this problem we need to train the types of

health workers who will be most effective in communicating the facts about good nutrition. Both the Nurse Training and Health Professions Educational Assistance Act improvement grant authorities provide the statutory mechanisms under which components of medical and nursing education may be strengthened.

We also call your attention to the fact that special training—both long- and short-term—in public health nutrition may be provided under the existing authority of sections 306 and 309 of the Public Health Service Act to professional health personnel including physicians, nutritionists, health educators, and social workers.

Although completely in accord with the second objective of Title II—support of research and research training in nutrition—the Department would point out that adequate authority now exists in the Public Health Service Act for all of the functions provided in this section, and more. These are now being discharged competently and extensively by the National Institutes of Health which is supporting a very substantial research and training effort pertaining to malnutrition and nutrition, both in the laboratories and clinics of several of the National Institutes in Bethesda and at numerous medical centers throughout the country. These activities cover the full spectrum of nutrition from fundamental studies concerning the metabolic and physiologic actions of the various nutrients and their requirements in man to practical, applied research aimed at alleviation of malnutrition and nutrition-deficiency diseases both in the United States and abroad. In addition, the NIH finances and administers a substantial and comprehensive program providing research fellowships and research training grants in nutrition. In the conduct of the very extensive nutrition programs of the NIH, the advice and assistance of many experts in the field are obtained continuously from the scientific staff of the National Institutes of Health and, on a consultative basis, from a very broad range of outside experts.

A special in-depth study in 1965 established the total expenditures of the NIH related to nutrition research at a level of $23,800,000. A more recent review indicates a similar level of expenditure for nutrition research in fiscal year 1968, as well as a total expenditure of approximately $2,100,000 for nutrition research training and $850,000 for fellowships. A substantial portion of this effort is related directly to nutritional deficiencies, malnutrition, and deficiency diseases and their various causes, and methods of diagnosis and treatment. Such levels of support are strong evidence that research in the field of malnutrition/nutrition is being given a very high priority by the NIH.

The Department feels strongly that Title II, in subsection (2), addresses itself to questions to which most answers already exist; in the instances where the relevant knowledge is as yet incomplete, these answers are being furnished continuously and are expected to be known in the near future. To use the language of the bill, the causes and effects of malnutrition are known, means for its detection are known, and the means for effective treatment of malnutrition are likewise known. The recent National Nutrition Surveys which pinpointed pockets of malnutrition among our poorest populations would indeed not have been possible were it not for the existing knowledge concerning the causes and effects of malnutrition and individual nutritional deficiencies, and methods for detection and diagnosis of such deficiencies.

No doubt the primary tool for nutritional improvement is financial improvement such as would be provided by the enactment of the President's proposed Family Assistance Plan. While the first objective of Title II appears to be the provision of better nutrition education for health workers and members of the public, we believe the means chosen are not entirely appropriate and to some extent duplicative of existing authorities. The second objective of Title II, that related to biomedical research on malnutrition, though relevant, is being carried out broadly and effectively at present. The authorization in subsection (2) of the bill would be an unnecessary duplication of existing authorities.

In summary, we are in complete accord with the fundamental objectives of the proposed legislation. We feel that that part of Title II devoted to the education and creation of malnutrition field workers to work on the community level, particularly in poverty areas, is based on a true need but is somewhat misdirected. Rather than the establishment of a new categorical program of this type, we would recommend the continued development and enhancement of the ongoing programs of this and other agencies directed toward meeting the totality of the needs of our Nation's disadvantaged. We feel strongly that the second portion of Title II addressed to research in malnutrition is being carried out effectively under present arrangements, that special legislation for this purpose is not necessary and could result in a duplication of efforts.

Dr. MARSTON. And then if I may move to a brief statement on the National Information and Resource Center for the Handicapped.

Mr. JARMAN. We would be glad to hear you, Doctor.

Dr. MARSTON. Yes.

NATIONAL INFORMATION AND RESOURCE CENTER FOR THE HANDICAPPED

Senator Dole's bill, S. 4002, to establish a National Information and Resource Center for the Handicapped, was passed by the Senate as title III of S. 3418. In effect, this proposal would expand and broaden the scope of the authority for the Secretary of Health, Education, and Welfare which is contained in section 7 of the Vocational Rehabilitation Act, as amended, to operate an information service and to make available to agencies, organizations, and persons concerned with vocational rehabilitation, useful information on resources for various disabilities and other matters helpful in promoting the rehabilitation of handicapped individuals. The establishment of such a center would be responsive to requests from many individuals and groups for guidance in finding and utilizing all available services and knowledge to meet the many needs of disabled people of all ages.

The information and data with which the Center would be concerned includes, but is not limited to, information about medical and rehabilitation facilities and services; day care and other programs for young children; education; vocational training; employment; transportation, architecture and housing (including household appliances and equipment); recreation; and public or private programs established for, or which may be used in, solving problems of the handicapped.

In recent years many other commissions, task forces, and committees working on single or multiproblem areas have referred to the necessity for communicating quickly and effectively new knowledge to physicians, rehabilitation practitioners, and others engaged in the delivery of services to people who need them. These include the President's Commission on Heart Disease, Cancer, and Stroke; the Department's task force on the feasibility of a National Mental Retardation Information and Resource Center; and the President's Committee on Mental Retardation.

Earlier similar needs and recommendations resulted in the formation of information exchanges in the education, scientific, and medical fields. Examples are ERIC in the educational areas, MEDLARS at the National Library of Medicine, and the clearinghouse for Federal scientific and technical data of the Department of Commerce. Services from these systems are available to researchers, planners, students, consumers of services, physicians, and other professional groups, as well as the general public.

The Department suggests that a necessary and perhaps primary task of any new Center should be that of (1) helping to orchestrate the existing information on systems, (2) filling in gaps in data by concentrating, at least initially, on one or more of the presently unorganized information areas referred to in the proposed legislation, and (3) advising potential users about the resources of the existing and any new systems.

In summary, the Department supports this title of the bill. For reasons of proper administration, however, we recommend that implementation not begin until fiscal year 1972. In addition, we recommend that, during the first year of the Center's operation, a complete plan be developed for utilizing pertinent data on ERIC, MEDLARS, and other information and resource systems. Concurrently, a plan for obtaining, handling, and releasing other new data, in accordance with a system of national priorities should be developed.

Mrs. Kathleen Arneson, as I have said, special assistant to the Commissioner of the Special Rehabilitation Service, is with me today and would be happy to answer any questions you may have on this part of the bill.

Thank you, Mr. Chairman. This concludes the Department's statement.

(The portion of Dr. Marston's prepared statement dealing with the National Information and Resource Center for the Handicapped follows:)

NATIONAL INFORMATION AND RESOURCE CENTER FOR THE HANDICAPPED

Senator Dole's bill, S. 4002, to establish a National Information and Resource Center for the Handicapped, was passed by the Senate as title III of S. 3418. This proposal reflects the Senator's finding that disabled people, and groups interested in improving health, housing, recreation, rehabilitation and other services for individuals with handicapping conditions, have no single source of authoritative and complete information about governmental or other services available to them. In effect, this proposal would expand and broaden the scope of the authority for the Secretary of Health, Education, and Welfare which is contained in Section 7 of the Vocational Rehabilitation Act, as amended, to operate an information service and to make available to agencies, organizations and persons concerned with vocational rehabilitation, useful information on resources for various disabilities and other matters helpful in promoting the rehabilitation of handicapped individuals. The establishment of such a Center would be responsive to requests from many individuals and groups for guidance in finding and utilizing all available services and knowledge to meet the many needs of disabled people of all ages.

The information and data with which the Center would be concerned includes but is not limited to, information about medical and rehabilitation facilities and services; day care and other programs for young children; education; vocational training; employment; transportation, architecture and housing (including household appliances and equipment); recreation; and public or private programs established for, or which may be used in, solving problems of the handicapped.

As the sponsors of this legislation have pointed out, a disabled person and his family have a special challenge they must meet each day—that of accepting and working with a disability in such a manner as to become and remain as active and useful, as independent, secure, and dignified as the disability will allow.

Many disabled young people and adults are cut off from normal experiences in going to school, and to church, participating in community activities, and in getting and keeping a satisfactory job. They must be helped, however, to utilize all available resources for their personal and social development. Some health and medical services are available in each State for children with mental and physical impairments. Many communities have special educational programs particularly designed for handicapped children. For those who do acquire some education and can seek employment, there is individualized help from the State-Federal vocational rehabilitation program. Services such as diagnosis and medical care, counseling, training, and assistance in finding employment are generally available from this public program. And in many communities voluntary programs aid many disabled children and older people.

For some handicapped people, a long period of care and training in rehabilitation centers and in workshops must be undertaken before the individual can be employed. For these and many other physically impaired people, there is great need for available information about community resources for outdoor recreation and other leisure time activities.

Information about technical schools and universities which can accommodate physically handicapped but intellectually able youth is often lacking. Available data are always incomplete and out of date. For the disabled who are going to school or trying to obtain and keep a job, accurate knowledge about which public buildings and which community plants and private office buildings are accessible and useable by them is of prime importance. They are also vitally interested in accessible public transportation—which bus lines, airlines or other modes of special transportation are able and willing to carry disabled people.

Many national organizations and community groups are now expressing concern about more economical and useable housing, recreation and transportation services for impaired people. In addition to ramps, wide doors and elevators, what architectural modifications will enhance self-care and independent use of the structure or facility? The National Conference on the Disabled and the Disadvantaged, sponsored by the Department and many national groups, highlighted the great demand for up to date information on research findings, the result of pilot and demonstration projects, and training and service efforts in the several States. The National Commission on Architectural Barriers recommended the establishment of information and technical assistance efforts to serve program developers, civic groups, research firms and others concerned with improving services for the disabled.

A major recommendation of the 1200 architects, engineers and civic planners who participated in barrier-free workshops of the American Institute of Architects last year dealt with sharing new technology and practice about the requirements of disabled persons.

In recent years many other commissions, task forces and committees working on single or multi-problem areas have referred to the necessity for communicating quickly and effectively new knowledge to physicians, rehabilitation practitioners and others engaged in the delivery of services to people who need them. These include the President's Commission on Heart Disease, Cancer and Stroke, the Department's Task Force on the Feasibility of a National Mental Retardation Information and Resource Center, and the President's Committee on Mental Retardation.

Earlier similar needs and recommendations resulted in the formation of information exchanges in the education, scientific and medical fields. Examples are ERIC in the educational area, MEDLARS at the National Library of Medicine, and the Clearinghouse for Federal Scientific and Technical Data of the Department of Commerce. Services from these systems are available to researchers, planners, students, consumers of services, physicians and other professional groups, as well as the general public.

The Department suggests that a necessary and perhaps primary task of any new Center should be that of (1) helping to orchestrate the existing information systems, (2) filling in gaps in data by concentrating at least initially on one or more of the presently unorganized information areas referred to in the proposed legislation and (3) advising potential users about the resources of the existing and any new systems.

In summary, the Department supports this title of the bill. For reasons of proper administration, however, we recommend that implementation not begin until Fiscal Year 1972. In addition, we recommend that during the first year of the Center's operation, a complete plan be developed for utilizing pertinent data in ERIC, MEDLARS and other information and resource systems. Concurrently, a plan for obtaining, handling and releasing other new data, in accordance with a system of national priorities, should be developed.

Mrs. Kathleen Arneson, Special Assistant to the Commissioner of the Social Rehabilitation Service, is with me today and will be happy to answer any questions you may have on this part of the bill.

Mr. JARMAN. Thank you very much, Dr. Marston. The subcommittee will be studying your entire statement with care.

Time pressure being what it is, let me ask very briefly, the Department takes a position against a provision in title I that would set up separate and distinct departments in family practice. With the situation what it is nationally, the tremendous need that we have in this field, don't you think that setting up a separate department in this field would spotlight the need and would even make it more attractive to medical schools to meet that need.

Dr. MARSTON. I would agree with the first part of your statement that it certainly would spotlight the need.

Mr. Chairman, let me try to make very clear the Department's deep concern about the need for more family practitioners and its hope to do all that we can to increase the numbers.

A year ago, Secretary Finch made the point, in emphasizing the need for more physicians, that our programs in trying to increase the numbers should, and I quote, "Give priority to provisions for experiences that will encourage students when they graduate to enter the practice of family medicine." So there is no question about complete support for the great need in the country.

Our concern about the legislative determination of the actual internal organization of medical schools is really on two bases. First, the question of the appropriate Federal role in specifying how individual institutions shall organize themselves by requiring as a condition of participation in this program not even the development of a division of family practice but the establishment of a department of family practice.

The second and more substantive issue is the fact that the evidence is not clear to us that the establishment of separate departments is the only, or is it the best, way of achieving the broad purposes of this bill in every medical school and school of osteopathy across this whole Nation. And these are the two bases of concern.

Again, I would agree with the first point that an earmark, a categorical program, always does highlight in a very effective fashion the emphasis and the need. I think that the problems in these two areas are not the ones that concern us. I can't answer your last question, and I don't think any of us can, and that is the impact on what students actually will do in the future.

Mr. JARMAN. Thank you.

May I say, off the record——

(Discussion off the record.)

Mr. JARMAN. On the record. The subcommittee will stand in recess until 4 o'clock this afternoon.

Mr. Skubitz.

Mr. SKUBITZ. I would like to ask one question at this moment, if I may.

Mr. JARMAN. Yes.

Mr. SKUBITZ. Doctor, I was interested in your statement on page 4: "Like the specialties of pediatrics and internal medicine, it is patient- and family-oriented rather than disease- or system-oriented." I would like to know this. Would the training of the individual that is going into family practice be any different than the training of students who are going into the practice of medicine?

Dr. MARSTON. Yes, sir.

Mr. SKUBITZ. Would it be a less-trained doctor? Is that what you are telling us?

Dr. MARSTON. No. What has appeared has been discussed for a number of years. The action of the AMA in 1969 actually established as a separate and distinct specialty the specialty of family practice and specified in general the types of training that would be required just as is true in the other recognized specialties.

Mr. SKUBITZ. You state, "It would be patient-family-oriented rather than disease- or system-oriented." I am wondering if we are creating a class B type of doctor. That is what I am wondering.

Dr. MARSTON. No, sir. I don't think so. I think there are specialists who are cardiologists who specialize in diseases of the cardiovascular system, a system-oriented approach.

Mr. SKUBITZ. Let me ask the question in this way. Would the courses be any different for a student going into this field through medical school than any other doctor going through medical school?

Dr. MARSTON. No, sir, except that the schools throughout the country are making serious attempts to provide a broader array of experiences for the students, and is probable that those who are interested in family practice might choose during their electives to spend more time in these opportunities. But the M.D. degree would carry the same significance of overall competence for all graduates.

Now, the specialization and the qualification for board would be in the post graduate years and the 3 years that are required by the board now.

Mr. SKUBITZ. Thank you, Doctor.

Thank you, Mr. Chairman.

Mr. JARMAN. The committee will stand in recess until 4 p.m.

(Whereupon, at 11:40 a.m., the subcommittee recessed, to reconvene at 4 p.m. the same day.)

AFTER RECESS

(The subcommittee reconvened at 4 p.m., Hon. Richardson Preyer presiding.)

Mr. PREYER. I hope some more members of our subcommittee will be back shortly, but since we do have two here, we will go ahead with our hearings.

Dr. Marston has already testified and has answered a number of questions.

Do you have any further statement that you wish to make, or are you just available for questions?

Dr. MARSTON. Just available for questions, Mr. Chairman.

Mr. PREYER. All right, sir.

Dr. Carter.

Mr. CARTER. Thank you, Mr. Chairman.

I notice you think you have a sufficient program for research and training in malnutrition, is that right?

Dr. MARSTON. Yes, sir. We have something over $24 million that is now being spent in these areas.

Mr. CARTER. You don't think you need any more funds or a new program in this field, is that right?

Dr. MARSTON. I think the statement I made was that we do not need any additional authority, authorization for the programs.

Mr. CARTER. You could use more money?

Dr. MARSTON. We have put emphasis in these areas.

Mr. CARTER. Yes, sir. You are not asking for more money, though, is that right?

Dr. MARSTON. That is right, sir.

Mr. CARTER. Yes, sir. At the present time you are doing this research. How are you applying the results of your research?

Dr. MARSTON. Could I ask Dr. Burton to give some examples on that, Doctor?

Mr. CARTER. Yes, sir.

Dr. BURTON. As you can well imagine, Dr. Carter, the research covers a broad spectrum, all the way from fundamentals to the most applied and practical. And the mechanisms for conveying the scientific information that comes out of that research also varies with the individual segment of research that is being done.

Thus, anything that is of a highly fundamental nature and would not, for instance, contribute to an immediate change of the practice of medicine would find its way into the scientific literature in the usual fashion.

On the other hand, anything that had any practical application—let's take an example: A grantee of NIH less than a year ago discovered that vitamin D as we know it, the antirachitic vitamin, is not really the decisive biologically active compound in the body. But one of its congeners, 25-hydroxycholecalciferol or "25 HCC" is the active compound. And that opened a door for a new clinical approach in the so-called "vitamin D resistant rickets cases." Could they be vitamin D resistant for the reason that something happens to that biologically reactive compound, like that it is not formed from the conventional vitamin D_3, which such patients receive? Would 25 HCC treatment be better?

At this point, within no longer than 3 months after he had found and had his first positive clinical results, it was already in publication. It so happens that it was a matter of publicizing it through one of our NIH scientific workshops which involved that particular area.

And the news was thus almost immediately distributed.

In addition, it will be and has been already reprinted in several journals, including now the Archives of Internal Medicine so that these findings are available within half a year at this point and have come to the attention of the practicing physician.

Mr. CARTER. Yes, sir. Your research and training, or the research which you do is published but not applied by the National Institutes of Health, then—that is, you just make the information available to physicians throughout the country, is that right?

Dr. BURTON. That is correct.

Mr. CARTER. Do you have any people involved, actually, at the grassroots in teaching nutrition?

Dr. BURTON. What we do is we support, to the tune of about almost $3 million, $2.95 million, both training in nutrition and fellowships through our training grants program and through our fellowships.

Mr. CARTER. I see.

Dr. BURTON. And it depends on the particular training program, whether this is on a clinically applied level or whether this is more fundamentally oriented.

Mr. CARTER. Yes, sir.

Dr. BURTON. And so, that again you may have, so to speak, imperfect penetrance in some cases whereas perfect penetrance in other cases.

Mr. CARTER. Yes, sir. Of course, we do have nutritional problems throughout our country in every segment of society, not just our impoverished people, but some people just don't choose to eat the right things or don't know the right things to eat, and others don't have the right things to eat, I guess.

However, our Government is spending hundreds of millions of dollars now for food stamps. Are you assisting in any way with this program?

Dr. BURTON. Dr. Carter, may I go back and answer as well part of your previous question, and make a relevant point?

Mr. CARTER. Yes.

Dr. BURTON. I have with me a booklet "Facts About Nutrition" and I would like to put it in the record, if possible.

Mr. CARTER. Yes, sir.

Dr. BURTON. My Institute, the National Institute of Arthritis and Metabolic Diseases, is the Institute which is the nutrition focus at NIH, has been publishing for the last 8 years a very popular brochure for mass consumption, for lay consumption, about what constitutes good nutrition, what constitutes the specific nutrition needed for unusually critical periods in the life cycle, like pregnancy, infancy, old age, with recommended meal plans and the like.

It has been what we could call our bestseller; hundreds of thousands of copies have been distributed. And I forgot to mention that before when you said: "What are we doing to bring the fruits of nutrition research to the attention of the public?" We do it also in that fashion.

(The booklet referred to follows:)



Facts About Nutrition

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE • Public Health Service • National Institutes of Health

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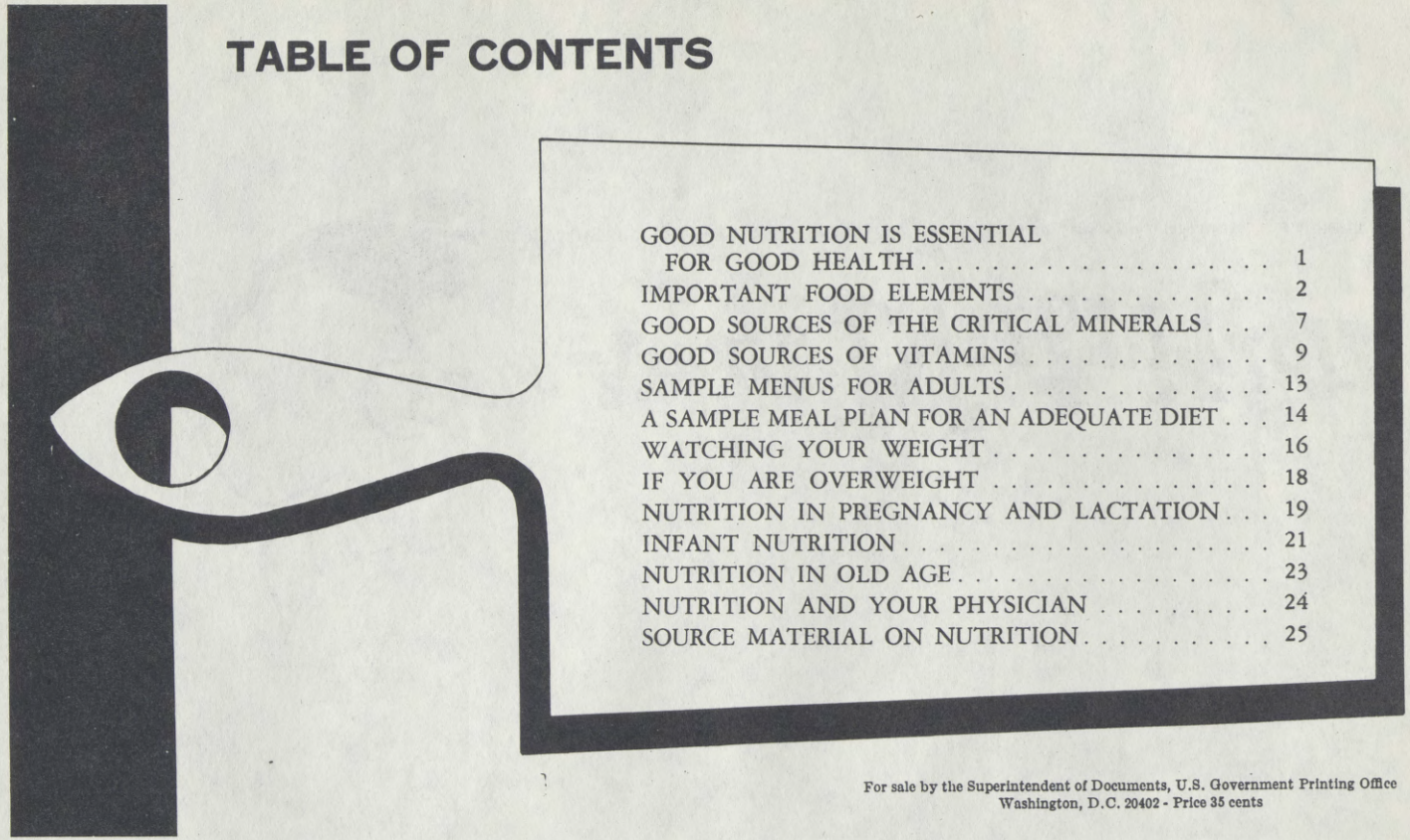

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For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington, D.C. 20402 - Price 35 cents

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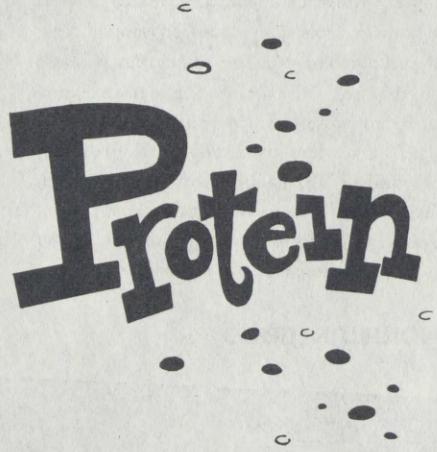
... Facts About Nutrition

GOOD NUTRITION IS ESSENTIAL FOR GOOD HEALTH

From simple one-celled plants to highly complex human beings, all living things need food. Food is necessary to support growth, to repair constantly wearing tissues and to supply energy for physical activity. Unless the food consumed supplies all the elements required for normal life processes, the human body cannot operate at peak efficiency for very long. If an essential nutrient is missing from the diet over very long periods of time, "deficiency diseases" such as rickets, scurvy, or certain anemias may develop.

The food choice of civilized man is influenced by many factors, such as cultural background, habit, taste preference, susceptibility to advertising, family finances, economic situation, and many others. In the United States today a variety of good foods is available everywhere and within economic reach of most people. Nevertheless, many persons still consume inadequate or faulty diets which are likely to lead to poor or borderline health, and there is a continuing need to provide information on how to use this abundance of food to the best nutritional advantage.

IMPORTANT FOOD ELEMENTS



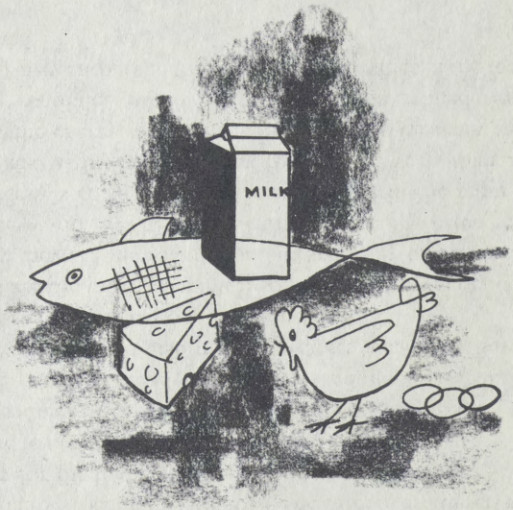
The nutrients in food which are necessary for good health can be divided into certain groups—proteins, carbohydrates, fats, vitamins, minerals, and water. Most common foods consist of combinations of the above; foods which are good sources of one food element usually also contribute other essential elements as well, but no one food supplies all needed nutrients in sufficient amounts. For good nutrition all essential food elements must work together. Therefore, well balanced nutrition calls for a well chosen variety of foods.

CALORIES—units of food energy—are derived from the body's chemical processing of carbohydrates, fats, and proteins. All three can serve as body fuel, to provide energy for physical activity and heat. Any excess of these three elements over the requirements of the moment is ultimately stored in the body in the form of fat—to be used as an energy reserve in time of caloric need. A habitual caloric excess leads to overweight (see later pages).

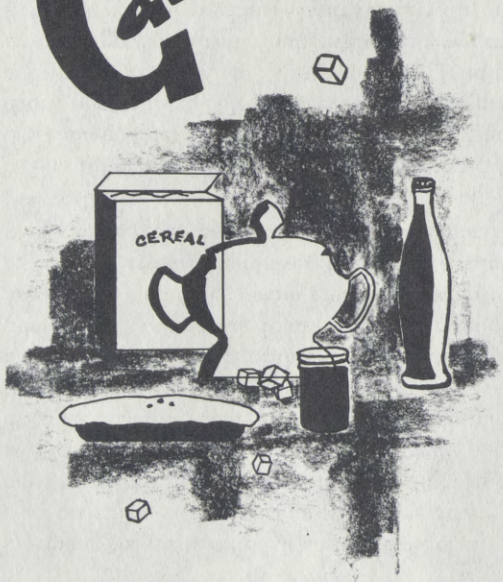
Proteins make up the basic material of each body cell. They are the main constituents of the muscles and most lean tissues of the body, and are required in the daily diet for growth, maintenance, and repair of tissues as well as for many other body processes. During the process of digestion, food proteins are broken down into simple components called amino acids, which are reassembled into other proteins needed by the human body. Any extra food proteins not utilized in this specialized fashion are used as a source of energy.

Among the many different amino acids, eight are called "essential" since body tissues cannot manufacture them; these essential amino acids must be furnished in the diet. Proteins differ in their essential amino acid content. Those proteins which contain a large amount of the essential amino acids are said to have a high nutritional value; those that are lacking in any of the essential amino acids or have insignificant amounts of one or more of these amino acids, have a low or poor nutritional value. In general, foods of animal origin such as eggs, meats, fish, poultry and milk contain proteins of better nutritional value than foods of plant origin. However, a diet containing both animal and plant proteins is nutritionally acceptable and economically more practical.

The following foods are common sources of protein (arranged in descending order of approximate nutritive value): Eggs, milk and cheese, meats, fish, poultry, soybeans, beans and peas, grains and cereals, and nuts. The last six foods mentioned (and vegetable proteins in general) provide a better nutritive value when consumed in combination with animal proteins—as in cereal with milk, chili beans with meat, or macaroni with cheese. By consuming a mixture of foods containing both animal and plant proteins at each meal, one is more likely to secure all the essential amino acids.



Carbohydrates



Starches and sugars make up this group. The carbohydrates serve as sources of energy for the human body—to do external (physical) and internal work, and to maintain body temperature.

The common sources of carbohydrates are cereals and products derived from them, such as bread and other baked goods, breakfast cereals, rice and noodles, and also most vegetables and fruits, sugar, jams and jellies, candy, soft drinks, and honey.

Carbohydrates are the most economical sources of body energy, and this explains why they are the foundation and mainstay of most diets everywhere in the world. When more carbohydrates are eaten than necessary, the excess is converted into fat and stored in the form of fatty tissues. Thus, eating more starchy foods and sweets than are needed to supply the energy requirement for daily activities may lead to obesity. The continued use of diets too high in refined sugar (candy, jam, etc.) may encourage the formation of cavities in the teeth of growing children.

Fats

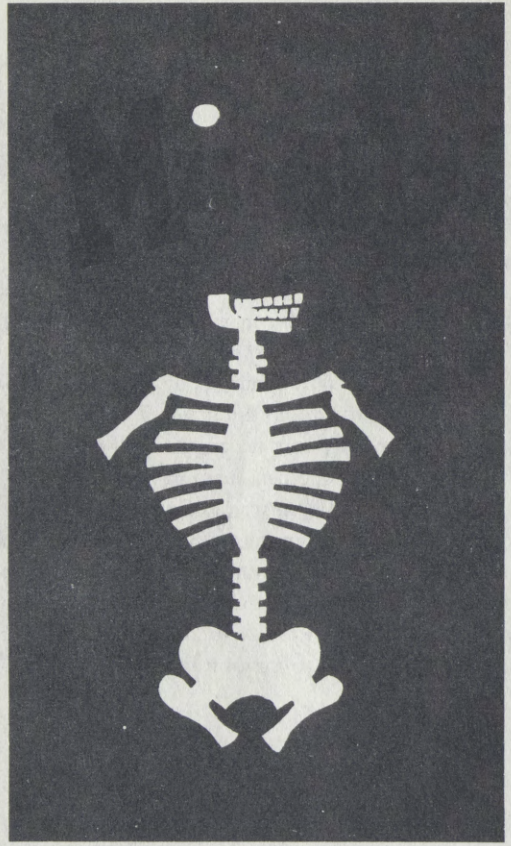


Fats are primarily a source of food energy and in this respect they are more than twice as "rich" as carbohydrates or proteins. Some fats also contain significant quantities of needed fat-soluble vitamins, and certain types of fat contain "unsaturated" fatty acids believed essential for normal health. The unsaturated fatty acids are found particularly in various liquid vegetable oils such as corn, cottonseed, peanut and soybean oil and in many fish oils.

Common sources of fat are: Fatty meats, butter, margarine, cream, most cheeses, whole milk, shortenings, mayonnaise and salad dressings, egg yokes, nuts, and peanut butter.

In cooking, fat makes foods more appetizing; by delaying the emptying time of the stomach, fats also make meals seem to "stick to the ribs."

Because fats have a very high caloric value, fatty foods—when eaten in excess—often contribute to overweight.



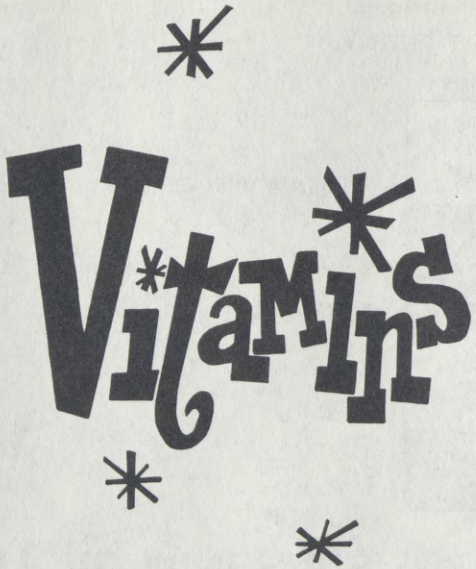
Most of the hard tissues of the human body, such as bones and teeth, are composed in part of mineral elements. In the case of bones and teeth, relatively large amounts of calcium and phosphorus are needed to make up these structures, but the body also needs many other minerals, some in very minute quantities, to carry on its life processes. For instance, in order to function properly, muscles, nerves, and the heart must be constantly nourished by body fluids containing the correct proportion of minerals like sodium, potassium, and calcium. Similarly, red blood cells cannot be formed or function properly unless sufficient iron is supplied to the body. The consumption of small amounts of another mineral, fluorine, during the formative years prevents excessive tooth decay among young children and adolescents, and during later life.

Altogether, about 15 different mineral elements are required by the body and all must be derived from food or drink. The minerals in which diets are most likely to be low, or deficient, are calcium, iron, iodine and fluorine.

• GOOD SOURCES OF THE CRITICAL MINERALS

• *CALCIUM*	Milk and cheese particularly; also ice cream, shellfish, canned sardines and salmon (with bones), egg yolk, soybeans, and green vegetables.
• *IRON*	Liver, heart, kidney, liver sausage, shellfish, lean meats, egg yolk, soybeans, dried beans and lentils, dried fruits, nuts, whole grain or enriched cereals and cereal products.
• *IODINE*	Iodized salt, seafoods.
• *FLUORINE*	If not naturally present in the local water supply, fluoridated water containing one part per million of fluorine.
• *OTHER ESSENTIAL MINERALS*	Sodium, potassium, phosphorus, sulfur, chlorine, magnesium, manganese, copper, zinc, cobalt, and possibly molybdenum and selenium.

A well balanced diet, especially one which contains adequate amounts of protein foods (such as represented by the sample meal plan on page 13) usually provides all the essential minerals in sufficient quantity to satisfy the body's requirements.



The vitamins are compounds which are essential in very small amounts for the proper utilization of foods and for healthy functioning of the human body. The various vitamins differ greatly in their composition, and each one has specific, separate vital functions. Vitamins must be supplied preformed in foods since the body cannot manufacture them.

Vitamins are found in varying quantities in different foods. Most foods contain more than one vitamin, but no one food contains all of them in sufficient quantity to satisfy man's requirements. Ordinarily, a well balanced diet, such as the sample diet on page 13 will provide enough of all the needed vitamins.

The functions of the various vitamins are innumerable. In brief, here are just a few of their more important functions. Vitamin A is essential for the maintenance of a healthy skin and mucus membranes, and for normal night vision. Vitamin D is needed to enable the body to utilize calcium and phosphorus derived from the daily food, and to build and maintain healthy bones and teeth. Vitamin K is an essential component of the body's blood-clotting mechanism which prevents continuous bleeding after an injury to blood vessels. Vitamin B_1 (thiamine) is required for the proper utilization of carbohydrates to obtain energy. Without vitamin B_2 (riboflavin) and niacin the body cannot utilize most food constitutents properly. Vitamin C (ascorbic acid) plays an important role in normal tooth and bone formation and in wound-healing.

GOOD SOURCES OF VITAMINS

These are just a few of the many important functions of the vitamins. Since vitamins are involved in the most basic, vital, life processes it is easy to understand why severe deficiencies in specific vitamins over prolonged periods may result in a variety of symptoms such as night blindness and certain skin lesions, or even fullblown deficiency diseases like rickets, scurvy, and others.

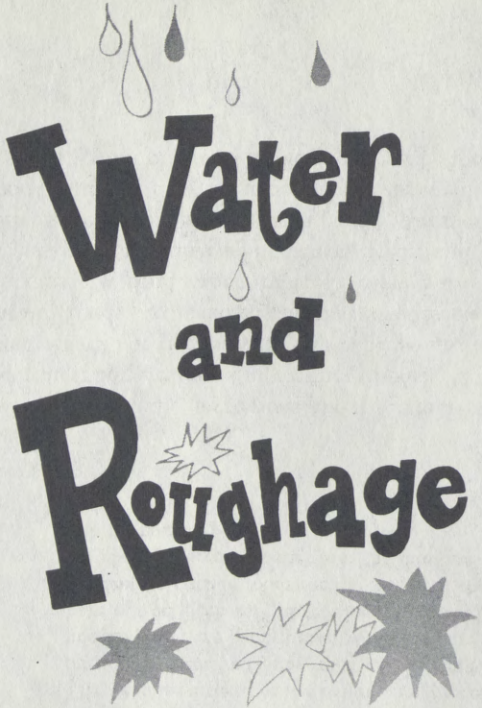
VITAMIN A	Liver, egg yolk, deep yellow and dark green leafy vegetables, tomatoes, liver sausage, butter, margarine, and cheese made from whole milk.
VITAMIN D	Liver, egg yolk, liver sausage, and foods fortified with vitamin D—such as fresh "Vitamin D Milk" and evaporated milk. (Direct sunlight also produces vitamin D in the skin of exposed persons. Growing children and expectant and nursing mothers require 400 international units of vitamin D per day and at these stages in life supplementation with vitamin D preparations might be prescribed by the physician.)
THIAMINE (*Vitamin* B_1)	Pork, organ meats such as liver, heart and kidney, whole grain or enriched breads and cereals, peas and beans, nuts, and eggs. (Also distributed in smaller quantities in many meats and vegetables.)

• *RIBOFLAVIN* (*Vitamin* B_2)	Organ meats like liver, heart, kidney and tongue, liver sausage, milk, cheese, meats, eggs, green leafy vegetables, enriched breads and cereals, and dried beans. (Also distributed in smaller quantities in other foods.)
• *NIACIN*	Liver, meats, fish, whole grain or enriched breads and cereals, dried peas and beans, nuts and peanut butter.
• *PYRIDOXINE* (*Vitamin* B_6)	Organ meats such as liver and kidney, meats and fish, whole grain cereals, soybeans, tomatoes, peanuts and peanut butter, and corn.
• *PANTOTHENIC ACID*	Organ meats, egg yolk, meats and fish, soybeans, peanuts and peanut butter, broccoli, cauliflower, sweet potatoes, peas, cabbage, potatoes, and whole grain products.
• *FOLIC ACID*	Organ meats such as liver and kidney, asparagus, turnips, spinach, kale, broccoli, corn, cabbage, lettuce, potatoes, and nuts.
• *VITAMIN* B_{12}	Liver and kidney, lean meats and fish, oysters, hard cheeses, and milk.
• *ASCORBIC ACID* (*Vitamin C*)	Citrus fruits (oranges, grapefruit, lemons) and their juices, strawberries, cantaloupes, raw or little-cooked vegetables—particularly green peppers, cauliflower, broccoli, kale, brussels sprouts, cabbage, tomatoes, and potatoes.

The vitamins listed are the major ones proven essential for human nutrition. Other vitamins, such as vitamin K or biotin are just as necessary, but the quantities in which they are present in many foods have not yet been fully determined. As a rule, the body is less dependent on outside foods for the supply of these vitamins since they are also produced by bacteria in the intestines and absorbed directly into the body.

There is nothing mysterious about vitamins; they are not special medicines, but are found in common foods. Under ordinary circumstances it is not necessary to buy expensive vitamin preparations or "health foods" to make certain that you receive your daily quota of vitamins. A good variety of fresh, canned and frozen foods has all the vitamins a normal adult person needs, and a well balanced diet such as the sample meal plan on page 13 satisfies all requirements for good health. Of course, in certain disease conditions, or in pregnancy or infancy, your physician is likely to prescribe specific vitamin preparations.





Water is an important nutrient without which the normal life processes cannot take place. It is obtained from beverages and from "solid" foods, many of which contain a high percentage of water (for instance—boiled potatoes contain 78 percent water). The water requirement depends to a large extent on the environmental temperature and on the physical activity of the individual, since water lost in the form of sweat must be replaced. Ordinarily, the sensation of thirst serves as a reliable guide for water intake.

Many people also require a certain amount of bulk for proper functioning of the intestines. This roughage is adequately provided by eating vegetables, fruits, and whole grain cereals mentioned in the following sample meal plan.

SAMPLE MENUS FOR ADULTS

• *Light and Inexpensive*

BREAKFAST

Enriched cereal with glass of milk and sugar
Orange or orange juice
Enriched or whole grain toast with enriched margarine and jelly
Beverage

LUNCH

Egg sandwich
Sliced tomatoes
Cottage cheese
Beverage

DINNER

Fruit in season
Beef stew (or hamburger steak and potatoes)
Green vegetable or mixed green salad
Bread with margarine or butter
Pudding
Beverage

BEDTIME SNACK

Fruit and cookies
(or cheese and crackers)

• *Hearty and Elaborate*

BREAKFAST

Enriched cereal with glass of milk and sugar
Grapefruit sections
2 eggs
Ham or sausage
Enriched or whole grain toast with butter and marmalade
Beverage

LUNCH

Tomato soup
Chicken pie
Grated carrot-raisin salad
Biscuits and butter
Beverage

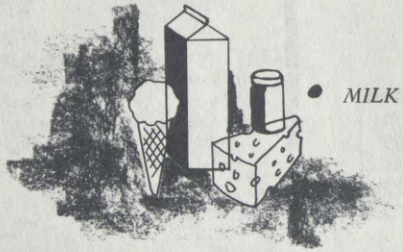
DINNER

Canned peaches
Pineapple-cottage cheese salad
Lamb chops
Baked potato
Broccoli spears, mustard sauce
Hot breads and butter
Ice cream
Beverage

BEDTIME SNACK

Chocolate milk and crackers
(or cheese and crackers)

• A SAMPLE MEAL PLAN FOR AN ADEQUATE DIET



• *MILK GROUP*

Eat food from each of the following four groups every day. Have at least three meals each day—including a substantial, satisfying breakfast.

The following servings

Children	3–4 glasses (8 oz.)
Teenagers	4 or more glasses
Adults	2 or more glasses
Pregnant women	4 or more glasses
Nursing mothers	6 or more glasses

NOTE: Other milk products may be substituted at times—1½ ounces of hard cheese or 2–3 large scoops of ice cream may count as 1 cup of milk. Skim milk may also be used, as well as evaporated or reconstituted, dried milk.



• *MEAT GROUP*

2 or more servings

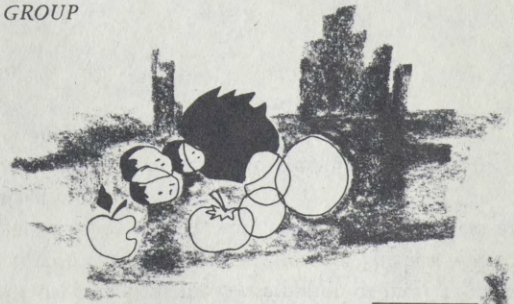
Beef, veal, pork, lamb, poultry, fish, and other sea foods, eggs; with dry beans, peas, lentils and peanut butter as an alternative to meet a tight household budget.

NOTE: Use organ meats—like liver—frequently.

4 or more servings

This should include:
A dark green or deep yellow vegetable (for vitamin A) at least every other day.
A citrus fruit or tomato or potato (for vitamin C) daily, and other fruits and vegetables to complete four daily servings.

- *VEGETABLE-FRUIT GROUP*



4 or more servings

Enriched or whole-grain cereals, breads, and other baked goods—as well as enriched noodles and rice.

- *BREAD-CEREAL GROUP*



- ALSO NEEDED

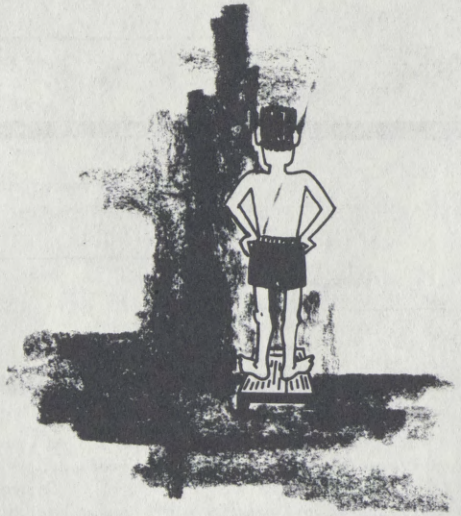
- *ADDITIONAL FOODS*

As needed to supply enough food energy and to make meals palatable—*iodized* salt, butter, margarine, oils and salad dressings, jams and jellies, sugar, honey, and other foods.

For most people 4–8 cups
(1–2 quarts)
of fluids each day.

- *FLUIDS*

WATCHING YOUR WEIGHT



There was a time when overweight was considered a sign of prosperity and abundance. Plumpness spoke well for a person, for it indicated a comfortable position in life. Today we know better. We know that the fat person is not necessarily well nourished. Excessive body weight puts an undue strain on the heart, and in predisposed individuals it encourages the emergence of latent diabetes. Obesity also increases the liability to a number of diseases such as high blood pressure and hardening of the arteries and, as a rule, tends to shorten the life span.

All other explanations to the contrary, the most frequent and important cause of overweight is the consumption of more food than is needed, coupled with too little physical exercise. The best way to deal with overweight is to *prevent* it; the next best—to eat less and to exercise somewhat more.

The following tables give desirable weights for adult men and women based on individual height and body frame.

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DESIRABLE WEIGHTS



MEN
Age 25 and over

Weight in pounds according to frame (In indoor clothing)

Height (with shoes on) 1-inch heels		Small frame	Medium frame	Large frame
Feet	Inches			
5	2	112–120	118–129	126–141
5	3	115–123	121–133	129–144
5	4	118–126	124–136	132–148
5	5	121–129	127–139	135–152
5	6	124–133	130–143	138–156
5	7	128–137	134–147	142–161
5	8	132–141	138–152	147–166
5	9	136–145	142–156	151–170
5	10	140–150	146–160	155–174
5	11	144–154	150–165	159–179
6	0	148–158	154–170	164–184
6	1	152–162	158–175	168–189
6	2	156–167	162–180	173–194
6	3	160–171	167–185	178–199
6	4	164–175	172–190	182–204



WOMEN
Age 25 and over

For girls between 18 and 25, subtract 1 pound for each year under 25

Weight in pounds according to frame (In indoor clothing)

Height (with shoes on) 2-inch heels		Small frame	Medium frame	Large frame
Feet	Inches			
4	10	92–98	96–107	104–119
4	11	94–101	98–110	106–122
5	0	96–104	101–113	109–125
5	1	99–107	104–116	112–128
5	2	102–110	107–119	115–131
5	3	105–113	110–122	118–134
5	4	108–116	113–126	121–138
5	5	111–119	116–130	125–142
5	6	114–123	120–135	129–146
5	7	118–127	124–139	133–150
5	8	122–131	128–143	137–154
5	9	126–135	132–147	141–158
5	10	130–140	136–151	145–163
5	11	134–144	140–155	149–168
6	0	138–148	144–159	153–173

• IF YOU ARE OVERWEIGHT



- *DO* . . . . . ask your doctor's advice about a reducing program and the amount of physical exercise which is safe for you. Then set yourself a goal—your desirable weight—and expect to lose about a pound each week.
- *DON'T* . . . . go on a self-prescribed reducing diet without your doctor's help and advice.
- *DON'T* . . . . take so-called reducing drugs and miracle foods or embark on faddish, blitz-diets which promise rapid results.

There are no miracle shortcuts for losing weight safely except eating fewer high-calorie foods and simultaneously getting more exercise. A good reducing diet is one which cuts down on total calories consumed, but does not cut out any dietary essentials. A reducing diet should still conform to the sample meal plan outlined previously—although the individual helpings of fatty and carbohydrate foods should be smaller. Naturally, there is no place for candy, rich desserts and gravies, extra pats of butter, alcoholic beverages (they're high in calories), potato chips, nuts, soft drinks, or between-meal snacks in a diet of a person who wants to lose weight.

• NUTRITION IN PREGNANCY AND LACTATION

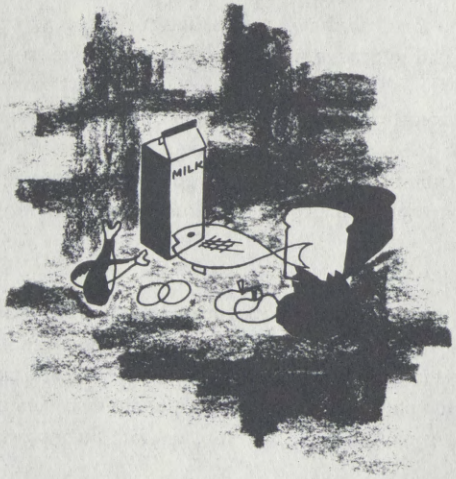
A reducing diet which is used for a limited time only is quite useless. In many cases the individual, after his limited objective is achieved, will backslide and revert to his old food pattern with the result that his temporary gain is soon wiped out. It takes a permanent, lifelong change in food habits to achieve permanent results!

Women who are properly nourished are less likely to encounter some of the complications of pregnancy. They usually recover more quickly after their babies are born and produce milk of good quality for breast feeding. As a rule, their babies are healthier and physically better prepared for life.

Most physicians do not want an expectant mother to gain more than 15 to 25 pounds if her weight was previously normal. Basically, the pregnant woman should eat the same amount of food as before, with emphasis on a higher protein intake and less fat and carbohydrate foods. Proteins are essential to maintain her body and to permit the child to grow and develop; after delivery they are needed for good lactation.



• EXPECTANT MOTHERS DIET

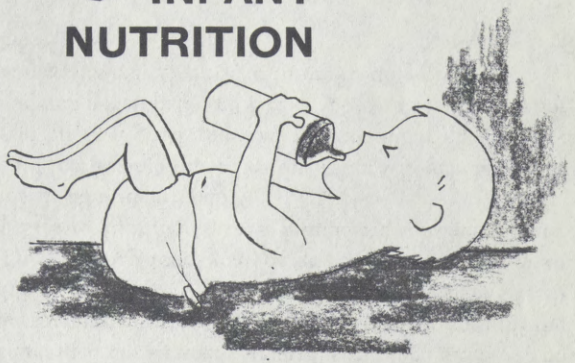


The expectant mother should have at least one quart of milk each day as well as one egg and a generous serving of meat, fish, or poultry. For reasons of economy, less expensive protein foods like evaporated or dried skim milk or dried beans and peas, may occasionally be substituted.

The daily milk provides calcium for the infant's bones and teeth and prevents calcium loss on the part of the mother. Iron-rich foods (see MINERALS) should be eaten in ample quantities to provide iron for the infant's and mother's blood. Iodine is best supplied by iodized salt or seafoods (only iodized salt should be used during pregnancy).

The expectant mother should eat generous amounts of citrus fruits, tomatoes, and deep yellow and green leafy vegetables daily—with less emphasis on potatoes, rice, noodles, fats, bread and sweets. In addition to providing much of the necessary vitamins this tends to prevent constipation. The attending physician may prescribe any additional nutritional supplements he deems advisable, such as vitamin D.

• INFANT NUTRITION



Probably the safest and most desirable way of nourishing a baby is by breast feeding, and human milk may be considered the ideal starting food. Breast feeding should, however, not be relied on exclusively for complete nutrition for long beyond the first 4 months of life. Even breast fed infants require supplementation with vitamin D and need additional iron early in life. (See below.)

Babies who are not breast fed are usually given a modification of cow's milk (provided they are not allergic to it). As a rule, proper bottle feeding is just as beneficial as breast feeding. In prescribing a cow's milk bottle formula, the physician attempts to meet the following daily-nutritional requirements:

• *PROTEINS*	The amount supplied by 1½ to 2 ounces of whole milk per pound of body weight of the infant.
• *CARBOHYDRATES*	The amount supplied by the above quantity of milk, with an additional ounce of sugar (as such, or in the form of syrups or dextrins) for each 10 ounces of milk used.
• *FATS*	As supplied by the milk.
• *TOTAL FLUIDS*	About 2½ ounces per pound of body weight are needed. The formula is diluted with water accordingly.
• *VITAMINS AND MINERALS*	As supplied by the milk. This calls for early introduction to other foods since cow's milk is deficient in iron and vitamin C. Unless the milk is specially fortified (most evaporated milk is), additional vitamin D is also required.

INFANT NUTRITION



Evaporated milk is widely used in infant feeding. It can be used in the above formula as "whole milk" by adding an equal amount of water.

Whether the baby is bottle fed or breast fed, within the first few weeks most physicians add a multivitamin preparation to the diet—or at least cod liver oil as a source of vitamin D, as well as orange juice or a similar source of vitamin C.

It is now customary to introduce selected solid foods between the 2nd and 4th month of life. The first solid food is usually one of the precooked baby cereals. Most infant cereals are enriched with the major B vitamins and iron, which is important since at this stage the baby requires all the iron it can get. Next are strained fruits and vegetables, hard boiled and mashed (or strained) egg yolks and then meats. The solid foods are first given in strained or finely ground form until the infant is capable of chewing. As time goes by and the baby's teeth come in, less finely divided foods may be given to teach him how to chew. By the 12th to 18th month most infants are considered ready for a well-balanced "adult-type" diet.

Mothers should feel assured that a healthy infant will generally take what he needs in his own good time and will not suffer nutritionally provided he is offered a well balanced diet. "Forcing" of foods is not necessary and sometimes may give rise to future feeding problems.

NUTRITION IN OLD AGE

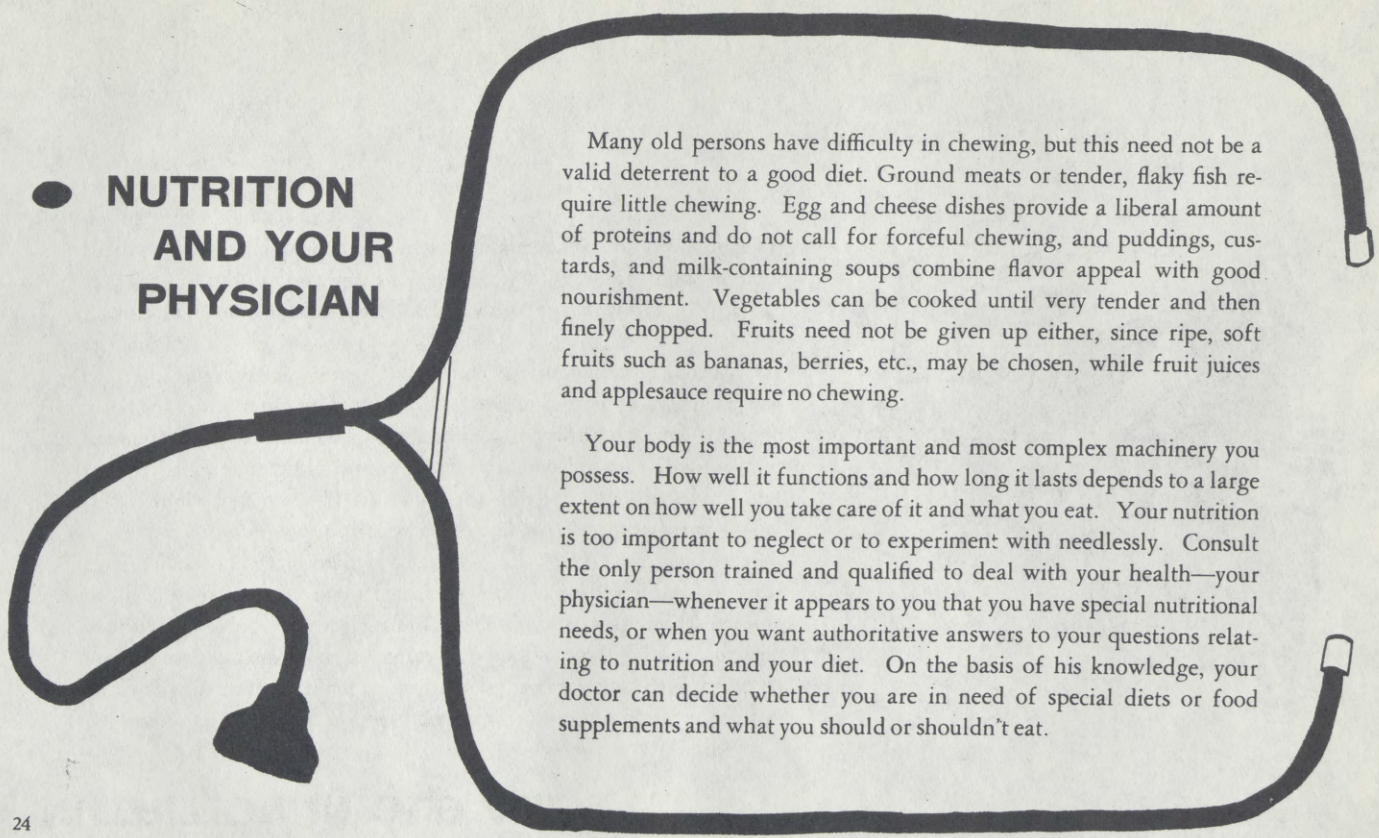
Usually less physical work is performed in advanced age and therefore the body's requirement for calories is lower. Dietary calories which are not used are stored in the form of body fat and many persons who continue the richer diet of their physically more active days may become too heavy. This is the main reason why fewer carbohydrates and less fat are needed in the food of the aged.

Since the total amount of food eaten may and will be smaller (loneliness and decreased activity make for smaller appetites), the diet should contain in proportion at least as much protein, vitamins and minerals. The requirements for these essential nutrients must continue to be met especially since there is a possibility that in advanced age the body may absorb and utilize some of these food elements less efficiently.

An ample fluid intake is important, especially in warm weather. A liberal consumption of fluids such as water, milk, juices, coffee and tea spaced throughout the day helps to maintain regular bowel habits and normal kidney function.



NUTRITION AND YOUR PHYSICIAN



Many old persons have difficulty in chewing, but this need not be a valid deterrent to a good diet. Ground meats or tender, flaky fish require little chewing. Egg and cheese dishes provide a liberal amount of proteins and do not call for forceful chewing, and puddings, custards, and milk-containing soups combine flavor appeal with good nourishment. Vegetables can be cooked until very tender and then finely chopped. Fruits need not be given up either, since ripe, soft fruits such as bananas, berries, etc., may be chosen, while fruit juices and applesauce require no chewing.

Your body is the most important and most complex machinery you possess. How well it functions and how long it lasts depends to a large extent on how well you take care of it and what you eat. Your nutrition is too important to neglect or to experiment with needlessly. Consult the only person trained and qualified to deal with your health—your physician—whenever it appears to you that you have special nutritional needs, or when you want authoritative answers to your questions relating to nutrition and your diet. On the basis of his knowledge, your doctor can decide whether you are in need of special diets or food supplements and what you should or shouldn't eat.

Much material, popular and technical, is available on various aspects of diet and nutrition. A few sources are listed here for those who wish to explore any phase in greater detail.

National Institute of Arthritis and Metabolic Diseases, National Institutes of Health, Bethesda, Maryland, 20014.

"Nutrition and Healthy Growth." Children's Bureau Publication No. 352, Social Security Administration, U.S. Department of Health, Education, and Welfare, Washington, D.C., 20025.

"Recommended Dietary Allowances" and other nutrition information. Food and Nutrition Board, National Academy of Sciences-National Research Council, Washington, D.C.

"How to Control Your Weight." Health and Welfare Division, Metropolitan Life Insurance Company, New York, N.Y., 10019.

Nutrition Section, Children's Bureau, Social Security Administration, U.S. Department of Health, Education, and Welfare, Washington, D.C., 20025.

Division of Nutrition, Food and Drug Administration, U.S. Department of Health, Education, and Welfare, Washington, D.C., 20025.

Nutrition and Consumer-Use Research, Agricultural Research Service, U.S. Department of Agriculture, Washington, D.C., 20025.

The American Dietetic Association, 620 North Michigan Avenue, Chicago, Illinois, 60611.

The Nutrition Foundation, Inc., 99 Park Avenue, New York, N.Y., 10016.

Prepared by the National Institute of Arthritis and Metabolic Diseases (NIAMD), one of the components of the National Institutes of Health, Bethesda, Maryland. The NIAMD, among other research, is the principal Federal agency conducting and supporting studies in nutrition, nutritional deficiency disease, diet and obesity.

GPO : 1969 O—322-618

Dr. MARSTON. We have no direct responsibility involvement in the food stamp program.

Mr. CARTER. How many nutritionists do you have employed, or how many people in research or nutrition do you have employed at the present time?

Dr. MARSTON. Do you know?

Dr. BURTON. We could supply that for the record within a very short time.

Dr. MARSTON. Would you like it for the Department as a whole?

Mr. CARTER. Yes, sir.

(The following table was received for the record:)

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE EMPLOYEES ENGAGED IN NUTRITION ACTIVITIES

Office	*Number of employees in nutrition*
Social and Rehabilitation Service:	
Assistance Payments Administration	3
Administration on Aging	2
Total SRS	5
Food and Drug Administration	66
Office of Education	2
Health Services and Mental Health Administration:	
National Center for Health Statistics	22
Center for Disease Control	61
Indian Health Service	38
Total (HSMHA)	121
National Institutes of Health [1]	65
Grand total	259

[1] Nutrition Study Section, Division of Research Grants calls on 15 special consultants in the field of nutrition for expert advice in this area.

Dr. MARSTON. As you know, the NIH—in NIH the research institutes have research responsibility, and there are additional responsibilities in the service area.

Mr. CARTER. Yes, sir. Are you working with States, State health departments, in particular, toward—I know that you do detail men to State departments for assistance. Do you have such people with the State health departments, working with them and teaching the fundamentals of nutrition or giving assistance, or planning for giving assistance to these people who get food stamps?

Dr. BURTON. Yes, sir. Considerably so. It is done through the nutrition program of the Center for Disease Control in Atlanta. That particular program has responsibilities in field work and domestic nutrition. It is the same nucleus, the same group that a year and a half ago carried out the national nutrition surveys which resulted in recommendations expounded to a large extent during the White House Conference on Nutrition, that we need considerably more community health action for nutrition.

And they have actually posted people at the community level in the State public health departments in a large number of States. I cannot tell you whether it is in all 50 States—I am sure it is not in all 50 States simply because of the limitations of positions that they labor under.

Mr. CARTER. I know that we do have nutritionists in certain counties in Kentucky involved in training and talking to people who are in the food stamp program, and I am thankful that we have them.

Now, I notice that you have various advertisements on radio and television. Do you ever have any advertisements which concern nutrition there? Don't you think it is important that we should get that before the public by television, as we do other statements regarding other fields of health?

Dr. BURTON. It is quite important.

Mr. CARTER. Quite important.

Dr. BURTON. I cannot talk for NIH in this particular case because the mission of NIH is rather circumscribed to research, but other components in the Department like the nutrition program in the Health Services-Mental Health Administration have that type of mission and undoubtedly have that among their many plans.

There are extensive plans there to go out to the public and do nutrition educaton on the practical everyday person-to-person level.

Mr. CARTER. Yes, sir. Well, I certainly hope that this program was adequately funded, since you evidently support the part of the bill which would train more people in this field. I have a feeling that more people might well be trained, however, and be sent to areas where food stamps are used to advise with the recipients and to give them such information as they need.

Dr. Marston, what do you envision as the proper program for paramedical—program of training for paramedical personnel and how are they to be used according to this bill?

Dr. MARSTON. Well, as you know, there is before the Congress, in conference now, the allied health bill which has been discussed by this committee and before this committee in some detail.

The particular point in this bill of how one can use allied health workers to help provide the type of comprehensive personalized services that that bill is focused on, again, as a goal is one that we do not take exception to and indeed have encouraged the development of allied health workers that would be of assistance in this type of endeavor.

Perhaps I will stop at that moment and see if this is responsive to your question, Dr. Carter.

Mr. CARTER. Well, what will be the role of paramedical personnel? Would you describe that to us?

Dr. MARSTON. I think broadly the role, the most dramatic role of the paramedical person in recent years has been the explosive increase in numbers and types of people who have become a part of the health team. And I would anticipate that in the future there would be a continued growth in both the numbers of individuals and the types of individuals that provide part of the health services for individuals.

And as you know, the number now is well up over a hundred as to the different types of individuals. I think part of the problem in the future is to try to be sure that these occupations remain productive and self-satisfying ones so that one can continue to recruit people into them, that one can find better ways to find the capabilities that individuals have by seeking, where it is possible, to expand our responsibilities to an optimal degree.

Mr. CARTER. The purpose would be to extend the arm of the physician, is that right?

Dr. MARSTON. Well, I think, in the broadest sense, that is so. On the other hand, there are individuals in these areas who have occupations that are highly specialized and not usually thought of as an extension of the arm of the physician. I am thinking about the technicians in the laboratories.

Mr. CARTER. Yes, sir.

Dr. MARSTON. I think part of the problem is that it is such a large and somewhat diverse field. The focus in this bill is how one can indeed extend the effectiveness of physicians through the use of highly trained individuals at the subdoctoral level.

Dr. ENDICOTT. I would like to comment that the development of paramedical personnel or allied health personnel for the specialties is pretty well advanced, especially in the hospital-based specialties such as pathology and radiology and anesthesiology. But the problem of training paramedical personnel for the family practice physician, particularly one in solo practice in a rural area, as much of the discussion was about this morning, presents a somewhat more difficult problem because he has to have a good bit more competency, a variety of competencies than, let us say, an orthopedic assistant whose principal function is in the cast room.

As you know, I am sure, there are a number of programs which I would characterize as still being in the experimental stage for developing the general, the generalist physician assistant who would probably be most useful for the family practitioner in solo practice, either in the ghetto or in the remote rural areas.

The number of programs that are starting up spontaneously is very encouraging to me. A number of medical schools are launching programs in this area on an experimental basis within their own resources.

Mr. CARTER. Duke and the University of Washington.

Dr. ENDICOTT. Those are the two——

Mr. CARTER. Yes, sir.

Dr. ENDICOTT (continuing). Most commonly referred to. But throughout, well, many parts of the South, for example, other schools—Bowan Gray has the program. There are the two that I know of in North Carolina. They are developing them in Georgia and Alabama and Louisiana. They are springing up in lots of places.

Mr. CARTER. Will these have the relationship to the physician as surgeon in the Army and his aide man?

Dr. ENDICOTT. Well, the type of person they are training would have, oftentimes, the relationship of the Navy corpsman, let's say——

Mr. CARTER. Yes, sir, the same thing.

Dr. ENDICOTT (continuing). Who is on a ship and who has to get his advice from a physician over the radio, because they would be working, let's say, in one town while he is in another.

Mr. CARTER. And you think that the present system—if you will excuse me for this last one, Mr. Chairman—would envision a paramedic in a small town adjacent to a physician, and he would replace the physician, to a certain extent, in that area?

Dr. ENDICOTT. It might be that way, or he might sort of you know, ride the circuit.

Mr. CARTER. Yes, sir.

Dr. ENDICOTT. I was told, just this morning, that in California the Governor has just signed a modification of the Medical Practice Act which would permit a physician to employ two such aides.

Dr. MARSTON. I think, Dr. Carter, the use of replace in the sense that you used it earlier—that is, to extend the effectiveness of the physician—we have not, in the Department, at least, been thinking of individuals trained to a lesser degree than a physician replacing him in an unsupervised category.

Mr. CARTER. Not in an unsupervised category.

Dr. MARSTON. No, sir. He would be replaced from a numerical standpoint. It would take fewer physicians to achieve the same result but not replace in the sense of being less capable.

Mr. CARTER. You think we already have sufficient funding for this under the paramedical bill which you mentioned, is that it?

Dr. MARSTON. No, sir. I think in this whole area of medical services, and certainly in the area of the allied health, the question of the appropriate involvement of the Federal Government, vis-a-vis other parts of the health system, has not yet been thoroughly resolved. And, indeed, I think the best example is that of the 120 or so allied health professions we, at present, are supporting under our legislation only a small number of those. It is a large, rapidly moving group, and I think the appropriate place for funding in some of these areas has not emerged with complete clarity yet.

Mr. CARTER. Thank you, Doctor.

Thank you, Mr. Chairman.

Mr. PREYER. Thank you, Dr. Carter.

Mr. Rogers.

Mr. ROGERS. Thank you, Mr. Chairman.

Dr. Marston, good to see you and your associates.

Dr. MARSTON. Yes, sir. Good to see you, sir.

Mr. ROGERS. What is the greatest need in the medical area, as far as doctors are concerned? Is it surgeons? Is it family doctors, or is it eye doctors, nose, ear, throat? What would you say?

Dr. MARSTON. I think the greatest need, as the question that was brought out so often this morning, is the question of adequate or optimal distribution of health resources and of having what one needs at the right place.

Now, against that background, if one had to look at the country as a whole and make a judgment within the intent of your question, I think the need for the primary care physician, the individual who takes responsibility for the care of a family or the care of an individual throughout his illness, is the area that we seem to see more frequent breakdown, and relatively less of a problem in terms of getting acute care in the highly specialized areas, particularly hospital, those cases that need hospitalization. We are probably in better shape there than we are in the other areas.

Mr. ROGERS. In other words, the primary care doctor, the general doctor is the one where we are short; is this what you are telling me?

Dr. MARSTON. Yes, sir.

Mr. ROGERS. I would agree with that, from the evidence I have heard——

Dr. MARSTON. Yes, sir.

Mr. ROGERS (continuing). And looking at the problem. Now, how many of these doctors are we turning out from our medical schools each year?

Dr. ENDICOTT. Well, Mr. Rogers, you really can't tell when they leave the school——

Mr. ROGERS. Well, we have a pretty good idea, don't we?

Dr. ENDICOTT. No, sir. We don't.

Mr. ROGERS. Because we know what the specialists are.

Dr. ENDICOTT. Well, you said turning out of the schools.

Mr. ROGERS. Well, of course——

Dr. ENDICOTT. When they leave the schools, they really haven't differentiated yet.

Mr. ROGERS. Well, all right. When they are ready to begin practice. I will stay out of their training.

Dr. ENDICOTT. As they finish their training, at the present time—we can supply the distribution, but the ones who will be characterized as general practitioners is probably somewhere on the order of 15 percent.

Mr. ROGERS. You think it is that high?

Dr. ENDICOTT. Somewhere on that order.

Mr. ROGERS. Now, they tell us the graduating class from Harvard, they indicate about 3 percent this year.

Dr. ENDICOTT. That would be what the senior says his intention is.

Mr. ROGERS. His intent is.

Dr. ENDICOTT. Yes. I am talking about after they have finished their training——

Mr. ROGERS. I understand.

Dr. ENDICOTT (continuing). And taken the next step, then about 15 percent are in general practice.

Mr. ROGERS. Well, I would like to see these figures, if you will supply them for the record.

(The following information was received for the record:)

GRADUATES FROM THE 1965, 1966, AND 1967 CLASSES NOW IN GENERAL PRACTICE

As of December 31, 1967, there were 22,623 living graduates of the 1965, 1966, and 1967 classes of American medical schools (including Puerto Rico). Of this number, 2,830 or 12½ percent reported themselves to the American Medical Association as being in general practice. (These numbers include military.)

Source: Medical School Alumni, 1967. American Medical Association, Chicago, 1968.

Dr. MARSTON. We have, I think, a definitional problem, Mr. Rogers, because you asked the question about the primary-care physician, and there are physicians throughout the country that are giving primary care who do not designate themselves as general practitioners. I mean, many of the pediatricians and internists, I think, would meet most definitions of primary-care physicians, in terms of what they do on a day-by-day basis.

Mr. ROGERS. Well, now, pediatricians, a pediatrician is not going to take care of the whole family, is he?

Dr. MARSTON. No, sir. But I think he would give primary care to that segment of the population.

Mr. ROGERS. To the children, but I am talking about giving care to the family, to a whole family that we envision in the family doctor.

Dr. MARSTON. Yes, sir.

Mr. ROGERS. What would you say the shortage is in the family, in this problem with the family doctor? Is there any way to estimate it?

Dr. MARSTON. Again, we have run around so often recently just trying to estimate the shortage of physicians in general, that I think one has real difficulty in giving an answer. There is a significant shortage, and I think we all accept that there is a problem.

Mr. ROGERS. Now, I understand there is an overage of surgeons, probably.

Dr. ENDICOTT. Probably, yes, sir. And I think this is perceived by the graduating students. I also understand that some feel that at the present time the number of filled surgical residencies is actually decreasing.

Mr. ROGERS. Would you let us have those figures——

Dr. ENDICOTT. Yes, sir.

Mr. ROGERS. For the record?

Dr. ENDICOTT. We will put together the best figure that we can.

(The following information was received for the record:)

RESIDENCIES IN GENERAL SURGERY

Statistics for 1969 and 1970 are not yet available. It is therefore impossible at this time to substantiate an impression by some that the number of filled residencies in general surgery has been decreasing.

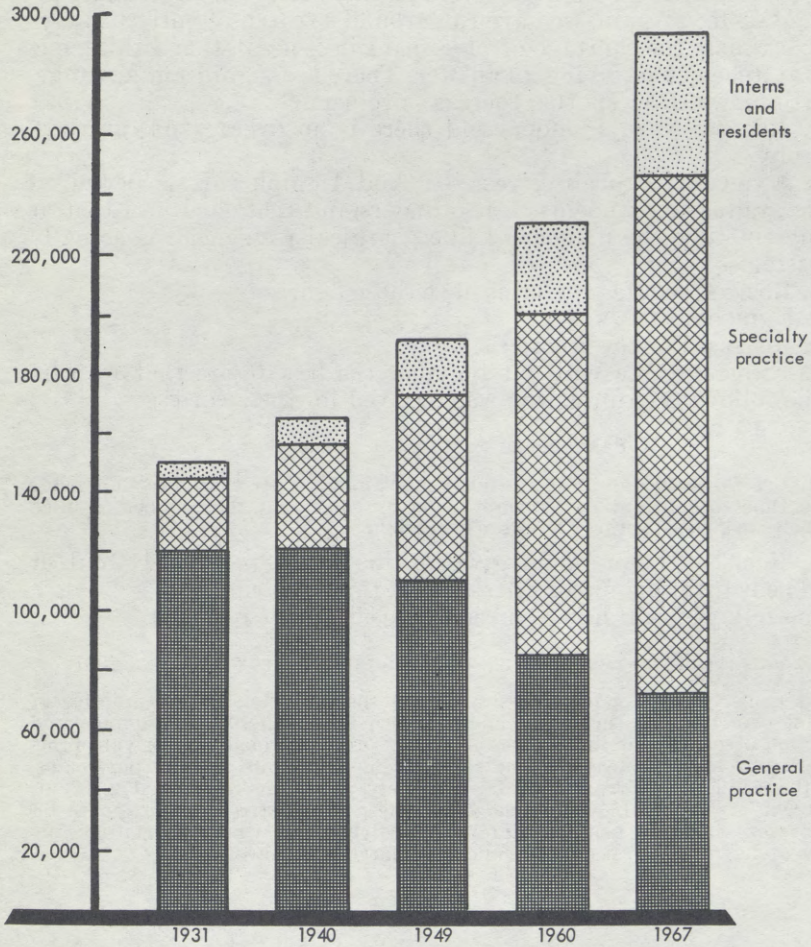
Mr. ROGERS. If you could give us this whole picture, I think it would be helpful in our consideration of this problem.

(The following information was received for the record:)

SPECIALIZATION IN THE PRACTICE OF MEDICINE BETWEEN 1931 AND 1967

With respect to the general trend toward specialization in the practice of medicine over the past several decades, between 1931 and 1967 the number and proportion of physicians in full-time specialty practice—including private practitioners, physicians in teaching and research, hospital staff, Federal physicians, and others—increased from 24,826, or 16 percent of the total, to 172,709, or 59 percent of the total. Among the specialties, the greatest proportionate increases were in such fields as internal medicine and its subspecialties, obstetrics and gynecology, pediatrics, and psychiatry and neurology.

ACTIVE PHYSICIANS (M. D.) BY TYPE OF PRACTICE: SELECTED YEARS 1931-67



ACTIVE PHYSICIANS (M.D.) IN SELECTED SPECIALTIES AND IN TRAINING PROGRAMS: SELECTED YEARS 1931–67

Type of practice and specialty	Midyear [1]				Dec. 31, 1967 [2]
	1931	1940	1949	1960	
Total active physicians	152,425	168,770	196,577	237,689	294,072
General practice [3]	120,399	120,090	110,441	85,268	74,507
Total, full-time specialty	24,826	36,880	62,688	114,578	172,709
Internal medicine	4,003	6,449	11,588	22,459	34,270
Subspecialties of internal medicine [4]	465	620	1,955	2,847	4,540
Obstetrics and gynecology	1,418	2,551	5,074	10,257	15,297
Ophthalmology and otolaryngology	6,410	7,608	9,224	10,358	12,612
Pathology	518	987	1,730	3,804	7,296
Pediatrics	1,568	2,416	4,315	9,157	14,333
Psychiatry and neurology	1,401	2,400	4,720	10,543	18,804
Radiology	1,005	1,589	2,866	5,659	8,854
Surgery (general)	4,320	6,645	9,931	17,027	22,698
Surgical specialties [5]	804	[6] 1,078	3,231	7,278	11,889
All other specialties	2,914	4,537	8,054	15,189	22,116
Interns and residents	7,200	11,800	23,448	37,843	46,856

[1] Includes all Federal physicians and non-Federal physicians in 48 States and the District of Columbia.
[2] Includes all Federal physicians and non-Federal physicians in 50 States, District of Columbia, and territories.
[3] Includes also part-time specialists, physicians not reporting a specialty, and those reporting specialties not recognized by the American Medical Association.
[4] Includes allergy, cardiovascular disease, gastroenterology, and pulmonary diseases.
[5] Includes neurological surgery, orthopedic surgery, plastic surgery, proctotogy, and thoracic surgery.
[6] Includes orthopedic surgery only, other surgical specialties included with general surgery.

Source: Health Manpower Service Book 20. Manpower Supply and Educational Statistics for Selected Health Occupations. P.H.S. Pub. No. 263, sec. 20.

Data in this table are derived from periodic questionnaires sent to physicians by the American Medical Association. The description of specialty and when full- or part-time specialist is each physician's own choice and does not reflect American Board Certification.

PERCENTAGE DISTRIBUTION OF ACTIVE PHYSICIANS (M.D.) IN SELECTED SPECIALTIES AND IN TRAINING PROGRAMS—SELECTED YEARS 1931–67

Type of practice and specialty	Midyear [1]				Dec. 31, 1967 [2]
	1931	1940	1949	1960	
Total active physicians	100	100	100	100	100
General practice [3]	79	71	56	36	25
Total full-time specialty	16	22	32	48	59
Internal medicine	2	4	6	10	12
Subspecialties of internal medicine [4]	([5])	([5])	1	1	2
Obstetrics and gynecology	1	2	3	4	5
Ophthalmology and otolaryngology	4	5	5	4	4
Pathology	([5])	([5])	1	2	2
Pediatrics	1	1	2	4	5
Psychiatry and neurology	1	1	2	5	6
Radiology	1	1	1	2	3
Surgery (general)	3	4	5	7	8
Surgical specialties [6]	1	1	3	3	4
All other specialities	2	3	4	6	8
Interns and residents	5	7	12	16	16

[1] Includes all Federal physicians and non-Federal physicians in 48 States and D.C.
[2] Includes all Federal physicians and non-Federal physicians in 50 states, D.C. and Territories.
[3] Includes also part-time specialists, physicians not reporting a specialty, and those reporting specialties not recognized by the American Medical Association.
[4] Includes allergy, cardiovascular disease, gastroenterology, and pulmonary diseases.
[5] Less than 0.5 percent.
[6] Includes neurological surgery, orthopedic surgery, plastic surgery, proctotogy, and thoracic surgery.

Source: Health Manpower Service Book 20. Manpower Supply and Educational Statistics for Selected Health Occupations. Public Health Service publication No. 263, section 20. Data in this table are derived from periodic questionaires sent to physicians by the American Medical Association. The description of specialty and when full or part-time specialist is each physician's own choice and does not reflect American Board certification.

Mr. ROGERS. Now, I understand that you are in sympathy with the goals of the legislation but feel the necessary authority already exists except for title III, I guess it is, or the last part where you would give some information to the handicapped. But the other two approaches to the bill you feel you have sufficient legislation to do the job; is that right?

Dr. MARSTON. Not in terms of what is specified in this bill. We do not have legislation which would establish a Federal principal to sort of indicate the internal structure of a medical school—that is, the establishment of a department. And we think that that would be unfortunate. We do not have the type of legislation that would highlight it.

Mr. ROGERS. Well, is this the direction that that would be done, or simply that funds be available if they decide to do it?

Dr. MARSTON. These funds are in sizable amounts, Mr. Rogers, when one is talking in authorizations of $50 going up to $100 million for this particular area. I think it is well to recognize that this is almost as large as the total sum of the formula. $113 million is the total amount that we have in the formula and special project grants for medical and related activities.

Dr. ENDICOTT. I would like to add one comment to that, Dr. Marston, and that is that in our existing legislation, health manpower legislation, the support is at the level of undergraduate medical education. And the differentiation into the family physician actually occurs after the M.D. degree.

And our legislation, existing legislation, is defective with regard to our ability to provide stipends and fellowships at the post-M.D. level.

Mr. ROGERS. But what about in the hospital or medical colleges for the post-graduate work?

Dr. ENDICOTT. Well, we would support the faculty which provided the training, but the stipends, which are included in this bill, we would not be now authorized to provide.

However, most of the stipends even in the university hospitals, are a part of the hospital cost and are charged off against the patients and medicare-medicaid, and third party carriers. Most of those stipends at present are not direct Federal stipends.

Mr. ROGERS. Now, how many departments of the family physician would you say there are in our universities and our hospitals?

Dr. ENDICOTT. Well, it depends a great deal on how you define it. It is kind of a fuzzy area at the present time.

Mr. ROGERS. Well, do they have departments of surgery? Maybe I am using the wrong terminology.

Dr. ENDICOTT. Well, some have departments of family practice. Not very many.

Mr. ROGERS. How many, would you say?

Mr. CARTER. Fifteen, I believe.

Dr. ENDICOTT. Yes, I think that is correct.

Mr. ROGERS. About 15 departments already?

Dr. ENDICOTT. Well, the last information that we had from the AAGP was nine departments and 14 divisions within other departments. But the picture is confused because in some schools they carry out considerable activity in a department which they would, for example, characterize as community medicine, or something of this sort.

Now, in a contract we had——

Mr. ROGERS. Wouldn't that be classified the same? Would not the association classify either as family practice?

They would not?

Dr. ENDICOTT. No; I don't think so.

We had a contract with the University of Chicago which made a survey, and according to his definition 43 were engaging in some sort of activity in this area. How it is organized, and what they call it, varies from school to school.

Mr. ROGERS. So we really don't know what we are doing in the area, is that what you are telling me?

Dr. ENDICOTT. Yes, sir. I don't know entirely what is being done in this area, because it is being done in so many different ways and different places that no matter what kind of a questionnaire you send out, you get sort of uninterpretable data back.

Mr. ROGERS. Well, it is amazing that doctors couldn't give us the right answer, and deans of schools. Is the questionnaire that difficult, or is their operation so difficult to interpret? This is surprising.

Dr. ENDICOTT. Well, I think that the difficulty here is confusion as to what we are really talking about, in terms of family practice.

Now, the president of the AMA has recently issued a figure indicating that 38 percent of the physicians in this country engage in what he calls family practice.

Mr. ROGERS. Well, now, I thought they had made a speciality of this now, about a year ago.

Dr. ENDICOTT. Yes, sir.

Mr. ROGERS. And I thought it was fairly well defined, but it isn't?

Dr. ENDICOTT. Yes, it is well defined but the residencies are just beginning this year.

Mr. ROGERS. They haven't had any residencies at all before in this?

Dr. ENDICOTT. Not so designated.

Mr. ROGERS. As a specialty?

Dr. ENDICOTT. Right.

Mr. ROGERS. Well, how did this come out, then?

Dr. ENDICOTT. There are 46 approved residencies as of June 30; 16 are located in medical schools and six are affiliated with medical schools or located in teaching hospitals of medical schools; the remaining 24 are located in community hospitals.

Mr. ROGERS. These are programs——

Dr. ENDICOTT. Yes, these are approved residencies in family practice.

Now, obviously there is no output yet because they are just starting the first year of 3 years of training.

Mr. ROGERS. Well, what I mean is, how do we turn out family physicians—how did we turn out family physicians before, and how were they designated, and how did we ever keep up with them, and how many did we know we had, before we had the specialty? I can understand the speciality designation, now, and that is over and apart. It is definite. There is a board, and the residency is accepted and they take the exam and all this. I understand that.

That has been done since 1969. How did we know before how many family physicians we had, or did we?

Dr. ENDICOTT. Well, we didn't really, but——

Mr. ROGERS. We didn't?

Dr. ENDICOTT. Well, when I went to medical school 30-odd years ago, it was fairly easy to tell, because we counted up the number who took specialty training and subtracted that from the rest, and they were general practitioners.

Mr. ROGERS. Well, I think that would be a pretty good rule of thumb still, today, wouldn't it?

Dr. ENDICOTT. No, sir. I don't think it would.

Mr. ROGERS. It wouldn't? Why not?

Dr. ENDICOTT. Because the, in many situations the internist has taken the place, really, of the general practitioner and engages in essentially the same type of practice as the general practitioner who 30 years ago completed 1 or 2 years of internship and went into practice.

Mr. ROGERS. So you would classify internists then as family physicians?

Dr. ENDICOTT. Many of them. Not all.

Mr. ROGERS. This may be a proper classification. How many does this give us?

Dr. ENDICOTT. Well, that I am sure would have been included in these figures, and that came out to 38 percent.

Mr. ROGERS. Including the internists?

Dr. ENDICOTT. And the pediatricians, I would assume.

Mr. ROGERS. And pediatricians, too, even though they don't treat the adult members in the family?

Dr. ENDICOTT. Now, Mr. Rogers, it is getting increasingly fuzzed up because of the proliferation of subspecialties. Boards of internal medicine recognize a number of subspecialties—hematology, gastroenterology, and so on. And these probably would not really be, could not really be considered as primary care or family physicians since they limit their practice pretty much, and their patients are often referred by other internists.

Mr. ROGERS. I would not think they would classify them as family physicians in the term we are using today. I would not think so.

Dr. ENDICOTT. Now, the same thing is happening in the field of pediatrics so that you are getting pediatric surgeons, pediatric neurologists, pediatric hematologists, pediatric radiologists. And here again you would have to scratch them off the list.

Mr. ROGERS. Well, I would agree. And this is what concerns me. We do not seem to know, really, what we have. And I don't know that we are seeing that the dollars that we are putting into education are really turning out what we need. If there is no concern about matching the need as to what we are producing, now, what is the point of having a Federal program?

Dr. MARSTON. Well, let me say here that we have figures as to the numbers of physicians in active practice, who are in general practice, for instance, who are in specialties. And for the year 1967 there were 62,757 private practitioners in general practice, and 127,322 private practitioners in specialties. And we know that the trend has been increasing in the number in specialties and decreasing in the number in general practice, but the differentiation occurs after medical school.

(The following table was received for the record:)

ACTIVE PHYSICIANS BY TYPE OF PRACTICE: 1949, 1960, 1967

Type of practice	1949	1960	1967
Number of physicians: Total active	191,577	230,762	295,072
Private practice: Total	150,417	165,844	[1] 190,079
General practice	95,526	74,553	62,757
Specialty practice	54,891	91,291	127,322
Nonprivate practice [2]	41,160	64,918	103,993
Percent of physicians: Total in private practice	100	100	100
General practice	64	45	33
Specialty practice	36	55	67

[1] Private practice not available for 1967. Figures shown are for solo, partnerships, group, and other practice.
[2] Includes for 1949 and 1960: hospital service (including interns and residents), medical school faculty, administration research, and Federal service.

Source: Health Manpower Source Book, secs. 14 and 20. Public Health Service Publication No. 263.

Dr. MARSTON. For the most part all programs have been focused at the undergraduate period, before the differentiation has occurred.

Mr. ROGERS. Yes. Well, now, do departments of surgery go into postgraduate, I presume, or do they go down into your 4-year?

Dr. MARSTON. The individual who goes into surgery specializes in surgery after he finishes medical school.

Mr. ROGERS. He finishes medical school?

Dr. MARSTON. Yes, sir.

Mr. ROGERS. So what about your department of family practice, they pick you up when?

Dr. MARSTON. As far as specialization is concerned after the M.D. degree, with the exception, as I mentioned earlier, that the individual going into general practice might choose to take his electives in his student days as opposed to taking them in surgery.

Mr. ROGERS. Now, what is the best way to have family physicians? Is it to have a department, and recognize it, or not?

Dr. MARSTON. Well, I think the best way overall is to have the type of practice arrangements which draw individuals into the field.

Now, backing up from that——

Mr. ROGERS. I am talking about what we can do and what the medical schools can do—set up departments to attract them?

Dr. MARSTON. I have watched this during my lifetime in medicine, and one can train an individual for a job, and yet if the conditions of practice are not conducive to keeping him in that job, he will come back for additional training, specialization, or move from one area to another area to seek that.

Mr. ROGERS. I understand. I am talking about making the initial decision, what he is going to do, now. Is it more attractive, or has it been more attractive to a docetor to go into a field which is now recognized? And now we are recognizing family practice by specialization, in effect, to specialize in this field. Is that more attractive now to a young man who is getting his medical education, to be able to go and say I will be a diplomate of family practice, the status? Is this helpful?

Dr. MARSTON. I think we all hope so, and I think we all believe——

Mr. ROGERS. Well, has it been true in medical education generally that young doctors would go to the specialty and become the diplomate?

Dr. MARSTON. Again, the reason for individuals going into specialties has been a complicated one.

Mr. ROGERS. I understand that, but I am saying what a medical college can do to help. I realize an individual decision is made all the time, but what can the university do to direct young people to put emphasis in the areas where they think it should be put?

Dr. MARSTON. Let me try to give an answer to this. When I was assistant dean I was studying the career patterns of individuals who graduated from an institution. Very few went into psychiatry on graduation. But by the time they had gone into military service and by the time they had moved around as graduates from medical schools do, if you looked 10 years later we were right on the national average. If you looked 2 or 3 years later, then one would come to the conclusion that the environment was one that did not lead the students to go into this particular specialty.

And I think one of the particular problems is the mobility and the multiple exposures that students get during this long period of training.

Mr. ROGERS. I am sure that is true, but what I am saying is, what I am trying to find out is do they have departments of psychiatry?

Dr. MARSTON. In schools. Yes, sir.

Mr. ROGERS. Do all the schools have them, medical schools?

Dr. MARSTON. Yes, sir.

Mr. ROGERS. What?

Dr. MARSTON. Yes, sir.

Mr. ROGERS. They have them in every one. They are called——

Dr. MARSTON. Behavioral science.

Mr. ROGERS. Behavioral.

Dr. MARSTON. But for all intents and purposes; yes, sir.

Mr. ROGERS. What are the other basic departments that they would have?

Dr. MARSTON. In the clinical areas, medicine and surgery and pediatrics, and OBGYN, and psychiatry and a variety of subgroupings of those. In some cases they are called departments; in some cases they are called divisions.

Mr. ROGERS. Now, it seems to me the pattern is that where there is a need—and certainly we had the need for psychiatrists after World War II, and this is when they came into their own. That is when the colleges started putting in those departments; wasn't it?

Dr. MARSTON. The departments of psychiatry were in colleges before World War II.

Mr. ROGERS. Well, not as widespread, I am sure; were they?

Dr. MARSTON. Yes, sir.

Dr. ENDICOTT. They were sort of starved for money.

Mr. ROGERS. Well, I am surprised at that. I would like to see a history of that. Not that I doubt you, but, I don't remember even hearing of a psychiatrists before World War II.

Mr. CARTER. Well, I graduated—if the gentleman would yield, I graduated in 1937 and we certainly had a department of psychiatry.

Mr. ROGERS. Well, I am glad to know that, because I didn't realize that, at all.

Dr. MARSTON. Some are called departments of neuropsychiatry.

Mr. ROGERS. I would like a rundown on that, how many colleges had departments of psychiatry before World War II.

(The following information was received for the record:)

COURSES IN PSYCHIATRY OFFERED BY MEDICAL SCHOOLS, 1940, 1969, AND 1970

In 1940, 29 medical schools out of a total of 67 offered elective courses in psychiatry. A dozen or less out of the total of 67, had independent Departments of Psychiatry. Of the over 100 schools of medicine admitting students for the years 1969 and 70, all except one have an independent department of psychiatry.

Dr. MARSTON. Mr. Rogers, I hope very much that the establishment of the specialty here will indeed achieve one of its main goals of inducing more people to go into this specialty area. From a factual standpoint, I cannot assure you at this time that that will occur. And that is the only point that I am trying to make.

Mr. ROGERS. I understand. Now, what are we doing at this level to produce family doctors; anything?

Dr. MARSTON. We——

Mr. ROGERS. We have admitted the need.

Dr. MARSTON. Yes, sir. And a year ago, really, with a considerable amount of enthusiasm from Secretary Finch and from the Department, we put as a specific requirement, as a part of our attempts to increase the number of graduates to put a special priority for those institutions that would indeed seem to give the best chance of increasing the number of students that would be going into family practice.

Mr. ROGERS. How did we do that?

Dr. MARSTON. Well, No. 1, we advertised in a press release that those applications that were designed to achieve this goal would have a higher priority than if they did not.

Secondly, in the review process, the review committees were told to consider this as one of the criteria in evaluating the application. So these were essentially the two ways in which we did this.

Mr. ROGERS. And did you get any results from that?

Dr. MARSTON. Yes, sir.

Mr. ROGERS. I would like for the record, and we won't have time, I guess, now, what you did do, what your criteria were, how the grants were made, to whom, and what resulted from it.

Dr. MARSTON. All right, sir.

(The following information was received for the record:)

PHYSICIAN AUGMENTATION PROGRAM

On August 21, 1969, Secretary of Health, Education, and Welfare Robert H. Finch announced a program to increase enrollments in the Nation's schools of medicine and osteopathic medicine. This program is known as the Physician Augmentation Program. a program to support the addition of first-year places in schools of medicine and osteopathic medicine commencing with the fall term of 1970. These places were in addition to any increase to which the schools already committed themselves. Grants were awarded on a national competitive basis to those schools of medicine and osteopathic medicine that documented

their intention to institute a major increase in their first-year enrollment and that appears to have the greatest potential for achieving major increases with their own resources as supplemented by funds allocated by the program. In soliciting applications it was stated that special emphasis would be accorded applications for Physician Augmentation program that include:

1. Clinical training that provides extensive experiences in patient care in out-patient and ambulatory facilities;

2. Provisions for experiences that will encourage students when they graduate to enter the practice of family medicine; and

3. Provisions that will lead to improvement in the distribution, both geographic and among various socio-economic groups, of medical and other health services.

Applications were reviewed by a specially appointed Ad Hoc review committee and by the National Advisory Council on Health Professions Educational Assistance. Applications were reviewed with respect to the general quality of the proposals, the size of the proposed enrollment increase, and the capability of the school to increase enrollment while maintaining the quality of its educational program. The review considered the numbers of existing and needed faculty, educational and physical facilities and financial resources of each institution.

29 Schools of Medicine and Osteopathy were awarded grants for FY–70 for the Physician Augmentation program. There were 448 additional first-year places represented in the 29 approved applications. A total of $9,781,252 was approved for the 29 applications for the first year of the program.

Of the 29 approved applications, five included programs in family medicine. Those institutions were the University of Nebraska Medical School, the University of Virginia Medical School, the University of Washington Medical School, the University of Indiana Medical Center, and the University of Iowa Medical School.

Mr. ROGERS. As far as family physicians.

Dr. ENDICOTT. Now, I would like to offer a comment here. I think one of the key things has not really been discussed.

Mr. ROGERS. Excuse me 1 minute. May I interrupt just a minute.

(Short recess.)

Mr. ROGERS. Excuse me. I am sorry.

Dr. MARSTON. Could I just again make sure on this point in making this information available, because I think it is important information, that we have concern—for instance, when the manpower legislation comes up for hearing this spring my guess is at least from our level that we will want to see some identification in that legislation in this area. You will recall that initially the special projects were focused primarily on salvaging schools.

After this last passage, the increase in enrollment emerged as a very large use of these grants. We added an emphasis on family practice and other needs. And I think this is a point that we would welcome additional discussion on in the extension of that legislation, and I for one would not be averse to seeing this type of priority to achieve this type of purpose.

I think this is another way of stating how strongly the department feels about the basic purpose behind the legislation.

Dr. ENDICOTT. I think one of the key things in tackling this problem is, first of all, to expose the medical student to good family practice when he is an undergraduate.

Now, in order to do this the institution has to engage in family practice. And as you know, most medical schools treat the outpatients who walk in off the street and whatever inpatients are admitted. They do not generally treat families.

Now, with the prepaid insurance plans, and so on, that are emerging, a number of schools like Johns Hopkins, for example, are undertaking to provide comprehensive health care to define——

Mr. ROGERS. Areas.

Dr. ENDICOTT (continuing). Populations of families. Now, when you have a setup of this kind so that the institution is taking care of, and in the home, and in the outpatient facility and the hospital engaging in preventive activities, then you have an ideal setting in which to train both students and residents.

Now, I think that that is probably much more important than whether you call it a division or a department or interdepartmental affair.

Mr. ROGERS. Well, that may be true, but you know the politics of a school.

Certainly I am sure you do, Dr. Marston. It is just about as heavy as it is in the Congress, I expect, or in NIH or HEW or anywhere else, and that in order to get funds and staff you have got to have status and you have got to have a department. Why does everyone want to be a national institute? For the same reason, to put the emphasis, to get the exposure, to be able to get the money, to get the staff.

So this is about what this whole program is about. It is to have a specialty in this field and recognize and get it moving, attract people to it.

And I understand that. We talk against all the other specialties, but we want to make a specialty here.

Mr. MARSTON. Yes, sir.

Mr. ROGERS. But we need a specialty here, and that is where the need is and we need to do something.

Now, I don't think we are doing a sufficient amount to encourage this. This bill is introduced to try to emphasize and give added impetus. That is basically what it is about.

I think the fact that they designated it as a specialty will help a lot in medical schools now. You will see them start to set up departments, I dare say.

Now, let me ask you this: I would like to know for the record, if you will get me these figures, what medical schools are producing what personnel, what is happening to our manpower in health. I would like to get a little brief, rundown on that for the record.

Dr. MARSTON. Yes, sir. Not only physicians but other health manpower the medical schools are producing?

Mr. ROGERS. That is right. What is happening and what input we have had in this thing, ourselves, what our programs have done, what the medical schools are turning out and allied schools.

(The following information was received for the record:)

ESTIMATED TOTAL TEACHING RESPONSIBILITIES OF MEDICAL SCHOOL FACULTIES, 1968–69

State and Medical school	Medical students	Interns	Residents	Masters, basic science	Doctoral, basic science	Post-doctoral, basic science	Clinical fellows, post-doctoral	Total, cols. 4–7	Other students, number	Other (medical students equiv-alent[1])	Total, cols. 1, 2, 3, 8, and 10	Number
Alabama: Medical College of Alabama	339	42	181	68	84			152	1,714	126	840	1
Arizona: University of Arizona	63			2	4			6	208	10	79	2
Arkansas: University of Arkansas	295	25	111	51	14		8	73	203	119	723	3
California:												
University of California, Davis	48	32	25	2	20	7	10	39	2,545	146	290	4
University of California, Irvine	262	63	249		2		4	6			580	5
Loma Linda University	357	30	60	14	8		10	32	356	125	604	6
University of California, Los Angeles	389	129	580	33	121	110	81	345	9,137	550	1,993	7
University of Southern California	289	287	606	12	53	18	125	208	5,125	84	1,474	8
Stanford University	327	32	236	7	113	62	145	327	98	5	927	9
University of California, San Diego	47	34	67	8	35	18	10	71	63	11	230	10
University of California, San Francisco	523	97	446	8	68		242	318	15,633	434	1,818	11
Colorado: University of Colorado	360	50	287	5	43	23	73	144	5,651	141	982	12
Connecticut:												
University of Connecticut	32	3	1				1	1	20	19	56	13
Yale University	347	63	139		57		198	255	590	44	848	14
District of Columbia:												
Georgetown University	464	28	191	13	41		51	105	220	155	943	15
George Washington University	414	29	145	122	150		1	273	76	29	890	16
Howard University	393	20	86	4	2		2	8	671	392	899	17
Florida:												
University of Miami	332	94	336	44	28	3	53	128	3,814	92	982	18
University of Florida	246	39	160	12	56	11	36	115	1,384	62	622	19
Georgia:												
Emory University	293	97	281	23	30	8	84	145	2,425	202	1,018	20
Medical College of Georgia	393	28	117	26	36			62	613	15	615	21
Hawaii: University of Hawaii	59			28	27	19		74	680	58	191	22
Illinois:												
Chicago Medical School	294	21	82	1	6	2		9	159	7	413	23
Northwestern University	547	111	319	9	81	8	47	145	1,761	424	1,546	24
Stritch School of Medicine	383	12	80	64	54		2	120	537	13	608	25
University of Chicago Pritzker School of Medicine	289	54	184	66	214	8	33	321	652	91	939	26
University of Illinois	793	36	229	129	104	17	15	265	1,447	167	1,490	27
Indiana: Indiana University	857	30	218	23	83	13	22	141	3,164	611	1,857	28
Iowa: State University of Iowa	494	41	206	38	105	20	47	210	3,966	360	1,311	29
Kansas: University of Kansas	483	26	189	3	62	13	31	109	8,225	125	932	30
Kentucky:												
University of Kentucky	300	48	114	17	73	15	16	121	1,298	91	674	31
University of Louisville	367	27	166	21	46	7	9	83	928	118	761	32

Louisiana:												
Louisiana State University	510	33	166	25	25		50	412	71	830	33	
Tulane University	506	62	169	27	86	7	96	216	850	62	1,015	34
Maryland:												
Johns Hopkins University	373	73	271		55	8	235	298	909	31	1,046	35
University of Maryland	521	47	217	1	38	9	30	78	1,089	78	941	36
Massachusetts:												
Boston University	306	70	266	5	48		77	130	337	108	880	37
Harvard Medical School	577										577	38
Tufts University School of Medicine	458	74	170	7	33		192	232	466	110	1,044	39
Michigan:												
University of Michigan	807	48	460	50	140	69	47	306	8,739	980	2,601	40
Wayne State University	531	80	421	43	44		14	101	1,068	28	1,161	41
Michigan State University	78			122	152	33		307	1,313	77	462	42
Minnesota: University of Minnesota	685	43	262	137	232		620	989	2,103	302	2,281	43
Mississippi: University of Mississippi	319	23	115	17	62	5	10	94	1,921	36	587	44
Montana:												
University of Missouri	358	32	261	28	56	9	18	111	13,771	317	1,079	45
Saint Louis University	461	54	110	14	62	15	19	110	582	46	781	46
Washington University	359	62	241		43	33	94	170	171	39	871	47
Nebraska:												
Creighton University	302	17	28	17				17	163	59	423	48
University of Nebraska	365	7	69	24	44		3	71	1,428	90	602	49
New Hampshire: Dartmouth Medical School	100	24	65		21	13	1	35	8		224	50
New Jersey:												
New Jersey College of Medicine and Dentistry	306	49	146		8		6	14	126	21	536	51
Rutgers–The State University	30	10	5		10	6		16			61	52
New Mexico: University of New Mexico	97	24	65		4	4	5	13	19	3	202	53
New York:												
Albany Medical College	284	54	150	1	20		14	35	3,682	474	997	54
State University of New York at Buffalo	407	64	258	27	141	40	36	244	3,616	382	1,355	55
Albert Einstein College of Medicine	402	83	425		74		59	133	2,561	161	1,204	56
Columbia University	499	36	411	2	67	33	303	405	2,499	261	1,612	57
Cornell University	353	59	246	2	74		92	168			826	58
Mount Sinai School of Medicine	59	47	214		16	3	65	84	1,192	1,599	2,003	59
New York Medical College	495	63	238	10	43		92	145	64	3	944	60
New York University	514	51	421	4	61	44	77	186	1,626	37	1,209	61
State University of New York at Brooklyn	770	418	83	4	56	27	34	121	2,157	79	1,471	62
University of Rochester	308	55	191	37	156		34	227	1,873	28	809	63
State University of New York at Syracuse	399	31	268	8	46		15	69	176	19	786	64

See footnote at end of table

ESTIMATED TOTAL TEACHING RESPONSIBILITIES OF MEDICAL SCHOOL FACULTIES, 1968–69—Continued

State and Medical school	Medical students	Interns	Residents	Masters, basic science	Doctoral, basic science	Post-doctoral, basic science	Clinical fellows, post-doctoral	Total, cols. 4–7	Other students, number	Other (medical students equiv-alent [1])	Total, cols. 1, 2, 3, 8, and 10	Number
North Carolina:												
University of North Carolina	287	44	131	21	88	28	49	186	1,803	432	1,080	65
Duke University	333	71	245	2	150	27	112	291	1,189	83	1,023	66
Bowman-Gray School of Medicine	226	23	91	20	36		7	63	453	34	437	67
North Dakota: University of North Dakota	98		3	36	29	2		67	482	108	276	68
Ohio:												
University of Cincinnati	407	69	218	14	59	7	77	157	1,418	31	882	69
Case Western Reserve University	374	92	476	24	111	40	65	240	903	209	1,391	70
Ohio State University	611	43	237	71	104	1	64	240	22,926	1,131	2,262	71
Oklahoma: University of Oklahoma	418	33	194	15	83		209	307	2,006	45	997	72
Oregon: University of Oregon	351	44	212	15	75			90	2,513	149	846	73
Pennsylvania:												
Pennsylvania State University, Hershey	88			5	8	3		16			104	74
Hahnemann Medical College and Hospital	432	21	139	10	23		29	62	6,531	77	731	75
Jefferson Medical College	717	28	165	2	73		36	111	7,906	72	1,093	76
Temple University	552	29	198	3	58	11		72	286	36	887	77
University of Pennsylvania	520	65	320	9	148	34	118	309	1,059	166	1,380	78
Woman's Medical College	237	4	57		16		3	19	374	25	342	79
University of Pittsburgh	388	46	263	23	66	31	57	177	785	50	924	80
Puerto Rico: University of Puerto Rico	268	24	133	18	9		26	53	594	106	584	81
Rhode Island: Brown University	20	37	123	21	35	20	22	98	689	35	313	82
South Carolina: Medical College of South Carolina	326	32	125	13	11			24	456	92	599	83
South Dakota: University of South Dakota	86		2	4	16	1		21	508	23	132	84
Tennessee:												
University of Tennessee	738	50	173	37	77			114	2,306	287	1,362	85
Meharry Medical College	278	17	22	10			3	13	176	49		86
Vanderbilt University	227	49	182	3	92	26	34	155	455	96	709	87
Texas:												
University of Texas Southwestern	411	115	430	15	29			44	1,162	68	1,068	88
University of Texas Medical Branch	606	30	182	29	48		16	93	544	34	945	89
Baylor University	351	56	272	19	63		70	152	696	26	857	90
University of Texas Medical School at San Antonio	105	38	122								265	91
Utah: University of Utah	259	39	116	15	64	9	52	140	2,040	107	661	92
Vermont: University of Vermont	232	36	114	6	40		14	60	2,923	20	462	93

Virginia:												
University of Virginia	319	37	147	1	52	9	38	100	860	94	697	94
Medical College of Virginia	451	76	214	19	58			77	6,912	219	1,037	95
Washington: University of Washington	334	75	307	29	136	115	157	437	12,093	787	1,940	96
West Virginia: West Virginia University	250	16	78	24	51	4	3	82	689	241	667	97
Wisconsin:												
University of Wisconsin	403	41	169	22	134	87	51	294	22,027	400	1,307	98
Marquette University	412	59	239	41	52	5	10	108	1,006	183	1,001	99
Total	35,833	4,860	18,602	2,061	5,831	1,200	4,966	14,058	235,054	15,842	8,195	

[1] The teaching responsibilities of faculty for dental, pharmacy, nurse, and other paramedical, students are computed in terms of their equivalency to medical students.

Note: Medical students include full-time, part-time, and special students.

Source: Education number of "Journal of the American Medical Association," Nov. 24, 1969. App. I, table 4.

NUMBER OF SCHOOLS OF MEDICINE AND OSTEOPATHIC MEDICINE, STUDENTS, AND GRADUATES—SELECTED YEARS 1950–51 THROUGH 1969–70

Academic year	Number of schools [1]	Number of students [2]		Number of graduates
		Total	1st year	
1950–51	85	28,062	7,684	6,562
1960–61	92	32,232	8,794	7,500
1963–64	92	33,595	9,213	7,690
1964–65	93	34,089	9,328	7,804
1965–66	93	34,516	9,223	7,934
1966–67	95	35,212	9,470	8,148
1967–68	100	36,361	9,988	8,400
1968–69	104	37,712	10,384	8,486
1969–70	107	39,400	11,100	8,700

[1] Includes new schools beginning in the year students were enrolled in regular program.
[2] Includes full-time, part-time, and special students.

Source: Education number of Journal of the American Medical Association, Nov. 24, 1969, and educational supplement of American Osteopathic Association, January 1969.

AUTHORIZATIONS AND APPROPRIATIONS FOR HEALTH PROFESSIONS EDUCATIONAL ASSISTANCE, 1964–71

[In thousands of dollars]

	1964	1965	1966	1967	1968	1969	1970	1971 estimate
HEALTH PROFESSIONS EDUCATIONAL ASSISTANCE								
1. Construction grants:								
Authorization [1]	25,000	75,000	75,000	135,000	175,000	170,000	170,000	225,000
Appropriation		100,000	75,000	135,000	175,000	75,000	118,100	118,100
Available funds		100,000	75,000	135,000	116,700	[2] 133,300	118,100	118,100
2. Educational improvement:								
Authorization			20,000	40,000	60,000	80,000	117,000	168,000
Appropriation			10,482	30,000	52,500	66,000	105,000	113,650
Available funds			10,482	30,000	42,292	66,000	101,400	113,650
3. Scholarships:								
Authorization			[3]	[3]	[3]	[3]	[3]	[3]
Appropriation			200	4,030	7,200	11,219	15,541	15,000
Available funds			200	4,030	7,088	11,219	15,541	15,000
4. Student loans:								
Authorization	5,100	10,200	15,400	25,825	26,000	26,500	35,000	35,000
Appropriation		10,200	15,400	25,325	15,000	15,000	23,781	12,000
Available funds		10,200	15,400	25,325	15,000	15,000	15,000	12,000

[1] Funds appropriated are available until expended. Authorizations recorded are based on aggregate appropriation authorization of $175,000,000 for 1964–66 and an aggregate of $480,000,000 for 1967–68.
[2] Includes +$58,300,000 reserved from 1968.
[3] Formula.

Source: Bureau of Health Manpower Education, National Institutes of Health.

HEALTH PROFESSIONS INSTITUTIONAL GRANTS, BY DISCIPLINE, FISCAL YEARS 1969–71

[Formula grants]

Type of school	1969		1970		1971	
	Number	Amount	Number	Amount	Number	Amount
Medicine	100	$21,123,000	101	$21,300,000	103	$21,400,000
Dentistry	51	9,213,000	52	9,400,000	53	9,450,000
Optometry	10	1,480,500	11	1,600,000	12	1,650,000
Osteopathy	6	1,126,000	6	1,100,000	6	1,100,000
Podiatry	5	693,500	5	700,000	5	700,000
Pharmacy [1]			70	9,700,000	74	9,800,000
Veterinary Medicine [1]			18	2,700,000		
Total	172	33,636,000	263	46,500,000	253	44,100,000

[1] Not eligible until 1970.

Source: Bureau of Health Manpower Education, National Institutes of Health.

HEALTH PROFESSIONS SPECIAL EDUCATIONAL IMPROVEMENT GRANTS, BY DISCIPLINE, FISCAL YEARS 1969–71

[Special project grants]

Discipline	1969		1970		1971	
	Number	Amount	Number	Amount	Number	Amount
Medicine	60	$19,784,000	79	$34,942,000	95	$51,175,000
Dentistry	26	8,723,000	35	12,962,000	35	12,550,000
Optometry	8	1,685,000	9	2,287,000	8	1,900,000
Osteopathy	4	1,119,000	6	2,050,000	5	2,725,000
Podiatry	5	1,053,000	5	1,007,000	5	1,200,000
Pharmacy [1]			2	268,000		
Veterinary Medicine [1]			1	782,000		
Total	103	32,364,000	137	54,298,000	148	69,550,000

[1] Not eligible until 1970.

Source: Bureau of Health Manpower Education, National Institutes of Health.

STUDENTS IN SCHOOLS OF NURSING: RN, 1964–69

Students	Total RN	Associate degree	Baccalaureate [1]	Diploma
Admissions:				
1964–65	57,604	6,160	11,835	39,609
1965–66	60,701	8,638	13,159	38,904
1966–67	58,700	11,347	14,070	33,283
1967–68	61,389	14,870	14,891	31,628
1968–69	64,157	18,907	15,983	29,267
Graduations:				
1964–65	34,686	2,510	5,381	26,795
1965–66	35,125	3,349	5,498	26,278
1966–67	38,237	5,654	6,131	27,452
1967–68	41,555	6,213	7,145	28,197
1968–69	42,196	8,701	8,381	25,114
Enrollments: October—				
1964	129,269	8,513	27,667	93,089
1965	135,702	11,564	30,378	93,760
1966	139,070	15,338	33,081	90,651
1967	141,948	20,936	36,599	84,413
1968	145,588	27,471	40,341	77,776
1969	150,795	34,537	43,460	72,798
Fall admissions: Sept. 1–Dec. 31—				
1965	50,495	7,057	11,429	32,009
1966	48,524	8,962	11,770	27,792
1967	50,880	11,857	12,730	26,293
1968	53,598	15,201	13,761	24,636
1969	56,856	19,081	13,788	23,987

[1] Includes data from one basic program leading to a master's degree.

Sources: National League for Nursing. State-approved schools of nursing—RN and LPN/LVN. New York, "The League," annual editions National League for Nursing. Prepublication data, Jan. 30, 1970.

AUTHORIZATIONS AND APPROPRIATIONS FOR NURSE TRAINING ADMINISTERED BY THE BUREAU OF HEALTH MANPOWER EDUCATION, NATIONAL INSTITUTES OF HEALTH, 1964–71

[In thousands of dollars]

	1964	1965	1966	1967	1968	1969	1970	1971 estimate
1. Construction:								
Authorization		(1)	15,000	25,000	25,000	25,000	25,000	35,000
Appropriation [2]		(1)	15,000	25,000	25,000	8,000	8,000	8,000
Available funds			15,000	25,000	16,700	[3] 16,300	8,000	8,000
2. Institutional grants—Payments to diploma schools (replaced in 1970):								
Authorization		4,000	7,000	10,000	10,000	10,000	(35,000)	(40,000)
Appropriation		4,000	2,500	6,000	3,000	3,000		
Available funds		4,000	2,500	6,000	3,000	3,000		
3. Institutional grants—Project grants for improvement of nurse training:								
Authorization		2,000	3,000	4,000	4,000	4,000	[4] 35,000	[4] 40,000
Appropriation		2,000	3,000	4,000	4,000	4,000	8,400	11,000
Available funds		2,000	3,000	4,000	4,000	4,000	7,000	11,000
4. Advanced traineeships:								
Authorization	(5)	8,000	9,000	10,000	11,000	12,000	15,000	19,000
Appropriation	7,325	8,000	9,000	10,000	10,000	10,470	10,470	10,470
Available funds	7,325	8,000	9,000	10,000	9,898	10,470	10,470	10,470
5. Nursing educational opportunity grants (scholarships in 1970):								
Authorization				3,000	5,000	7,000	(6)	(6)
Appropriation				500	5,000	6,500	7,178	17,000
Available funds				500	4,750	[7] 5,750	[8] 8,178	17,000
6. Student loans:								
Authorization		3,100	8,900	16,900	25,300	30,900	20,000	21,000
Appropriation		3,100	8,900	16,900	16,000	9,610	16,360	9,610
Available funds		3,100	8,900	16,900	16,000	9,610	9,610	9,610

[1] Under health professions educational assistance.
[2] Funds appropriated are available until expended.
[3] Includes +$8,300,000 reserved from 1968.
[4] $35,000,000 authorized for both formula and project grants with stipulation that $15,000,000 of funds appropriated shall be available for project grants.
[5] Indefinitely.
[6] Formula.
[7] Includes +$250,000 reserved from 1968 —$1,000,000 reserved until 1970.
[8] Includes +$1,000,000 reserved from 1969.

Source: Bureau of Health Manpower Education, National Institutes of Health.

ALLIED HEALTH PROFESSIONS EDUCATIONAL IMPROVEMENT PROGRAM: BASIC IMPROVEMENT GRANT SUPPORT, BY TYPE OF CURRICULUM, TO 302 TRAINING CENTERS, FISCAL YEAR 1970

Programs of study	Number of students	Number of curriculums
Baccalaureate or higher degree—228 schools:		
Medical technologist	7,909	195
Optometric technologist		
Radiologic technologist	123	8
Medical record librarian	334	19
Dietitian	2,557	105
Occupational therapist	2,093	37
Physical therapist	3,225	62
Sanitarian	396	21
Dental hygienist[1]	943	22
Total	17,580	469
Associate or equivalent degree—74 schools:		
Medical laboratory technician	666	29
Optometric technician	6	1
Dental hygienist[1]	1,849	59
Dental laboratory technician	276	16
Dental assistant	632	29
X-ray technician	848	47
Medical record technician	138	14
Inhalation therapy technician	352	28
Ophthalmic assistant	80	3
Dietary technician	271	13
Occupational therapy assistant	101	6
Sanitarian technician	38	3
Total	5,257	248
Grant total	22,837	717

[1] 9 training centers offer both the baccalaureate and associate degree programs.

Source: Bureau of Health Manpower Education, National Institutes of Health

AUTHORIZATIONS AND APPROPRIATIONS FOR ALLIED HEALTH PROFESSICNS PERSONNEL TRAINING, 1967–71

[In thousands of dollars]

	1967	1968	1969	1970	1971 estimate
1. Construction:					
Authorization	3,000	9,000	13,500	10,000	(1)
Appropriation[2]		3,000	1,800		
Available fund		2,000	[3] 2,800		
2. Educational Improvement:					
Authorization	9,000	13,000	17,000	20,000	
Appropriation	3,285	9,750	9,750	9,750	9,750
Available funds	3,285	9,750	9,750	9,750	9,750
3. Advanced traineeships:					
Authorization	1,500	2,500	3,500	5,000	(1)
Appropriation	250	1,500	1,550	1,550	3,750
Available funds	250	1,184	1,550	1,550	3,750
4. New Methods:					
Authorization	750	2,250	3,000	4,500	(1)
Appropriation	200	1,000	1,225	1,837	4,495
Available funds	200	800	1,225	1,238	4,495

[1] Extension of legislation pending.
[2] Funds appropriated are available until expended.
[3] Includes: +$1,000,000 reserved from 1968.

Source: Bureau of Health Manpower Education, National Institutes of Health.

Mr. ROGERS. Now, in the allied health field we heard talk about assistant doctors. What are you doing to help in this program to begin to build paramedical people who can help in the delivery of services in a primary way, assistant doctors, assistant doctors or nurses or former medics? What are we doing in that area?

Dr. MARSTON. Would you like that now, or for the record?

Mr. ROGERS. Well, I would like it in detail for the record, but if you could just give me a quick summary.

Dr. MARSTON. All right, sir.

Mr. ROGERS. Are we really doing anything or are we still talking and still planning, you know, and saying, yeah, we are thinking about it.

How many assistant doctors are we really turning out?

Dr. ENDICOTT. What we are turning out at the present time, sir, in allied health, using the new methods authority, and in nursing, we are assisting schools to develop curricula to start such programs and examine their feasibility.

(The following information was received for the record:)

BUREAU OF HEALTH MANPOWER EDUCATION EFFORTS

Increasing awareness of the inability of existing health manpower to meet growing demands for service has prompted the medical community to seek innovative ways for increasing the physician's productivity and for expanding his capacity to deliver health care. One method, commanding increasing interest and attention, deals with changing patterns of delegation of selected duties and functions traditionally performed by the physician. Over the past several years, a variety of such experimental programs have come into being in various locations across the nation. Each program is unique and is developing in response to needs for health care as perceived by the sponsoring institution. There is no standardization of program design, curriculum content, academic transferability, or certification procedures.

The variety of names used to identify this new type of "assistant to the physician" illustrates the diverse nature of the approaches under development. Examples include "Physician's Assistant," "Pediatric Nurse-Practitioner," "Clinical Associate," "Medex," and others. No generic name enjoys common usage or general acceptance to date.

It is important to recognize and understand that virtually all of the programs are still in their formative stages of development, demonstration, and evaluation, though some are more advanced than others. A few programs have graduates actually in the work force. Others have admitted students; and still others are developing faculty and curricula in preparation for admitting students at a later date.

Support provided by the Bureau of Health Manpower Education has given emphasis to the development of the education and training phases of such programs or to develop a base of data through which curricula development might be initiated. Support has been provided under both Allied Health Professions Personnel Training and the Nurse Training authorities. The Bureau has also provided support for certain activities through contract.

The following programs are currently receiving support through the Bureau:

Program title: A comprehensive and Detailed Manpower Analysis of General Practice.

Institution: University of Florida.

Description: The project is designed to provide a measurement base for assessing level of preparation required to carry out known responsibilities in the general practice of medicine and develop a methodology to predict the influence of various mixes of physicians and physician support personnel in the general practice of medicine.

Number of students enrolled: Not applicable.
Number of students graduated: Not applicable.
Program title: Physician Assistant.
Institution: Bowman Gray School of Medicine.
Description: The purpose of the project is to examine the duties of pediatricians, both in hospitals and in practice, in order to develop a basic definition of the assistant to the physician. Based on this definition, job description will be developed for "assistants to the physicians" in the fields of pediatrics, medicine, surgery, and general or family practice. A core educational program suitable for the training of these jobs will be developed. Where applicable, changes in local and state licensure will be recommended. In addition, procedures to aid individuals with similar but other types of training, i.e., the Armed Services Corpsmen, to enter the above job categories with a minimum of difficulty are being developed and studied.
Number of students enrolled: Not applicable.
Number of students graduated: Not applicable.
Program title: Research in Development of New Child Health Professional.
Institution: University of Colorado.
Description: The purpose of this program is to develop a new type of allied health professional, the pediatric associate, who after completion of training would be qualified to perform 80 to 90 percent of all services now being given by pediatricians. To date, the basic program format has been developed and implemented. This included a feasibility study to determine the scope of the program and duties of the graduates. State licensure of the participants has been achieved. Studies to ascertain the effectiveness of the training are being conducted. Other studies include the degree of acceptance of the graduate by the professional community and public, curriculum evaluations and character evaluations of the program participants.
Number of students enrolled: 13 starting July 1970.
Number of students graduated: None.
Program title: A study of Anesthesiology Manpower Problems for the Development of New Types of Allied Health Personnel.
Institution: Emory University, School of Medicine, Atlanta, Georgia 30322.
Description: The primary objective is to determine the feasibility of creating new levels of health manpower for the delivery of anesthesiology services. The study provides for detailed task analysis of the anesthesiologist, considerations of new levels of personnel to function under the direction of the anesthesiologist, and development of a curriculum including new equipment and instrumentation to augment the productivity of the anesthesiologist both qualitatively and quantitatively.
Number of students enrolled: 3 at Master's Degree Level.
Number of students graduated: None.
Program title: Development of Orthopedic Assistant Training and Certification Program.
Institution: City College of San Francisco (California).
Description: Purpose of the program is to develop a 2-year community college curriculum to train orthopedic assistants. A curriculum committee was formed and developed the courses offered in the new program. In addition, a task analysis was conducted to ascertain the scope of activity to be performed by this individual. Recruitment of candidates is being conducted. An evaluation of the program has been planned and will be performed. A subcommittee concerned with relations between hospitals and orthopedic surgeons in the area has been formed and is functioning.
Number of students enrolled: 23 at Associate Degree Level, March 2, 1970.
Number of students graduated: None.
Program title: Urologic Assistant.
Institution: Cincinnati Technical Institute.
Description: The project is designed to develop a 2-year Associate degree training program for urologic assistants who can be utilized in hospitals, outpatient clinics and private medical offices. The program will be a model for the development of similar programs throughout the United States.
Number of students enrolled: None (Project initiated June 1970).
Number of students graduated: None.

ACTIVITIES OF THE DIVISION OF NURSING IN SUPPORT OF PREPARING NURSES TO PROVIDE PRIMARY CARE SERVICES

1. "Project to Prepare a Family Health Practitioner" at the School of Public Health, University of California (Berkeley). Section 805 of PHS Act (Title II—Health Manpower Act of 1968—P.L. 90–490).

This is a project grant to support an educational program which will provide already qualified public health nurses with further knowledge and skills in physical diagnosis, clinical management, and community medicine so that they may assume responsibilities as family health practitioners capable of providing comprehensive care to individuals and families in certain settings. The project will have three phases: an educational segment, a clinical phase, and a final phase with increased independence and responsibility under decreasing supervision. The family health practitioner in this manpower health program will have continuing responsibility for patients all along the age continuum and for both acute and chronic conditions.

2. "The Dynamics of Nursing in Ambulatory Patient Care"—Dr. Charles E. Lewis, Department of Preventive Medicine, University of Kansas Medical Center, Kansas City, Kansas, June 1, 1965—November 30, 1968—Section 301 of PHS Act.

In this research project continuing care for adult patients with chronic disease within an ambulatory care setting was provided by a nurse in a one-to-one relationship. The nurse clinic was compared on a number of variable with the traditional medical clinic.

3. "Health Nurse Clinician"—Henry Ford Hospital, Detroit, Michigan—Section 805 of PHS Act (Title II—Health Manpower Act of 1968—P.L. 90–490)

This is a project initiated in the spring of 1969 for support of the development of a new nursing program to prepare family health practitioners. The goal of the project is to bridge the gap existing between the services of nurses and the services of physician in delivering health care.

4. "A Study of the Role of the Nurse in the Preventive Services of a Student Health Clinic"—Dr. John S. Hathaway, Yale University, New Haven, Connecticut, September 1957—August 1963—Section 301 of PHS Act.

This study set out initially to determine whether a nurse conducted health interview could be safely substituted for the traditional physician conducted physical examination in a college health service. This carefully controlled study provided unequivocal answers to the question of the safety of the nurse conducted interview and of the acceptability of this procedure to the students. On the basis of these findings, college health services at Yale were reorganized.

5. "A Study of the Role of Nurse in the Clinic"—Thelma Ingles, Duke University, Durham, North Carolina, September 1958—August 1960—Section 301 of PHS Act.

This research project compared the traditionally administered role of the clinic nurse with an alternate role of historian, dispenser, participant in diagnosis, teacher and counselor roles traditionally played by the physician. Based on delegation of authority by physician to nurse, expanded nurse functions were promising.

6. "Long-Term Efforts of an Experimental Nursing Process"—Miss Genrose Alfano, Loeb Center for Nursing and Rehabilitation, Montefiore Hospital and Medical Center, Bronx, New York. This study, begun in 1968, will not be concluded until May 31, 1973—Section 301 of PHS Act.

This study was based upon the hypothesis that the patient's need for professional nursing care becomes paramount as his need for medical care during the critical stage of illness decreases. At the Loeb Center the nurse is the chief therapeutic agent and the final effector in providing interrelated patient care.

7. "An Exploratory Study of a New Role in Nursing"—Mrs. Barbara Madden, Rancho Los Amigos Hospital, Downey, California—Section 301 of PHS Act.

This research grant will describe and define the role of the nursing care consultant in an effort to identify ways of using qualified professional nurses more effectively in the face of manpower shortages, physician and other.

Work was begun December 1, 1968 and is expected to be completed in December 1970. Data should reveal the value of the clinical specialist as coordinator of patient care.

8. "Evaluation of an Experimental Training Program for Pediatric Nurse Practitioners"—41 USC 52—Delegation from GSA under P.L. 152.

Areas that were evaluated in this contract with the University of Colorado included the content, competence, development and acceptance of new role. It was found that professional nurses with four months additional formal training and twelve months field experience in pediatrics were able to competently perform the following activities: (a) take a complete pediatric history, (b) perform a comprehensive basic physical examination, (c) carry out necessary immunizations, (d) determine developmental status, (e) evaluate hearing, speech, and vision, (f) perform urinalyses and hemoglobin determinations and obtain laboratory specimens, (g) evaluate and manage common problems of the healthy child and minor illnesses, (h) counsel parents, (i) assist in management of emergencies, (j) care for newborn infants, (k) make home visits, and (l) handle telephone calls.

An analysis of the performance of pediatric nurse practitioners over a one-year period in one of the health stations in an urban neighborhood of Denver indicated that nurses were able to care for 82% of the children by themselves and that only 18% required referral to a physician or medical facility. Fifty-four percent of the visits were for well-child care while the remaining 46% for children who were ill or injured.

As associates of pediatricians in private practice, the nurse practitioners performed functions similar to those carried out in the neighborhood health stations. It has been found that having a nurse practitioner in his office, provided the pediatrician wih at least one-third more time than he formerly had for patient care, reading, attendance at meetings, and other purposes.

9. "New Training Program for Pediatric Nurse Practitioners"—41 USC 52 Delegation from GSA under P.L. 152.

This contract with the University of Colorado Medical Center supports a program aimed at the problem of providing adequate medical care to children of families most likely to be affected by the increasing national shortage of doctors, the rural and urban poor. It has implications as a demonstration of how the research of doctors in general might be extended through the use of nurses with advanced clinical training.

10. "An Experimental Training Program for Nurse Practitioners"—41 USC 52 Delegation from GSA under P.L. 152.

This is a contract with Yale University to plan and conduct an experimental training and demonstration program to prepare nurse practitioners in the clinical specialities of pediatrics and general medicine and to document the knowledge gained for use in preparing a new advanced nursing curriculum in the school of nursing.

11. "Ph.D Research Training In Clinical Nursing, Maternity and Pediatric Nursing"—Section 302 of PHS Act.

This program will provide indepth training at the Ph.D. level in maternity and/or pediatric nursing with a view to increasing the number of nurses prepared to provide primary care services.

12. "Specialized Nursing Care in Acute Circulatory Failure——Dr. Lawrence E. Meltzer, Presbyterian-University of Pennsylvania Medical Center, Philadelphia, Pennsylvania, June 1, 1967—May 31, 1970—Section 301 of PHS Act.

In this research project, the effectiveness of intensive coronary care was demonstrated in a treatment program using specially trained nurses to monitor electrocardiograph information, and to initiate planned life-saving procedures during emergencies in the care of acute infractions. Previously these life saving actions had been carried out only by physicians.

Dr. ENDICOTT. With regard to returning corpsmen, we have a program in collaboration with the Department of Defense which seems to be getting off the ground very well in identifying the corpsmen about 3 months before discharge——

Mr. ROGERS. How many have we got working now? We had 14 the last time I asked in the research program.

Dr. ENDICOTT. I would have to supply the——

Mr. ROGERS. Do you think it is more than 14 now?

Dr. ENDICOTT. Oh, yes. I am sure it is much more than that.

Mr. ROGERS. That is encouraging.

Dr. ENDICOTT. It is operated in nearly all of the 50 States at the present time. We got started first in Texas and now it is——

Mr. ROGERS. I would like to know. I think this is very important, and I think we ought to have a real program to encourage these young men as they come back, to keep them in the health field.

Dr. ENDICOTT. I was pretty skeptical as to how that was going to to work, and I think it is working much better than I expected.

Mr. ROGERS. Yes. I would like a rundown in the record on what we anticipate in this area.

(The following information was received for the record:)

STATES IN MEDIHC SYSTEM

With one exception, the State of Washington, all of the major population States and Territories have now designated State MEDIHC Agencies. This brings the total to fifty. Alaska and Nevada have not been asked to establish such a program since so few servicemen with medical training return to those States. The agencies are located as follows:

State Health Department	15
State Hospital Association	11
Comprehensive Health Planning Agency	8
State Health Careers Council	7
State Employment Security Agency	6
University	2
State Education Department	1

Mr. ROGERS. Now, on nutrition, how many medical schools have courses in nutrition?

Dr. MARSTON. All of them have courses of one type or another in nutrition.

Mr. ROGERS. Do they have any specialty in nutrition, at all?

Dr. BURTON. Sir, there is no district nutrition specialty training in the medical schools, but all of them have it as part of their undergraduate curriculum. In some schools nutrition study would start in the first or second year; in other schools it would start during the clinical experience in obstetrics and pediatrics.

Mr. ROGERS. Yes. How many courses would they have to take generally?

Dr. BURTON. It may be broken up in some places into two or three segments, but it depends on the school.

Mr. ROGERS. Two or 3 hours?

Dr. BURTON. Two or three different locations and different times during the 4-year curriculum when they actually get a concentrated dose of nutrition studies. There are about 17 medical schools who actually have a formally defined course in nutrition, which is given on certain days during their sophomore or junior year and dedicates a certain number of hours solely to nutrition.

Mr. ROGERS. But most of them don't, do they?

Dr. BURTON. They do it under the name of pediatrics, when they teach how to feed the infant; obstetrics, when they teach what kind of prenatal care the woman should get from the nutritional dietetic standpoint in order to produce an optimal baby.

Mr. ROGERS. What about you and me? Who studies what we are eating?

Dr. BURTON. As they go into, say, internal medicine in general, the question of what is the best diet, or what is your best body weight comes up and is the subject of formal presentations, not just——

Mr. ROGERS. I think this is the most neglected course probably taught in colleges, don't you?

Dr. BURTON. As a matter of fact, if I may add, Mr. Rogers, there have been many attempts in the last 10 years not just by Federal sources but by other sources such as the American Medical Association and the National Dairy Council to make strong efforts to introduce formal nutrition education into the curriculum, but I don't think the overall picture has changed very much, despite all these efforts. It has something to do with the fact that there are too many impingements and demands on the curriculum.

Mr. ROGERS. I understand, but this is one area which I hope that we will be able to do something about in nutrition. I see you are spending some money in research.

Dr. MARSTON. Yes, sir.

Mr. ROGERS. Is the research being funneled into the—what does it go to? Where do the results go?

Dr. MARSTON. Well, I think the example that Dr. Burton has brought up is the fact that if it is a relatively new and dramatic and helpful thing, then very rapidly this becomes a part of practice. And he was talking about——

Mr. ROGERS. Yes, but nobody teaches it.

Dr. MARSTON. Pardon?

Mr. ROGERS. Nobody teaches it.

Dr. BURTON. Anything new, Mr. Rogers, will be taught within, I would say, a few months after its publication, because there are people in internal medicine and there are people in obstetrics and there are people in pediatrics who are vitally interested in that. And the moment it appears in print it becomes part of both practical and formal teaching in the school.

Mr. ROGERS. You know, I dare say you could ask 10 Americans in their last five fiscal exams how many doctors went into nutritional problems with them, other than just saying well, you are a little overweight or you are a little—or you could gain a little. I don't see it being applied at all. I don't think we know enough about it, evidently. We have had people testify, and I notice you say that probably the best approach is the President's family assistance plan to help the nutritional problem. I am not sure that is right.

In fact, I have great concern because we have had a group of dentists and doctors before this committee, who conducted a 5-year experiment, and the diet they checked is what they were eating, and then they changed it. But the diet they were eating was very insufficient, and they are affluent and could buy about any food that they wanted. But they didn't—doctors who are conscious of their health, and dentists were not even eating the right foods, and then they assure the relationship and the fact when they corrected their diets the cardiogram, the spread between the cardiogram signifying the aging of the heart was reduced 10 years.

Now, it seems to me the medical profession here is very negligent, and medical schools are very negligent in not developing a body of knowledge here and getting it out. And with all of the chatter we have had here in the Congress on Wheaties, and Post Toasties alone, the lack of evidently any knowledge on that is shocking.

And I think with our research here again we ought to see if we can't encourage some of this knowledge to be put to use.

Dr. MARSTON. I think you have pinpointed one of the very real problems in talking about the impact of diet on cardiovascular disease.

Mr. ROGERS. I think it is on all disease. I don't believe it is from just cardiovascular. From the testimony we heard it affects us so many ways, skin conditions, and all.

Dr. MARSTON. In many instances, the problem is that we do have an inadequate base of knowledge.

Mr. ROGERS. Yes.

Dr. MARSTON. And, as you know, there is a vigorous debate that is going on now among countries as to the precise relationship between diet and early death of males. And this is one that we have and will be spending a lot of time on, which will raise problems for us and eventually will raise problems for you because there are judgment factors in this that are going to be difficult to give a clear-cut yes-or-no answer on.

Mr. ROGERS. But I would like a rundown on what research we are doing and what results we have, and how is it being applied. I would like a rundown, if you can get it—maybe you can't—on the medical schools and the number of hours presented on nutrition and those that are compulsory courses in nutrition.

(The following information was received for the record:)

NUTRITION TRAINING OFFERED IN MEDICAL SCHOOLS

While all medical schools offer some training in nutrition, it is frequently offered in the context of broader courses in the basic and clinical sciences courses which are required. A typical medical student may receive from 30 to 40 classroom hours of nutrition, of which one-half to one-third would be in pure nutrition and dietetics and the remainder in obstetrics, pediatrics, internal medicine, physiology, and biochemistry. Because of the way nutrition is integrated into the basic curriculum, it is virtually impossible to pinpoint it in terms of numbers of hours of required instruction.

There is general agreement among medical educators that nutrition training offered in the schools falls short of the ideal. However, given the pressures on schools to expand their curricula in other subjects as well, there appears to be no immediate optimum solution to the problem. A few schools are experimenting with innovative teaching methods to increase student interest and shorten instruction time.

Dr. ENDICOTT. I would like to offer a comment here because early in my career I was in the field of nutrition at the NIH, and in the 1940's, the early 1940's, we had a major program of research in nutrition which had been going on for about 20 years.

Now, in that period of time the essential vitamins were identified and related to specific nutritional diseases such as pellagra and beriberi, rickets, and scurvy, and so on.

And having pretty much mined out the area of the specific vitamins which were specific remedies for specific diseases, people began to lose interest in the field, and I think really because they didn't know where to go next. And much of the malnutrition that we are talking about

today is quite subtle, and making this association between the diet and the disease is a difficult, oftentimes primarily a statistical thing involving large population samples where you can't really get adequate information on what the people really do eat, and people just went into other areas.

And I think you are quite correct in saying that one of our main problems right now is that we have quite inadequate knowledge as to the subtle effects of a diet which may contain every essential ingredient but too much of some and not enough of others.

Mr. ROGERS. Like women supposedly having a deficiency in iron, and so forth, and all of this.

Now, let me get back to this assistant doctor business. What are we really doing? Are we pushing anything here? Are we waiting for the AMA? I think they have given their approval now. Or are we waiting for some licensing? Should we have some technique where we should preempt State licensing on these new categories of health?

Dr. ENDICOTT. I am satisfied that the licensing problem, once the physician assistant is accepted by the profession, will quickly be taken care of by modifications of the Medical Practice Acts of the several States.

I mentioned that it had already been done, for example, recently in California.

Mr. ROGERS. Yes. I saw that.

Dr. ENDICOTT. So I don't think that that is going to be an impediment.

Mr. ROGERS. How many research projects do we have going on in this manpower area for assistant doctors? What are we doing to develop this category?

Dr. ENDICOTT. The responsibility for research in this area is in the National Center for Health Services Research and Development, and I would have to get that information.

Mr. ROGERS. Could you get it and let us have it?

Dr. ENDICOTT. Yes, sir.

Mr. ROGERS. I think it would be helpful.

(The following information was received for the record:)

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH AND DEVELOPMENT, HSMHA—RESEARCH RELATING TO PHYSICIAN EXTENDER PROJECTS

MANPOWER

a. Evaluation of manpower projects: a systems model

The most productive single contribution which the National Center can make in manpower is to design, test, and demonstrate a reliable means of early assessment of the values of manpower development programs which periodically sweep through the health-care industry in response to critical needs as perceived by various groups of hard-pressed practitioners. The currently popular and potentially valuable physician assistant idea is just such a proposal. So also was the dental chairside assistant, the nurse anesthetist, and the pediatric nurse practitioner. But these were the sound projects which survived out of a welter of similar projects which existed only long enough to drain off scarce resources and delay arrival at a solution to the problem.

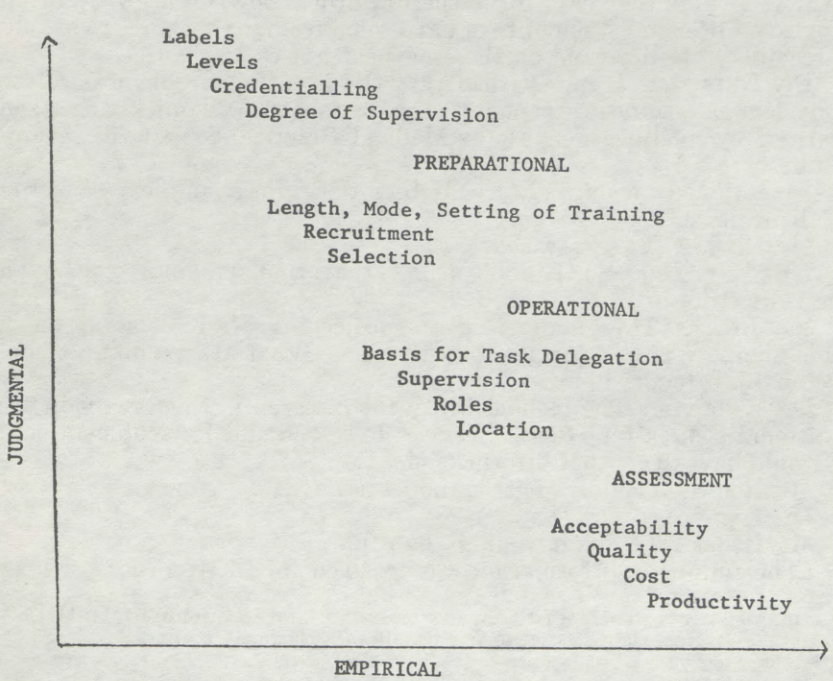
As an alternative to the trial-and-error method currently applied to such projects, the Center is developing an evaluation tool which can be used to systematize both analysis of the elements of each "new manpower" project and measurement of strengths and weaknesses, in accordance with accepted principles of evaluation. By use of such a model, savings in time and money can be effected and greater utility can be assured in manpower innovations.

(1) *Medex.*—The starting point for building the assessment model is the national evaluation of the Medex project, one of the most promising of the more than 40 physician-assistant projects now under way in the country.

In FY 1971, the Medex approach will be replicated in three sites: inner city, rural central plains, and rural northeast.

In FY 1972–1976, further extension will be carried out on a large-scale demonstration basis in States where medical leadership, expressed desire of practicing physicians, and educational resources hold promise of successful application. Tentative identification has been made of 13 such locations, which represent all geographic areas of the country. Final determination will be reached with the advice of scientific and professional adivsory committees.

With a national advisory group, a matrix will be developed for the systems model against which physician-assistant programs can be measured in the future. As a first step toward this goal, broad categories of questions to be included in this matrix have been depicted, as follows:



The scientific and professional advisory committees will also assist in developing a national information/surveillance system into which the total range of observations and experiences of all large-scale demonstrations of physician-assistant projects will be fed and analyzed.

b. Physician extender projects

The acute shortage of physician services in rural and inner-city United States is well documented, as is the steady decline in the ranks of the general practitioner. A series of specially-designed projects will be undertaken to study training and utilization requirements for mid-level workers who can provide specified medical and health services under the general supervision of a physician, who may be on the premises or located at some distance but linked to the site of care by closed-circuit television, short-wave radio, telephone, or computer cable. The effectiveness of the performance of these workers will be examined, as well as the economics of their use, and the limitations which may or should be placed upon them.

All of these projects will be evaluated, using the national evaluation plan discussed in the previous section covering Medex. The projects include:

(1) *Pediatric Nurse Practitioner.*—Based on data on physician visits collected by the National Center for Health Statistics, it is clear that the greatest decrement in medical care in this country is for low- and middle-income family members under age 15. The pediatric nurse practitioner program therefore takes on special significance.

Twelve such programs are in existence or in some stage of development, with widespread interest in development of more. The total production of these largely experimental programs has been only about 200 pediatric nurse practitioners. Ten large-scale demonstration projects will be completed by FY 1975 to extend the concept and the capability of producing pediatric nurse practitioners.

Evaluative studies of this new occupational type have, in general, established its productivity, effectiveness, and public acceptance. Some of the questions still to be answered are occupational persistence as a proxy measure of job satisfaction, the extent to which these workers can be more flexibly allocated in relation to social needs, how productive in service and economic terms will they be over the long haul, and what kinds of problems in interpersonal and interprofessional relations will be encountered in this new role.

(2) *Generic (Non-Military) Physician Assistant.*—Discharged military corpsmen who have been certified for independent duty constitute a valuable pool for recruitment and training as physician assistants. Due to prior training and experience, it is possible for them to convert to the physician assistant role in primary care practice with minimum additional training and orientation.

It must be recognized, however, that as military need for active-duty corpsmen is decreased, this resource group will be diminished for physician assistant training programs. Need for the services of physician assistants will continue, or will in all likelihood mount as the public adjusts to the presence of the new mid-level worker in the health-care delivery system. It seems reasonable to assume that programs to train civilians as physician assistants can gradually be built into the mainstream of health-career education.

Anticipating that time, we will support 12 college-based physician assistant programs. This will permit studies of the preparation, role, and specialty options of physician assistants, as well as related social and economic factors. By the end of FY 1975, these college-based programs could either be expanded in accordance with accumulated data, or phased out if the new role has not established itself in our American system of health care delivery.

(3) *School Nurse Practitioner.*—There are 18,459 nurses employed by local Boards of Education in the United States. Nearly half of them have academic degrees, and 27 percent of them have both academic degrees and public health nursing preparation. Most work alone in school health units, with only occasional supervision by physicians.

A project will start in FY 1971, in which the role of the school nurse will be expanded (after special training) to include physician assistant functions, so that she can provide routine and regular health care and treatment for children on the scale of a small neighborhood clinic. At a later stage, the feasibility will be explored of extending some kinds of services (well-baby and prenatal care, for example) to members of the families of the school children.

(4) *Nurse Midwife.*—By 1975, there will be six million births annually in the United States, but there is such a shortage of obstetricians and general practitioners who practice obstetrics that it is estimated that in the years 1976–1980 as many as 40 percent of the births may be unattended.

One solution to the problem is utilization of well-prepared medically-supervised nurse midwives. In FY 1972–1976 the Center will determine training requirements and utilization of nurse midwives in rendering professional management of anticipated normal pregnancy and delivery; in staffing special family-planning clinics; in providing continuity of care, or services in antepartum clinics, labor and delivery rooms.

(5) *Clinical Pharmacist.*—The use of pharmacists in new clinical roles in medical care will be examined. The extent and the directions to which the study will be extended during the period 1972–1976 will depend upon results emanating from the early work.

c. Methods for obtaining basic information

Balanced development of new health manpower will require methods of obtaining reliable basic information, on which action projects can be designed. In this foundation-building category, three major projects will continue through FY 1972–1976:

(1) *Research Center.*—A Health Services Research Center which will concentrate on manpower will be supported for the purposes of developing and using various measures of manpower productivity under different organizational patterns; and examining the process of installing innovative types of manpower, as well as task redistribution, within different care settings, namely: (1) private medical, both urban and rural; (2) comprehensive community care; (3) Model Cities health programs; and (4) prepaid group practice.

(2) *Data Resource for Manpower Planning or Staffing.*—To provide a highly-organized informational resource for manpower planning or staffing, systematic collection will continue of both formal and naturally-occurring experimental evidence related to staffing alternatives.

(3) *Appraisal of Medical Clinic Staffing Patterns.*—The Center will continue a systematic department-by-department appraisal of staffing patterns in the 250 medical clinics (or an appropriate sample), cutting across geographic, size, type of payment, and other crucial variables, to develop data required for planning major change within the group clinic movement in America.

d. Relationship to the community health services system projects

The large-scale manpower R&D projects will provide a resource of personnel and knowledge to be used in the community projects described above. To the extent possible, the community project sites will also be used for the manpower R&D efforts.

The manpower staff, familiar with the accumulated experience in utilization studies, will provide an informational resource regarding methods and resources for the manpower development aspects of the community projects. The national protocol for manpower evaluation will also be recommended for use in the community projects.

Dr. ENDICOTT. Now, our support up to now has been limited to development of curricula and evaluation of utilization.

Mr. ROGERS. Yes; well, I would like to know what programs you have supported in doing this type of work with the junior colleges as well as your medical schools, if you could let us have that for the record.

Dr. ENDICOTT. Now, you will recall when we had earlier hearings this year in allied health, one of the difficulties which we reported to you at that time was not a deficiency in authorization, but you recall there was a peculiarity of the allied health bill which required that we fund the formula or entitlement grants before we made any special project grants, and we never got enough money to satisfy the formula entitlements.

Mr. ROGERS. Yes.

Dr. ENDICOTT. We had the authority, but we didn't have the funds.

Mr. ROGERS. Could not use it. This is right. This is true. Have you given any other kind of encouragement to get into these programs?

Dr. ENDICOTT. Yes.

Mr. ROGERS. If you will let us have it, for the record.

Dr. ENDICOTT. We have; right.

(The following information was received for the record:)

BHME ACTIVITIES INVOLVING PHYSICIAN'S ASSISTANTS

The Bureau of Health Manpower Education staff participates actively in national conferences and workshops exploring problems regarding the development, utilization and evaluation of physician's assistants. Staff also provides consultation in the preparation of grant applications for funding of physician's assistant programs under existing legislative authorities. In addition, staff main-

tains working relationships with other Federal programs involved in physician's assistants such as the National Center for Health Services Research and Development, Regional Medical Programs, Office of Education, Department of Labor, and Office of Economic Opportunity. The Bureau engages in collection of data about physician's assistant programs. The first compilation of data has been published in a document entitled "Selected Training Programs for Physician Support Personnel." A method to facilitate continuous data collection about existing and developing physician's assistant programs is now being established. A series of meetings with key professional organizations concerned with the delivery of primary care has been initiated. These meetings are intended to facilitate more broadly disseminated knowledge among the various professional organizations, as well as recommendations for future action, both private and Federal.

Mr. ROGERS. Well, I think we need to emphasize this specialty of the family physician, and to boost our whole effort. And I hope that our programs will be geared to that. I don't know what the committee is going to do with this, but I think they are favorably impressed that something must be done in order to get us moving in this area, because what we are concerned with, as you know, is getting out delivery now. And the man who has got to deliver this on an open basis is going to be the family physician, it looks like to me, and his helpers. And we have got to move to this quickly.

Dr. ENDICOTT. Well, I can assure you that a number of institutions are planning, or starting, these programs, and that there is a steady stream of them to my door trying to find out where they can get some money, so it is going to move somehow.

Mr. ROGERS. So you think it does need some money to get them going?

Dr. ENDICOTT. Yes, sir; I am quite sure it does.

Mr. ROGERS. Thank you.

Thank you, Mr. Chairman.

Mr. PREYER. Thank you, gentlemen. We certainly appreciate all of you being here today and staying on later than usual.

Dr. MARSTON. Thank you for the opportunity to be here.

Mr. PREYER. We have four more witnesses, and I am afraid it is impossible for us to complete them today, so that the committee will recess until 10 o'clock tomorrow.

I am sorry we haven't been able to get to every one today but we will get to you the first thing in the morning.

If there are any of you who would not be able to be here tomorrow, and who would like to have your statement included in the record, we will be glad to do that. I am sorry we won't have the chance to hear you testify in person, but we wouldn't want to cause you to throw your schedule completly out of joint and stay, if you could put your statement in the record, which we would be glad to have.

(The following statements were submitted for the record.)

STATEMENT OF DR. JOHN A. B. COOPER, PRESIDENT, ASSOCIATION OF AMERICAN MEDICAL COLLEGES

Mr. Chairman and Members of the Subcommittee: The Association of American Medical Colleges appreciates this opportunity to offer comments on H.R. 15793 and related bills, authorizing grants to support training of physicians and other health personnel in the field of family practice.

The Association of American Medical Colleges is comprised of all of the 107 medical schools in the United States and 390 of the major teaching hospitals. This community of institutions encompasses most of the processes of medical education in this country as well as providing training for large numbers of related health professions and occupations, and contributing in a considerable

and influential way to the improvement of the medical care scene through innovation, demonstration, and providing medical and health services. Thus the Association and its membership have a direct and deep involvement in the problem and activities with which the bills being considered by this Subcommittee deal.

At the outset, it is important to emphasize that the Association fully supports and is broadly committed to the basic objectives being sought through these bills. The Association commends their sponsors for the continuing interest that they have shown in improving the health care of the American people.

The advance of medical science and technology, the necessary expansion of specialization in medicine to assure effective clinical application of these advances, rising public expectation that their health needs will be more adequately met, and the growng inaccessibility of health services has made it abundantly clear that there are major deficiencies in the nation's present arrangements for the provision of medical care. This set of circumstances has emphasized for some time that a more direct confrontation with the problems of meeting society's health needs constitutes perhaps the central challenge before medical education today.

The perception of this challenge has generated widespread and diverse response on the part of American medical schools and teaching hospitals. In brief and in summary, these responses involve:

Major effort to expand medical school enrollments and thus the production of physicians.

The development of departments of community medicine and family practice.

Curriculum modification which has brought to medical students a greater awareness and understanding of the social, behavioral, and environmental factors in disease and health.

Expanded research and development activity in the area of medical care and health services.

Extensive involvement in the community health scene and the development of innovative approaches to the delivery of health services.

Out of this considerable activity has emerged a set of generalizations which are pertinent to the Committee's action on these bills.

In general, it seems clear that a major national need is for the better provision of primary, personal, and comprehensive medical care. Various terms are utilized to describe this need—family practice, general practice, personal medicine, primary physician, generalist, etc.

Because of this confusion in terminology, it is more useful to think of the functions which should be performed in the optimum provisions of health care to patients:

1. Assessment of their total needs before they are categorized by specialty.
2. Elaboration of a plan for meeting those needs in the order of their importance.
3. Determination of who shall meet the defined needs—physicians, general or specialist, non-physician members of the health team or social agencies.
4. Follow-up to see that needs are met.
5. All must be done in a continuous, coordinated, and comprehensive manner.
6. Attention at each step must be given to the personal, social, and family dimensions of the patient's problem.
7. Health maintenance and prevention are as important as cure and rehabilitation.

The achievement of a pattern of medical care which provides for the full and competent performance of these functions is dependent upon changes in not only the content and scope of the educational experiences of the MD, but also upon considerable change in the structure and process of delivery of health services.

The broad efforts now going on in medical schools and teaching hospitals to extend both the educational experience of physicians in this respect and the involvement of academic medical centers in these problems have already been briefly summarized. What is important to keep in mind is the diversity of approaches being taken. This diversity of effort is of the utmost value because, as noted by one student of this problem:

"To date, no clear pattern for the future of medical practice has emerged, and the nature of American society makes it probable, indeed desirable, that there be diversity of medical care arrangements, opportunity for experiments, and

acceptance of the need for critical evaluation of new approaches to the provision of health services."

Thus, the concentration of support only on developing departments and programs in Family Practice such as proposed in H.R. 15793 would, in the view of the Association, not provide the broadest opportunities to achieve the overall objectives being sought. For example, studies have shown that the function of providing primary care is by no means confined to general practitioners. A study by Dr. Kerr White of Johns Hopkins reported in the April 1964 issue of the *Journal of Medical Education*, indicates that substantial amounts of primary care are given by internists (77 percent of patients seen), obstetricians (85 percent of patients seen), and pediatricians (88 percent of patients seen).

It seems evident that the education of internists, obstetricians, and pediatricians as well as general practitioners and other specialists, should have sustained exposure in their educational experience to the needs, functions, and practices involved in providing sound, comprehensive and prevention-oriented medical care.

The urgent and fundamental need is for broad flexible support of the whole process of innovation and new developments in medical eduaction aimed at increasing its relevance to the problems, conditions, and needs of developing a system of medical care services characterized by comprehensiveness, continuity, competence, humaneness, and family orientation.

The Association would view with great concern approaches which would have the effect of determining departmental organization and the nature of the curriculum in medical schools by statutory action. We join with the American Medical Association in this reservation concerning the specific language of HR. 15793 and its companions, including the Senate-passed measure S. 3418.

The statement has been made that only through statutorily designated grants will it be possible to divert the medical schools from their present work with research and get them to concentrate on problems with medical care and the needs for primary service.

Mr. Chairman and members of the Committee, we seriously question the accuracy of this allegation. In our view, Congress will be gravely misled if it is accepted as a basis for legislation of the kind proposed here.

We have already outlined for the Committee the extent to which the medical schools are involved in attempting to solve problems of health care and health services and the development of innovative programs in this area. The additional facts which the Committee must consider in respect to this are as follows:

1. The entire structure of medical education is in desperate financial circumstances. This factor is a product of rapidly increasing costs, expanding functions such as those into the problems of community service, and increasing enrollments in efforts to expand the numbers of physicians produced, coupled with declining levels of private support. The major sources of Federal funds utilized by medical schools have been restricted to specific and often quite narrow objectives, principally in the support of research and in a particular effort to support increases in the number of physicians produced.

2. Despite the desperate financial circumstances of the medical schools, there has been completely inadequate Federal support for the basic operating costs of the educational process in relation to the magnitude of the needs.

3. Although programs have been authorized to support, among other things, innovation and new developments in curriculum and programs which would be used to accomplish the very purposes of the bill now before the Committee, the funds appropriated for these purposes have been utterly inadequate. Most of the funds so appropriated have been consumed in the urgent and necessary efforts to rescue schools in financial distress.

4. The legislation now before the Committee will only compound this grave situation. It will again provide restricted grants for limited special purposes. It will provide no recognition of the need for basic operating support. Unless some provision is made to cope with this problem on a stable and continuing basis, it is folly to legislate additional restrictive categorical programs. Unless some provision is made to sustain the basic structure of medical education, it is the most unwise public policy to seek to strain this already weak structure to serve highly restrictive special purposes.

Medical schools are actively changing their educational programs to meet new challenges. Support for specific programs rather than general support will limit the speed, flexibility, and effectiveness of the process of innovation.

The objectives sought through H.R. 15793 could be well achieved by broadening the support to all programs that will increase the number of physicians qualified to participate in the delivery of primary health care. One way of doing this would be by appropriate amendment of Part E of Title VII of the Public Health Service Act to provide for the following:

1. A modification in the language of Section 772—Special Project Grants, to emphasize the use of these grants for educational innovation and development relating to the needs for physicians capable of providing primary, comprehensive and personal medical care.

2. Enlarge the institutions eligible for Special Project awards to include hospitals and public and private non-profit agencies involved in education and training in health.

3. Increase the appropriation authorizations in Section 770 to assure that adequate funds can be budgeted for Special Project Grants in this area.

With the addition of the changes noted above, it would appear that existing legislative authority is fully adequate to achieve the essential objectives of H.R. 15793.

Since the Senate has already acted on S. 3418, a companion bill to those under consideration by this Committee, I would like to address a few remarks to an additional provision contained in that bill. Title I of S. 3418 is substantially the same as H.R. 15793. Title II would authorize support by both grants and contracts to institutions conducting courses and undertaking research in the field of malnutrition and would authorize the Secretary of Health, Education and Welfare to establish special projects to provide students with practical experience in this field and to provide them with financial assistance to pursue studies and engage in activities in poverty areas relating to malnutrition.

Title II of the bill does not suffer to the same extent from the defects which we perceive with respect to Title I. While encouraging the study of nutrition, it does not establish as a precondition for receipt of the grants authorized the requirement that such courses be given in any particular administrative setting in the schools. The institutions which the AAMC represents are becoming increasingly aware of the importance of nutrition-related problems and are moving to develop their ability to meet these problems more fully. Funds made available in response to this legislation may well serve to accelerate that process.

On the other hand, we consider it important to once again register our concern over the continuing tendency of the Congress to support important health objectives through the establishment of a multitude of highly specific programs. As a matter of principle, we believe that Federal assistance should be given in such a manner as to ensure the continuing viability and healthy development of the institutions devoted to these objectives. The fragmented pattern of support that results from legislation such as that under consideration often bears little relationship to the real needs of the institutions and severely restricts their ability to develop well planned and comprehensive programs. We believe that the Congressional objectives can be more effectively carried out through an adequately funded program of broad support wherein the Congressional priorities are indicated.

We would point out, for example, that the broad authority available to the Secretary with respect to the support of research has already resulted in a strong program in research on nutrition, supported by the National Institutes of Health at a rate of about $23 million per year. Additionally, research training in the field of nutrition is supported at well over $1 million per year. This bill provides the Secretary no new authority in this area, and it is doubtful that it would result in significantly increased funds for this purpose.

On the other hand, financial assistance to students for one segment of their curriculum, as provided in this bill, is of little avail if sufficient funds are not available to enable them to complete their entire course of studies.

In conclusion, then, we would urge the Committee to postpone action on the legislation before it until the Committee has had ample opportunity to consider the full set of circumstances bearing upon the support of medical education in the United States. The expiration of the Health Professions Education Assistance Act as of June 30, 1971 and the prospect of the introduction of legislation to extend this program in the forthcoming Congress will provide an excellent opportunity for the Committee to study this problem in depth. On this basis it will be possible for the Committee to approach this problem as a whole, rather than act upon isolated programs which provide no recognition of the basic and grave financial problems that beset the entire structure.

STATEMENT OF DR. WILLIAM A. SODEMAN, CHAIRMAN, COUNCIL ON MEDICAL EDUCATION, AMERICAN MEDICAL ASSOCIATION

Mr. Chairman and Members of the Subcommittee: I am Doctor Wiliam A. Sodeman of Philadelphia, Pennsylvania and Chairman of the Council on Medical Education of the American Medical Association. Accompanying me today are Doctor C. H. William Ruhe, Director of the Association's Division of Medical Education, and Mr. Charles W. Pahl, a member of the AMA's Legislative Department.

Mr. Chairman, we appreciate this opportunity provided to the American Medical Association to present its views on legislation before you which would establish a five-year program of assistance to public and private nonprofit medical schools and hospitals to expand existing programs, or to establish new programs, of training in the field of family practice. These bills also give the Secretary of Health, Education, and Welfare the authority to appoint a 12-member Advisory Council on Family Medicine. We are pleased to recommend that this legislation be supported and enacted into law with certain modifications.

There can be no doubt remaining in the minds of the Members of Congress, and there is certainly no doubt within the medical profession, that one of the most pressing and vexing problems facing this country is the provision of comprehensive and high level medical care to every American. In spite of all that has been done by Congress and other groups, there remain important problems in the delivery of health care. We will address our comments to S. 3418, which has been passed by the Senate and which is similar to the other bills before you.

We are in an age of specialization which has been the basis for many of the major breakthroughs in modern medical science and improvements in patient care. However, if the patient is to receive maximum benefits from medical science, his total health care must be evaluated and managed efficiently. This cannot be done satisfactorily if the patient must first diagnose his own ailments to determine the specialists he should see. This is expensive, time-consuming, inefficient, often impersonal, and not very satisfying to the patient. What is needed is a generalist who is the patient's first contact physician.

In earlier days the general practitioner filled this need and most physicians were general practitioners. It was an easier role to fill them than now because knowledge was limited and specialization was not well developed. The need today is for a new type of generalist who is prepared to function as a family physician. Unfortunately, most medical schools and hospitals do not offer this kind of training.

The new type of generalist must be trained to evaluate the patient's problems in their totality, to provide by himself or with his office staff a high proportion of the care needed by most patients, and to coordinate the care provided by others when necessary. He must be concerned as much with prevention, health maintenance and rehabilitation as with diagnosis and treatment, must care for ambulatory and out-of-hospital patients throughout their illness and in times of good health as well as sickness, and must deal with the environmental and emotional problems of the patient and his family. He must make his services available as well as accessible. This is what we mean by comprehensive, family-centered, patient care, and this is the kind of care the modern family physician should give.

The American Medical Association has been concerned for a long time about the decline in the number of physicians in family practice and the lack of educational programs designed specifically to prepare physicians for careers in family medicine. This concern lead in 1964 to the appointment by the AMA and the Ad Hoc Committee on Education for Family Practice "to examine the problem of the declining numbers of family practitioners and to support solutions which might increase the supply". The Ad Hoc Committee studied the problem for two and one half years and in 1966 submitted a report entitled "Meeting the Challenge of Family Practice". The recommendations of the Report were approved by the AMA House of Delegates, and the Council on Medical Education was charged with the responsibility for implementing the recommendations. The entire Report is relevant to the proposed legislation and we have provided the Committee with copies for its information.[1]

[1] The report, "Meeting the Challenge of Family Practice," of the Ad Hoc Committee on Education for Family Practice of the Council on Medical Education, American Medical Association, may be found in the committee's files.

The most glaring problem identified by the Report was the lack of effective and attractive educational and training programs for family practice in our medical schools and teaching hospitals. The reasons for this lack are many and there is not time to dwell upon them now. Perhaps it is enough to say that the need for a new approach has become both clear and compelling only recently, and the resources and incentives for developing such programs have been lacking.

As a result, we find the following conditions to be generally prevalent in our teaching institutions, although there are some exceptions:

1. Most medical schools and teaching hospitals do not have organizational units for teaching family medicine and do not offer in their patient care programs, where medical students, interns and residents are taught, a model of example of family-oriented, comprehensive patient care.

2. There are few family physicians teaching on the clinical faculties of medical schools—outstanding men with whom students can identify and whom they can emulate. There are few career opportunities for such physicians in academic medicine. Even more serious for the future, there are few who are qualified for academic appointments, although happily there are many young physicians with potential interest in this field if attractive career opportunities for them can be developed.

If teaching by example is more effective than teaching by exhortation, and I have no doubt that this is true, it no wonder that the field of family practice now attracts few recruits among medical students.

I do not blame medical schools for this. We have been in a period which has emphasized medical research and specialization, and the schools have adapted to the prevailing values and patterns for the delivery of health care and to sources of financial support. Their programs have been effective and socially beneficial, but they have been incomplete and not in balance.

Another problem identified by the AMA Ad Hoc Committee Report was the lack of status and recognition for the young physician considering family practice as a career. Family Practice was not a recognized specialty and the traditional specialist dominated the scene. Hospital privileges for family or general practitioners were sometimes unnecessarily restricted. Third parties who paid for physicians' services, including the U.S. Government, paid the specialist more than the general practitioner for identical services. The prestige, status and influence of the specialist were greater. Why should a student take additional training after medical school to become a family or general practitioner when with little additional time, effort and expense, he could become a specialist?

Much has happened since the Report of the Ad Hoc Committee was released in 1966, but we are just at the beginning of what must be a long-term, sustained effort to solve the family practice problem:

1. As a result of leadership by the American Academy of General Practice and the American Medical Association, Family Practice is now a recognized specialty with an approved specialty board, and the status problem for physicians in this field should begin to improve.

2. Some medical schools and hospitals have developed training programs for family practice. Many other schools and hospitals are considering the development of new programs.

3. Interest in the field has grown substantially, and the climate for constructive work is much better than it has ever been. At the recent meeting of the AMA in Chicago, the House of Delegates strongly reaffirmed its support of measures for increasing the numbers of family physicians.

However, the family practice movement faces some serious problems, the most serious of which is financial. The Ad Hoc Committee Report recognized this problem and stated, "Substantial additional funds will be needed if medical schools and teaching institutions are to develop satisfactory training programs and appropriate models of practice." Support will be required for faculty and other staff and for operating expenses similar to other major clinical departments. Suitable facilities for training programs are generally lacking, and to provide them will necessitate construction. Funds for training faculty and stipends for trainees will be needed. The Committee report recognized that most medical schools and teaching institutions were already fully committed in the use of their resources; in fact many face grave problems just to maintain their present operations without adding new and major programs such as family practice.

It is true that family practice programs in a few institutions have obtained support from institutional funds, or from service contracts with federal agencies

such as the Office of Economic Opportunity. Relative to need, this support has been only a drop in the bucket; and the problems involved in financing an educational program from a service contract seriously distort the educational program and sometimes the service program as well.

If the Family Practice movement is to succeed in helping to solve a major problem in the delivery of health services, it must be supported adequately. It must command a national commitment analogous to research in the post World War II period, not necessarily in the amount of money but in the assurances of gradually increasing funds, stable in nature, and flexible in their use. Nothing will assure success more than this. A new program, not yet engrafted firmly into the medical educational system, needs earmarked funds, not funds that might or might not become available to it from institutional grants. Without such funds, the Family Practice movement will develop much more slowly than it should if it is to meet pressing national needs. S. 3418 is designed for the type of program that is required.

The proposal before you authorizes the Secretary of Health, Education, and Welfare to make grants to public and private nonprofit medical schools to establish and operate educational departments devoted to teaching all phases of family practice. Grants would also be available to assist in the cost of construction of any additional facilities as may be required and funds could be used to defray the costs of training needed teaching personnel. This is a laudatory program and should be supported.

We are somewhat concerned, however, over the specification in Section 761 (a) (1) of S. 3418 that there must be "separate and distinct departments" established for these purposes. While new administrative units would be desirable, the requirement of "separate and distinct departments" seems unnecessarily restrictive and might inhibit the development of otherwise worthy programs of family practice.

Our Ad Hoc Committee Report dealt with this organizational issue with this comment (page 48) :

"There are various ways in which this need" (i.e. for an administrative unit) "might be satisfied, an academic department of family medicine is one way; another is the creation of a division of family medicine within a major department such as medicine" (or community medicine) ; "a third way might be the creation of an interdepartmental unit; and there might be other approaches which would serve satisfactorily in a given setting."

In light of this, we feel that it would be inadvisable to legislate the organizational structure for teaching family medicine, especially since some medical schools are successfully developing programs without a separate department.

We would suggest further that Section 765(b) (1) (A) be deleted, since its application would pose many difficulties. It states that departments of family medicine should be of "equal standing" with other clinical departments. The meaning is not clear. The various clinical departments of medical schools are not "equal" now in terms of budgets, number of faculty, patient load, curriculum time or other measurable criteria. What we want are departments adequate to conduct defined programs as specified in the applications and approved by the Advisory Council.

Section 765(b) (1) (B) specifies that the program should meet the standards established for the specialty of family medicine. The bill provides elsewhere that the grantee institutions and their programs must be accredited or have "reasonable assurance" of accreditation. This accomplishes the objectives of ensuring that standards are met and avoids any implication that this section would legislatively dictate curriculum content and quality, which are the proper responsibilities of faculties. We suggest the deletion of this provision as being unnecessary.

The grant program for hospitals is valuable and should provide the needed impetus to the developemnt of family medicine training programs in the post-medical school, hospital environment. The scholarships, fellowships and stipends to interns and residents will enable the program to compete better with the other medical specialties in attracting aspiring physicians to the practice of family medicine.

We would like to recommend to this Committee that it give serious consideration to amending this legislation by the deletion of the provisions relating to the training of paramedical personnel in the field of family practice. While the training of such individuals is desirable and should be undertaken, its inclusion in this proposed program can only dilute and encumber the primary purpose of

the legislation—that is, the training of physicians to practice in the field of family medicine. We would urge that the training of paramedical personnel be the subject of separate legislation and this legislation be directed solely to the training of physicians.

We would suggest a modification of the composition of the Advisory Council on Family Medicine to be appointed by the Secretary of HEW. Because family medicine draws from all disciplines of medical practice, we would suggest that some of the members include medical educators from other fields. This would broaden and strengthen the deliberations of the Council. If a membership of 12 is desired then three could be practitioners of family medicine, three could be teachers of family medicine, three could be medical educators from other fields and three could be public representatives. We would further suggest that the Secretary of HEW make his appointments of physicians in consultation with the organized medical profession, soliciting for his consideration a panel of names of physicians who would be qualified to serve.

In conclusion, let me reiterate our strong support of this important legislation. We recommend its enactment as modified to delete the restrictions identified above and the provisions for the training of paramedical personnel. We believe these modifications would strengthen the legislation to accomplish its goals. We believe that this legislation will make a meaningful contribution to present efforts to increase the number of physicians practicing in the field of family medicine.

We will now be happy to attempt to answer any questions which the Committee may wish to ask.

STATEMENT BY MARJORIE A. COSTA, DIRECTOR OF COMMUNITY RELATIONS, EDUCARE DIVISION, UNIVERSAL EDUCATION CORPORATION

I am Marjorie A. Costa, a Public Health Educator with a Master of Public Health Degree from Columbia University, School of Public Health and Administrative Medicine. I have lived in the Bedford-Stuyvesant area of Brooklyn for more than 40 years. (The Bedford-Stuyvesant area, as referred to by me, is primarily a Black ghetto with a population of approximately 450,000 residents in 2,582 acres).

For many years my concern for comprehensive health services has kept me involved on a voluntary basis as well as on a paid professional basis.

In my capacity as Instructor in Public Health Practice for Columbia University and as Director of Community Relations for the Educare Division of the Universal Education Corporation, I go into areas similar to Bedford-Stuyvesant, e.g. East Harlem, Central Harlem, South Bronx, Pittsburgh and Harrisburg.

In a voluntary capacity, I have been serving as Chairman of the Board of Directors of the OEO funded Neighborhood Health Center of the Provident Clinical Society of Brooklyn, Inc.; Chairman of the Board of Directors of the Bedford Mental Health Clinic; Secretary to the Board of Directors of the Brooklyn Psychiatric Centers, and appointed member of the Mayor's Advisory Board to the New York City Department of Mental Health and Mental Retardation Services.

It is with this background that I testify today on behalf of the Bill H.R. 15793 relating to the need for more practitioners of family medicine.

Due to the increased emphasis on medical specialization, the general practitioner, or family doctor, has been gradually phased out of our society, leaving little or no personalized medical attention.

Disadvantaged individuals have been forced to substitute the emergency room of hospitals for the family doctor. Consequently, the utilization of ambulatory care facilities in areas heavily populated with minorities, is on the increase. These ambulatory care facilities leave a great deal to be desired since it is difficult to staff them with general practitioners for the family medicine practice. This is caused not only by the uncertainty of the funding of these centers and the muddled federal guidelines, but primarily because of the fact that there just are not any general practitioners to staff them.

In any given area with a heavy concentration of poor immigrant residents, emergency room visits have increased fifty percent over the previous year. The "emergencies," in the eyes of the patients, were real; but an analysis of the cases indicated that the number of "hospital emergencies" were minimal. This supports the fact that the emergency room is substituted for the family doctor increasing the cost of medical care and decreasing the effectiveness of medical

care. As a result of this practice, the health care institutions are being forced to expand staff and facilities for a component for which they are neither financially nor professionally prepared. Ofttimes, in these emergency rooms, nurses carry out many of the functions of physicians, which is not a desirable practice since it is of an "unofficial" nature. Very seldom, if ever, do you see a Chief of Staff in an emergency room or out-patient clinic situation.

Priorities in the medical education programs are concentrated on the in-patient aspect, to give broad exposure on the ward with the patient that can be followed and studied.

Emergency room or clinic rotation of the intern or resident is less desirable and comprises only a minute portion of the total schedule, since there are no regular assignments but a sharing with other services on a limited and undisciplined basis.

Preventive medicine is one of the major objectives of the family doctor. It is imperative that we move ahead seriously and rapidly to achieve a family-oriented health delivery system with broadly trained family physicians.

In order to create the new specialty of family medicine, the medical schools and hospitals must be able to envision some financial support in the development and implementation of programs for this objective. Their current operating costs are excessive and spiralling.

The availability of Federal Funds with matching State Funds for the education of family physicians is extremely desirable and necessary.

I submit that these funds should be made available to disadvantaged high school graduates immediately upon graduation from high school, and should carry them through pre-medical and medical school, if they so desire.

Upon completion of their formal education with a specialty in family medicine, they should serve in a fully equipped family-oriented health center in the area from which they came or a similar area, for a period of at least five years.

At the end of the five year period, they should be given the health center which they helped build as a further incentive to remain, if they choose to remain, in the service of that community.

This suggested solution is certainly not in place of the allocation of funds for the training of para-medical staff to assist and become members of the health team, but in addition thereto. Nor is this statement to minimize the importance of specialists. On the contrary, it is because of these specialists and the advances in our technology that we know how to render superior medical care. We are about 10 years behind in the application of our medical knowledge due to the shortage of physicians, et al, to apply it. Hence, fragmentation!

I further submit, that these recommendations will not only improve the health lot of the disadvantaged, but of the advantaged as well.

(Whereupon, at 5:20 p.m., the committee adjourned, to reconvene at 10 a.m. Thursday, October 1, 1970.)

TRAINING OF FAMILY PHYSICIANS

THURSDAY, OCTOBER 1, 1970

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON PUBLIC HEALTH AND WELFARE,
COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE,
Washington, D.C.

The subcommittee met at 10 a.m., pursuant to notice, in room 2325, Rayburn House Office Building, Hon. John Jarman (chairman), presiding.

Mr. JARMAN. The subcommittee will please come to order as we continue the hearings on H.R. 15793 and all similar or identical bills to amend the Public Health Service Act, the Family Medicine Practice.

Our witness this morning, Dr. Peter Andrus, chairman of the Standing Committee on Health Affairs, Student American Medical Association, Philadelphia, Pa.

We appreciate your being with us this morning, Dr. Andrus.

STATEMENT OF PETER ANDRUS, CHAIRMAN, STANDING COMMITTEE ON HEALTH AFFAIRS, STUDENT AMERICAN MEDICAL ASSOCIATION

Dr. ANDRUS. Thank you, Mr. Chairman.

I am Peter L. Andrus, a recent graduate of the University of Pennsylvania School of Medicine. I am appearing before you today in my capacity as chairman of the Standing Committee on Health Affairs of the Student American Medical Association, SAMA is an autonomous organization representing over 20,000 active medical members and over 30,000 affiliate intern and resident members.

Mr. Chairman, our Nation today faces a crisis in health of steadily mounting proportions. The severity of this crisis becomes clearer to more and more people with each passing day. We are faced by severe constraints in each of the operative parameters which determine the extent to which high quality health care is available to all of our country's people.

First, the manpower shortage in practically all categories of health professionals is worsening appreciably with each passing week. This shortage of qualified manpower is perhaps our most pressing and immediate constraint on the delivery of health care, since, in the final analysis, health care is people—people trained and available to serve other people who are sick.

Second, and of great importance as well, is our lack of suitable facilities in which to deliver health care. Both consumers and providers of health care alike are becoming increasingly aware that our

existing institutional structure of health facilities is not maximizing the time of scarce health professionals engaged in the delivery of services nor are they conducive to optimal utilization of the limited funds available to finance health costs. Thus, we must expect in the coming months and years to find a great deal of innovation exerted in developing new facilities for aiding in the delivery of fast, effective, comprehensive, economic health services.

Third, we find ourselves in the midst of a devastating upward spiral of health care costs brought on by a host of factors including: a rise in consumer expectations in the health care system; attempts at new funding mechanisms for health care such as medicare and medicaid; and a rapid inflation in the economy as a whole. Thus, health costs have skyrocketed. I need hardly elaborate on this point except to say that adequate documentation of this phenomenon is readily available elsewhere.

Within the context of this most distressing picture, I wish to state the strong support of the Student American Medical Association for H.R. 15793, a bill which we feel will make a significant contribution in remedying the problems to which I have previously alluded and in improving the quality of health care to all Americans.

In testimony presented 2 days ago before the subcommittee, the American Academy of General Practice strongly emphasized the shift away from generalization toward specialization that has occurred in American medicine in the past 40 years. The rise of specialty-oriented practice, based firmly in scientific and technologic knowledge and advances is a very significant, and for the most part positive, feature in the growth of medicine. Historically, this movement was strongly aided by the development of the National Institutes of Health in the late 1940's and their subsequent growth as a source of funds for research and training of manpower in the several specialties of medical practice.

Looking at the contemporary scene, however, we see a health care system that has in part grown away from the fundamental reason for its existence: the good health of our Nation's people. While I strongly support the rise of scientific, specialized medicine, I also wish to suggest that at present we are in the process of reexamining our objectives and reformulating our goals so as to reemphasize health services as the end toward which the means of health research and education are directed.

I think that a basic conclusion we are reaching in this sweeping reappraisal is that the primary care, or family physician must play a central role in the delivery of health services in the years ahead. Family practice, as Dr. Vernon E. Wilson, recently appointed head of the Health Services and Mental Health Administration, points out "is the first specialty whose specialization arose from the need of the community rather than the need of the discipline." [1]

The family physician specializes in generalization and adaptability. His training equips him to deal with a broad range and the vast majority of the illnesses which afflict mankind and to deal with them in a competent, effective and economical manner. This training further equips him to recognize and delineate those problems of a highly

[1] From American Family Physician/GP, April 1970, p. 132.

complicated nature which require a specialist, and further to coordinate the various health services in a community to the overall good of his patient.

Yet, as has been pointed out by Dr. Kowalewski of the AAGP in his earlier testimony, the numbers of family physicians as a proportion of all practicing physicians have steadily dropped for the past 40 years, and the ratio of health consumers to family physicians has risen steadily during this same period. Even more frightening are the current estimates which indicate that only between 10 to 15 percent of the graduates in recent medical school classes are going into general or family medicine.

Within the past 18 months, the development of the American Board of Family Practice and the rapid increase of family medicine residency programs from a mere handful to 38 (as of June 1970)—and I am informed now somewhere in the seventies—has begun to provide a sound base for certification and strong training in this legitimate patient-oriented medical specialty. Yet, the efforts to provide adequate numbers of well-qualified family physicians have to date been pitifully small.

An important factor in the prospect for future success of such program is, of course, the attitude of today's medical students toward family medicine. I can state with conviction that the activism and commitment that mark today's students in their efforts to face and solve many of today's health problems will provide a strong stimulus to devote their professional lives to the practice of high quality, patient-oriented family medicine.

It is for the reasons I have stated that the Student American Medical Association strongly supports H.R. 15793, and its companion bill, S. 3418 which has passed the Senate. We believe this bill focuses at each of the important levels required to develop a strong program of training in family medicine. By its provisions for funding departments of family medicine within the medical schools, a significant postive exposure and influence to family medicine can be provided for medical students at a crucial time in their career decisionmaking process. By providing funds for the development of family medicine residency training programs there will be a strong impetus placed on capitalizing upon the increased interest in and need for the practice of family medicine. Finally, by providing funds for the training of allied health personnel in this area the bill takes the very progressive step of encouraging innovation in developing new patterns of delivering health care in a more effective and economic manner.

In conclusion, let me say that we believe this bill, H.R. 15793 to be most timely, and its sponsor and cosponsors are to be heartily congratulated for its inception. Just as the provision of Federal funds since the late 1940's for the National Institutes of Health has provided this country with tremendous advances in biomedical knowledge and specialty practice, so too the initiation of the program proposed in H.R. 15793 will make a dramatic contribution toward the goal of better quality health care for all Americans that we are all seeking in the 1970's. The Student American Medical Association strongly supports that goal and this effort to achieve it.

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Thank you for the opportunity to present our views here today, and I would be glad to answer any questions which the committee would have at this time.

Mr. JARMAN. Thank you, doctor. May I ask what your own plans are in the medical field?

Dr. ANDRUS. Yes, sir; I recently finished my M.D. work at the University of Pennsylvania, and this year I am continuing at the university in a master's program in health care administration. I intend to take my internship beginning next year, and I am strongly considering taking 3 years in a family medicine residency program. My long term career plans lie in the direction of health care planning and administration, but I think that a foundation in the area of family medicine that could be gained through such a residency program would be most invaluable.

Mr. JARMAN. How many were in your graduating class at Pennsylvania?

Dr. ANDRUS. Approximately 125.

Mr. JARMAN. And could you estimate out of that group of graduates how many you think were going into family medicine practice?

Dr. ANDRUS. I would suspect that the number would be very small. I couldn't give you a numerical figure, but I think the significant thing is the change in the attitudes from my class in medical school to the attitudes of the first and second year medical students currently in school. And I think among this group of students there is a significant increase in the interest for such programs in general or family medicine.

I think that students today are far more concerned about the issues of health care delivery, the way our system is operating at the current time, the difficulties that we're having. And I believe that what they are doing is translating those kinds of interest into recognition that the real need for physicians in this country is in the family practice field. There is less of an interest at the current time in research areas, and I think students are more concerned about health services today than they have ever been in recent years.

Mr. JARMAN. In terms of the bills themselves and the provisions of the bills, what is your reaction to the provision of the bill relating to separate departments to teach family medicine?

Dr. ANDRUS. There has been much contention on this point. The argument has been made that the bill would require medical schools to set up separate departments, in essence that the Congress would be dictating to medical schools how to administer their schools. I would have to reject that contention, because I believe a careful reading of the bill will indicate that there is no requirement that a family medicine program be set up, because a school does not have to seek funds under this program. And, indeed, I think that with the appropriate reading of section 761(a)(1) we find that there are grants "to operate, as an integral part of their medical education program, separate and distinct departments devoted to providing teaching and instruction, including all phases of family practice." In many schools it is appropriate to set up a Department of Family Medicine specifically to accomplish this task, but I think that in other schools, and I can cite my own, the University of Pennsylvania, where we have a Department

of Community Medicine, we feel very strongly that community medicine has the obligation and the concern of providing students with the opportunity during their medical education to experience family medicine. And I think that it would be very reasonable to have a Department of Community Medicine applying for funds under this program specifically for the purpose of setting up and operating a program to provide students with experience in family medicine.

Mr. JARMAN. Just one other question then along that same line of thought. Do you think that currently authorized programs in the medical schools are providing the necessary incentives to encourage students to enter family medicine?

Dr. ANDRUS. I looked through the transcript from the hearings on the companion bill over on the Senate side, and it was very interesting for me to find in that transcript on page 51 a listing of some of the programs which were mentioned as possible areas of support for family medicine. Among these were the Health Profession Educational Assistance Act, The Allied Health Professions Personnel Training Act, the Nurse Training Act, and various other provisions of the Public Health Service Act.

I think that the current administration has made a very strong point that they had the necessary authorizations to provide sufficient incentives for this type of program. And yet I think if you look at the record of their support of appropriations for these programs in the last 2 years you find very clearly that their support for these programs is inadequate. Support for medical students and other health profession students and nursing students by way of loan and scholarship funds has decreased by significant figures in the last 2 years rather than increased. Support of an institutional sort for special projects within our health profession schools has either decreased or remained at the same level, and I think that one can conclude that the efforts being made at the current time to support family medicine as an area of high priority are definitely much less than are needed.

I think, too, that the argument that this is a categorical bill and, therefore, should not be passed, simply must be rejected when one examines the realities of the situation. Although in general I would support the idea of block funding. I think that here we find a case in which family medicine is a very high priority for us in the 1970's and we must make a very direct effort to put the needed funds and incentives into this area so that we can make the progress that we must make.

During my formal statement, I proposed the analogy between what happened for medical research during the 1940's and the 1950's through the NIH to what should be happening in the family medicine and other programs related to the improvement of health services and the delivery of health services in the 1970's. And I think that this analogy makes very clear where I stand in that particular regard.

Mr. JARMAN. Thank you.

Mr. Hastings?

Mr. HASTINGS. I yield at this time, Mr. Chairman, to Dr. Carter and save my questions until after Dr. Carter.

Mr. JARMAN. Yes.

Dr. Carter?

Mr. CARTER. I thank you for your courtesy.

I particularly enjoyed your statement. I thought it was very good and well written, well thought out. I find it good to have young men such as you entering the profession, I believe, with the idea of really doing something about the problems that face us. I hope we have more of your bent.

Certainly, I strongly support this bill as it is, and what you say about the loan funds, of course, is true for medical students, and not only that, but in allied professions that is true, also. The funds have not been increased as they should have been, and many medical students are having difficulty in getting through school. We find that all the time. I would hope that we could do something about it. Of course, I didn't hear the first part of your statement, but I think you may have said that through the efforts of NIH many of our institutions have become research oriented, is that true?

Dr. ANDRUS. I think that is very true, sir.

Mr. CARTER. And you think we need more emphasis on health professions where the impetus of that particular branch is leading, is that true?

Dr. ANDRUS. Yes, sir. I think my position certainly would not be an anti-intellectual one. I think that the research we are doing is very, very important, but I think that at this particular period of time we are clearly recognizing that our efforts in research have far outstripped our efforts to improve and increase the quality and the amount of health care that is being delivered to our people. So I think that our primary concern now must be in the area of health services, and we must begin to develop more manpower, to develop the right kinds of facilities, to develop the financing mechanisms, and to develop a plan for reorganizing health services so that health care can be delivered to all Americans.

Mr. CARTER. Our delivery system has fallen down, is in the process of falling down.

Dr. ANDRUS. I think that we can safely say that.

Mr. CARTER. Yes, sir. I am also happy to see that there is a larger program for the prospective family physician, a year of internship and 2 years of residency or vice versa.

Dr. ANDRUS. I think that the first year is normally considered to be the internship year in those instances where an internship is required under State licensure for practice within the State.

Mr. CARTER. Yes, sir.

Dr. ANDRUS. But as my understanding of it goes, the family medicine residency is a comprehensive, coordinated program during the entire 3 years. It is merely the first that is considered an internship for licensure purposes.

Mr. CARTER. Yes, sir. I certainly support a strong program in this field and feel that family physicians should be well grounded in general medicine, if you would, diagnosis and basic surgery. A family physician or a country doctor many times has to do things that require knowledge in many cases in which he has not had adequate training, but I would like to see them trained adequately to face almost any situation that might confront them. I realize the necessity of that, and certainly I think it isn't enough to have just training in obstetrics and gynecology. We have got to have a rather broad spectrum training program in order to be efficient. As it happens I am a country doctor,

and I have enjoyed very much my work as a country doctor and realize the necessity, the importance of adequate training and also the importance of dedication to one's profession which you communicate to me and this group.

Thank you, Mr. Chairman.

Mr. JARMAN. Mr. Kyros.

Mr. KYROS. Dr. Andrus, we are pleased to see you here. I would like to ask you a couple of questions in regard to the testimony of the Department of Health, Education, and Welfare, as represented by Dr. Marston yesterday. Apparently you are aware of some of his statements.

Dr. ANDRUS. Yes, sir; I was here.

Mr. KYROS. In one of his statements yesterday, Dr. Marston, for whom I have the highest respect, felt that it was not necessary to operate separate and distinct departments devoted to teaching and instruction in all phases of family practice. Although you seem to distinguish that section 761(a)(1) gives some flexibility, as I read it, money for family practice under this particular bill would be to assist you to set up independent departments. It could well be argued that the Government, through this bill, is saying that you ought to have a separate department. What we have heard thus far from the doctors is that they would welcome a separate department, so it isn't coercion.

Now, I want you to distinguish for us, on record, why you should have a separate department, and why not a division within a departmental specialty, as Dr. Marston suggested?

Dr. ANDRUS. Very well, sir. To proceed to a direct answer to your questions, what this bill does provide is very strong incentives to create change rather than providing coercion as a means of creating that change. I think the point of section 761(a)(1) is to insure that the institution of family medicine programs within any medical school will be on a first-rate basis. There should be no inference that family medicine is in some sense second-class medicine. I think that it is very clear that the disciplines of internal medicine, surgery, pediatrics, psychiatry, OBGYN, all of these provide their input to family medicine. These are the disciplines which a family physician uses in conducting his practice.

But of greater importance than just those disciplines is the attitudinal approach which the family physician takes to the care of his patients. He takes a comprehensive approach. He takes a preventive as well as a curative approach in dealing with his patients' problems. He does not just hone down into one organ system. I think that this is one of the very important reasons why in any school where a program of family medicine is set up there must be very strong assurances that everyone views this as being first-class medical training.

The point I made earlier was simply that there would be no necessary requirement that the department set up within a school would be named the Department of Family Medicine, and I gave the specific example that a department of community medicine which took as one of its primary objectives, teaching and instruction in all phases of family practice for medical students and, conceivably, for residents within its medical center could legitimately qualify under the provisions of this act for support.

I think in some instances interdepartmental mechanisms may be used, but a specific department, a Department of Family Medicine, or a Department of Community Medicine would be the mechanism through which such a program would be administered.

I think the one thing I want to get very clearly on the record is that I do not view family medicine as second-class medicine. I think that this must be stressed and this must be understood by all parties concerned.

Mr. KYROS. So, in order to motivate medical students to go into family practice, family medicine must be a major department in a medical school. That, in and of itself, will motivate them to go into family medicine. Is that correct?

Dr. ANDRUS. I think that the idea that family medicine is first-class medicine is going to be a strong motivating factor. I think that the bill will provide sufficient flexibility so that within the context of any given medical school the arrangements can be worked out such that there can be strong support for family medicine. I would expect that in a majority of schools this will be through the formation of a separate and distinct Family Medicine Department. I would think that in an additional number of schools, a Department of Community Medicine would be the approach taken, and that in fulfilling the criteria of section 761(a)(1) a Department of Community Medicine could qualify under the bill for funding and support.

Mr. CARTER. Mr. Chairman, would the distinguished gentleman yield?

Mr. KYROS. Just one question.

Mr. CARTER. Yes, sir.

Mr. KYROS. You apparently do not agree with Dr. Marston's statement on page 8: "We strongly oppose legislating the organizational structure within medical schools for teaching family medicine, especially when some schools are successfully developing such programs without separate departments." You do not agree that we are legislating an organizational structure within medical schools?

Dr. ANDRUS. I don't think you are doing this in a coercive fashion. I think that in an incentive-type fashion you are recognizing the political realities within most of our medical schools. In most of our medical schools, a Family Medicine Department might find a somewhat hostile environment within which to operate, and this bill provides the incentives to insure that the family medicine program won't be coopted—to use the words of today's activists.

Mr. KYROS. I, for one, don't remember this committee ever wanting to legislate how medical schools operate internally. We feel, I think, that we have enough on our hands and should not try to tell the medical school how to organize. I don't think that is really our province, and I wouldn't want to be accused of that. But Dr. Marston, for whom, as I said before, I have a sincere admiration, apparently has this belief. I want to make sure that you felt we weren't legislating the organizational structure of a medical school.

Dr. ANDRUS. No, I think medical schools would be free to organize themselves administratively as they choose.

Mr. KYROS. The gentleman from Kentucky.

Mr. CARTER. Yes, sir. I have been impressed very much by your statement and by its clarity, and you have gone so deeply into these

different problems. A question was brought up about family medicine being of an inferior quality. Of course, many times we realize that a family doctor or country doctor is often referred to as perhaps not knowing that much, and they quote as I quoted a day or two ago about the general practitioner knows less and less about more and more until finally he knows nothing about everything.

As one family physician or country doctor, I had heard things like that said many times. I like to be with rural people, more closely associated with them, and enjoyed this type of practice. I made the decision as many others have to do the best to upgrade the quality of family medicine.

I have heard surgeons say, for instance, this fellow at the crossroads sent in this patient and he diagnosed him as having diverticulitis and he has appendicitis. Of course, there is not—the appendix itself is only a diverticulum as we know, a residual appendix. I have heard those aspersions cast so many times, so one day I got a great deal of kick out of having diagnosed a tumor of the sigmoid colon, the lower part of the sigmoid colon. I had sent this patient to a specialist for treatment, and he sent the patient back and he said he didn't have it. I was happy to call him over the phone and tell him, "You have just not got your finger far enough up the rectum."

Thank you.

Dr. ANDRUS. Well, as you know, Dr. Carter, occasionally even the surgeons are wrong.

Mr. CARTER. As this one was. They are men just as general practitioners.

Mr. ROGERS. Would the gentleman yield?

Mr. CARTER. Yes, sir.

Mr. ROGERS. Off the record.

(Discussion off the record.)

Mr. KYROS. Dr. Andrus, the next point I want to direct to your attention, is again to Dr. Marston's testimony, although perhaps you are not in a position to answer this because you may not have had enough experience in this field with Federal programs. Dr. Marston has indicated his belief that the health professions educational assistance construction program and the Hill-Burton medical facilities construction and improvement programs were sufficient to cover with those funds any family practice assistance. I wonder what you comment is on that, and why those programs might not be sufficient in your judgment.

Dr. ANDRUS. You are referring to which programs, again, sir, the Hill-Burton program?

Mr. KYROS. The Hill-Burton construction program and the health professions educational institution assistance grants.

Dr. ANDRUS. The institutional or construction or both?

Mr. KYROS. Both construction and institutional grants.

Dr. ANDRUS. Well, I think first we must consider the level of authorization which is available, and then relate that to the level of appropriations which have been available. And if we could cite the 1970 year under the Health Profession Educational Assistance Act, authorized for construction was $170 million, appropriated was $118.1 million. For educational improvement—that is, the institutional support—$117 million was authorized and $105 million was appropriated.

I think what has to be brought into consideration here is the fact that that $223.1 million which was available during the last fiscal year for construction and educational improvement under the Health Profession Educational Assistance Act has got to be divided up amongst all of the varied concerns within the medical schools of the country. This is going to be not only for family medicine but for surgery and obstetrics and gynecology and internal medicine and for research, and right on down the line. So I think the point here is that conceivably if you allocated very nearly all of the funds, or a very, very large proportion of the funds under those programs to family medicine and completely ignored other areas of interest, then possibly the contention of Dr. Marston is correct. But I think the track record would prove that has not in fact been done and that there has not in fact been sufficient incentive put into the area of family medicine in the past.

That is the record. I think that the Department of Health, Education, and Welfare would more adequately be able to indicate specifically what efforts they have made in this area than I. I think that you would agree with me if they did provide that information that the efforts in family medicine have not been sufficient.

Mr. KYROS. There is also one more point. You will notice on page 10 of Dr. Marston's testimony that he says the administration strongly opposes enactment of the educational categorical grant authority such as the present bill before us has. He said this I suppose in the light of the fact that he had discussed the Health Professions Assistance Act and the Hill-Burton Act. How do you defend the categorical approach in the light of his statements?

Dr. ANDRUS. Well, I think that the health professions program is a categorical one. It is directed toward the health professions. I think that the nursing program is a categorical one. It is directed toward nursing. I don't see how the administration proposes to provide the appropriate funding for education unless these programs are continued. I think that to include all programs that the Federal Government operates in support of education within one omnibus bill would be to significantly lose sight of the particular concerns we have in the area of health. And I would think that the health concerns would be swallowed up in such an approach to the problem.

I think that this family medicine bill is a categorical approach to the problem, and I think that in this specific instance it is very much needed.

Mr. KYROS. Do you think this is putting the money where the priority exists to make the best and closest health delivery to the patient?

Dr. ANDRUS. I think that this would make a significant contribution to that, yes.

Mr. KYROS. Thank you very much. Thank you, Mr. Chairman.

Mr. JARMAN. Mr. Hastings.

Mr. HASTINGS. Dr. Andrus, I commend you first for your statement and your position, your feeling and hopefully your leadership of young doctors toward the problem that is going to increase in the seventies for us. I support this bill. I have no reservations. I am a cosponsor. I have some reservations only in that I sometimes feel that we are trying to deal with this whole extremely serious problem of proper health care in a bits and pieces approach rather than an overall comprehensive approach.

I am very concerned with the oncoming, apparently in the not too distant future, of some form of national health insurance, for example, that we are just not going to be in a position to provide the health service that we will have to have available by legislating it.

In line with that, I feel that if we are going to solve this problem, it is going to be primarily solved by the medical profession, not by Congress or State governments. We obviously are going to have a strong part of that in working in partnership with the medical profession, but I don't believe in the end result that we are going to be able to sit here and legislate a proper system of health care throughout the country without perhaps some great changes in the medical profession, and I am not going to suggest what they should be because that is your area, not mine.

In the overall field though, of a health care plan in this country that is going to provide enough health services, allied professions, et cetera, and certainly family doctors, the family practice part of it, what are your observations as to which direction, first, the medical profession and, second, the Congress in order to be of assistance, hopefully using the carrot approach rather than the stick, what is your observation in which direction we should be moving?

That goes beyond the realm of this particular bill, of course, but it is part and parcel of our overall concern.

Dr. ANDRUS. It certainly does, and I am going to have to be careful not to stick my neck out too far.

Mr. HASTINGS. Why not? We do every day.

Dr. ANDRUS. To look retrospectively for the moment: In particular the history of the 89th Congress is of interest in terms of the very progressive health legislation that came out of that body. The comprehensive health planning approach, Public Law 89–749, the regional medical programs—the cancer, heart, and stroke legislation—all of these or both of these programs were directed toward providing incentives within the health care delivery system for having various components of that system work together in a cooperative fashion to deal with health problems in a coordinated comprehensive fashion rather than in a fragmented bit-by-bit type of fashion. And I think that the health legislation that follows upon that initial step in the comprehensive direction should be directed in the same fashion. I think that, hopefully, family medicine programs—as they are to be provided for in this bill—will be coordinating with the whole thrust of the regional medical programs and will be interrelated with comprehensive health planning within the given areas.

Mr. HASTINGS. Well, all right, if I may interrupt a moment. I think that it is the same Congress or perhaps the one before that approved title XIX. Medicaid and with all the great promises that have been ongoing since that time even I think it has been proven where a State actually implemented the intent of the medicaid legislation, it found itself in a position it didn't have enough health services available through either doctors, hospitals, or allied professions to be able to handle the promises that were made to everybody through medicaid.

My concern really in the long range as we get into this program and other types of programs is, are we going to answer the need when we finally do adopt such a program as the National Health Insurance program and are we going to say to everybody in this country regard-

less of income that you are going to have an equal opportunity to have good medicine, good health care? Are the programs that we have ongoing including this one, sufficient to guarantee that when that is passed in fact we are going to be in that position? I have some serious reservations that we will be in that position.

Dr. ANDRUS. I think, sir; that the programs that are on the books now are the first attempt to provide very strong incentives within the system to interrelate and coordinate the various components of that system. I think when we move in the direction of taking a comprehensive step in developing the financing mechanism for health care in this country, the provision of that financing mechanism must be coupled with the development of very, very strong incentives to make more efficient the delivery of health services.

I think your point is absolutely correct, that if we simply provide, as I think for the most part was done through the title XVIII and XIX mechanisms, for a means of financing health care without providing for the basic changes in organization of delivery patterns that will be necessary in order to make the system capable of providing the increased amount of health care demanded once the financing mechanism has been created, the health services system will simply dissolve in chaos.

Mr. HASTINGS. Is Congress or the medical profession going to be the leader in developing that type of health care?

Dr. ANDRUS. Well, I would like to be able to contend that the medical profession will be the leader, and perhaps if you give some of us younger fellows a few more years, we will.

Mr. HASTINGS. Hopefully we can wait for that. I don't know that we can.

Dr. ANDRUS. Unfortunately, I don't think that we can wait quite that long, either, and I think it is going to be necessary for the Congress to prod us along. You may be sure that there are going to be some strong supporters among student ranks for that prodding process in the next few years. But I think it is going to be very important that we begin to view the whole area of health as a cooperative endeavor, one which involves not only the providers, but the consumers as well, provides for an appropriate mix of the public and private sectors. We physicians have simply got to stop thinking that we have all the answers in health care. I think the record proves that that is not so.

Mr. HASTINGS. Thank you, Dr. Andrus. Mr. Chairman, no further questions.

Mr. JARMAN. Doctor, we think you have made an excellent witness. We appreciate your being with us to help make the record on this important bill.

This concludes the hearing, and the committee will stand adjourned.

(The following letters and telegram were received for the record:)

AMERICAN HOSPITAL ASSOCIATION,
Washington, D.C., October 8, 1970.

HON. HARLEY O. STAGGERS,
Chairman, Committee on Interstate and Foreign Commerce,
U.S. House of Representatives, Washington, D.C.

DEAR MR. CHAIRMAN: This letter is written to place before you and the members of your committee the views of the American Hospital Association with regard to H.R. 15793 which would authorize grants to medical schools and hos-

pitals that have training programs for medical students, interns or residents to help them provide professional and technical training in the field of family medicine.

One of the most noticeable changes in the practice of medicine in our country in recent years has been the great increase in specialization. Whereas eighty percent of the physicians in private practice declared themselves to be general practitioners forty years ago, recent information from medical school graduates indicates that at this time only about fifteen percent are planning to enter general practice. The decrease in the number of physicians providing health care as general practitioners or family physicians has, we believe, been one of the major causes of the increasing difficulties encountered in trying to obtain the services of a physician when medical help is needed. This lack of accessibility to physician services is not limited to the poor, although, it is especially apparent in urban and rural poverty areas.

In addition to the importance of the family physician as a means of entry into the health care system, his role includes evaluating the total health needs of the patient; providing preventive, curative, and rehabilitative health care; referring the patient, when appropriate, to other sources of care; preserving the continuity of care; and coordinating health services for the patient.

The new field of family practice has emerged in recent years in recognition of the family physician's key role in and responsibility for the total health care of patients. Some medical schools are beginning to develop curriculum and offer courses in family practice. However, much more needs to be done along these lines by medical schools and by hospitals engaged in training medical and paramedical personnel.

The American Hospital Association is pleased to support H.R. 15793 in view of the great need for both medical and paramedical personnel trained in the field of family medicine.

We shall not comment on all of the provisions of the bill. We would, however, note with approval that the bill specifically provides that public and private nonprofit hospitals shall be eligible for grants to operate special professional training programs in the field of family medicine for medical students, interns or residents; to operate or participate in special training programs for paramedical personnel in the field of family medicine; to provide financial assistance in the form of scholarships, fellowships or stipends to needy interns, residents, or other medical personnel receiving training in the hospital's program in the field of family medicine; and to construct, acquire, expand, remodel or alter facilities appropriate to carrying out a program of training in the field of family medicine.

The provisions permitting the Secretary of Health, Education, and Welfare to make planning grants (Sec. 766) are certainly desirable inasmuch as medical schools and teaching hospitals are already hard pressed to maintain their present programs and for the most part simply do not have available the funds that are necessary to plan and develop new programs in family medicine.

In order to assure that proper consideration is accorded the problems and needs of teaching hospitals engaged in training in the field of family medicine, we urge that Section 767 of the bill be amended to provide for representation of such hospitals on the Advisory Council on Family Medicine. This could be accomplished without increasing the size of the proposed twelve member council by having the council consist of twelve members, three of whom are physicians engaged in the practice of the family medicine, three of whom are physicians engaged in the teaching of family medicine in medical schools, three of whom are engaged in the teaching of family medicine in hospitals, and three of whom are representatives of the general public.

We appreciate the opportunity to present the Association's views on H.R. 15793 and request that this letter be made a part of your committee's hearings on the bill.

Sincerely,

KENNETH WILLIAMSON,
Deputy Director.

AMERICAN OSTEOPATHIC ASSOCIATION,
Washington, D.C., October 6, 1970,

HON. JOHN JARMAN,
Chairman, Subcommittee on Public Health and Welfare, House Committee on Interstate and Foreign Commerce, Rayburn House Office Building, Washington, D.C.

DEAR MR. CHAIRMAN: The American Osteopathic Association appreciates this opportunity to note, for the record, its support for Senate Bill 3418 and similar House bills.

The American Osteopathic Association (A.O.A.) is the national professional organization of osteopathic physicians and surgeons. There are in excess of 13,454 osteopathic physicians and surgeons in the United States. Some 252 hospitals with a bed capacity in excess of 22,117 are staffed by doctors of osteopathy. There are six colleges of osteopathy all approved by the A.O.A. and there are 79 intern training and 68 residency training hospitals likewise approved by the Association, which is the recognized accrediting agency by the Division of Education of the Department of HEW, and The National Commission on Accrediting.

The objective of the A.O.A. is to promote the public health, to encourage scientific research, and to maintain and improve high standards of medical education in osteopathic colleges.

For the past twenty years, as this distinguished Committee is well aware, this country has been moving unswervingly in the direction of a crisis in health manpower resources. Our population growth has far out-paced our ability to increase the number of qualified physicians. At the same time, we have been faced with an explosion of technological advances in medicine, which by their nature have occasioned increased specialization in health manpower. As a result, we are now faced with a grave shortage of family physicians.

Historically, our profession has been, and continues to be, a major supplier of family physicians. A significantly larger percentage of osteopathic physicians practice family medicine than do medical doctors. Of our 13,454 osteopathic physicians, approximately 65% or about 8,750 are engaged solely in the delivery of comprehensive health care as primary physicians.

The fact that the majority of our physicians devote their entire practice to family medicine (or the delivery of primary health care) is no accident, but rather a manifestation of our basic philosophy which emphasizes the treatment of human ailments within the context of treating "the whole man."

In order to meet our country's increasing need for more family physicians, we believe that our nation's medical schools require not only the kind of financial assistance Senate Bill 3418 would provide, but it would serve to point out the fact that these schools have a responsibility to inculcate in their students the desire to serve people and not merely treat disease. This can be done by placing the student in a learning environment which includes clinical experience in a primary physician setting. Our experience has been that when this is done a majority of students will want to become family physicians. We sincerely hope that schools receiving funds under this Bill, if enacted, will make a concerted effort to apply the foregoing principle in their efforts to generate more family practitioners.

Given the acute shortage of family practitioners and consonant with our profession's philosophy, it is with pleasure that we offer our endorsement of Senate Bill 3418.

While the language of the Bill, as passed by the Senate, does not explicitly articulate the inclusion of our osteopathic medical schools in the grant programs and representation from our profession on the Advisory Council on Family Medicine, the Report on the Bill from the Committee on Labor and Public Welfare (Report No. 91–1070) states: "Since the committee understands that HEW defines 'schools of medicine' to include schools of osteopathy for the purpose of qualifying for grants of assistance, the committee did not feel the necessity of identifying them by name in the Bill. Additionally, no specification of osteopaths was made with regard to the membership of the Advisory Council, though clearly there are many eminent osteopaths whose contribution to the Council would be invaluable."

Because of interest in the area of family medicine and the expertise, we believe our institutions and members can and do contribute to that field, we would respectfully request that the report of this committee similarly reflect the Congressional intent that our profession be included.

Very truly yours,

WALLACE M. PEARSON, D.O.,
Chairman, Council on Federal Health Programs.

AMERICAN PSYCHIATRIC ASSOCIATION,
Washington, D.C., September 30, 1970.

Hon. JOHN JARMAN,
Chairman, Subcommittee on Public Health and Welfare, House Interstate and Foreign Commerce Committee, 2125 Rayburn House Office Building, Washington, D.C.

DEAR MR. CHAIRMAN: The American Psychiatric Association wishes to express its professional interest in Title III of S. 3418, The Family Practice of Medicine Act of 1970, which will be considered by your Subcommittee.

Title III, as you know, provides for the establishment of the National Information and Resource Center for the Handicapped within the Department of Health, Education, and Welfare.

We of the psychiatric profession agree in principle with the need for greater coordination and effective dissemination of information in the field of the handicapped, as indeed we do in all other areas affecting the nation's physical and mental health.

As Title III so aptly states, "Greater availability and coordination of knowledge is essential to achieving meaningful solutions and progress for the disabled." This of course, applies to every area of health services in general.

Centrally available information is vital to us in the medical, scientific, and social fields if we are to end wasteful duplication, and to function with any semblance of unity and efficiency.

Nevertheless, we must also be watchful in not forming new entities which may efficiently be placed in existing facilities.

We therefore are privileged to join the list of distinguished national organizations which support the concept set forth in the proposed National Information and Resource Center.

With best personal regards, I am

Sincerely yours,

ROBERT S. GARBER, M.D.,
President, American Psychiatric Association.

NATIONAL ASSOCIATION FOR RETARDED CHILDREN,
GOVERNMENTAL AFFAIRS OFFICE,
Washington, D.C., October 1, 1970.

Re H.R. 15793.

Hon. HARLEY STAGGERS,
Chairman, House Interstate and Foreign Commerce Committee,
Washington, D.C.

DEAR MR. STAGGERS: The National Association for Retarded Children would like to record its support of Title III of S. 3418, now pending before the subcommittee on Public Health, which would authorize the establishment of a National Information and Resource Center for the Handicapped.

We understand it is the intent of the Title to cover problems specific to handicapped persons, whether the handicap is physical or mental, or both. We recommend that this intent be clarified in the language of the Act by substituting the phrase "who are physically or mentally handicapped" for the phrase "who are handicapped" in Section 3(a) of Title III.

The needs of persons with physical and/or mental handicaps are diverse and complex and require the mobilization of resources which cannot in the nature of things be themselves centralized. The centralization and dissemination

of *information* concerning such resources, including new knowledge, becomes, therefore, an important means by which we can maximize the appropriate utilization of these resources and make most effective use of the money that is spent by the federal government and other agencies in creating new facilities, training new personnel, and generating new knowledge.

It is appropriate that provision for the National Center should be incorporated in the family practice bill since the family physician is often the first person to whom a family with a handicapped member may turn for help; he in turn needs a source of current information in this complex field.

Sincerely,

ELIZIBETH M. BOGGS,
Chairman, Governmental Affairs Committee.

OREGON ACADEMY OF GENERAL PRACTICE,
Portland, Oreg., July 21, 1970.

Hon. HARLEY O. STAGGERS,
Chairman, Interstate and Foreign Commerce Committee,
Rayburn House Office Building,
Washington, D.C.

DEAR CONGRESSMAN STAGGERS: The Oregon Academy of General Practice urges you to hold hearings on H.R. 15793 at the earliest possible date. The need is critical for additional physicians in family practice and likewise for allied health personnel. Existing training programs should be expanded at once and new ones established now.

Especially with respect to family physicians, training programs must receive immediate attention. Opportunities for such training must be made available to our current medical students and for the most recent graduates now in their internships. Medical schools and hospitals presently engaged in such activities as well as institutions willing to undertake them are in need of the financial assistance which H.R. 15793 would provide.

The Subcommittee on Health of the Senate Labor and Public Welfare Committee has already held hearings on S. 3418, identical to H.R. 15793. It appears to us that the enactment of this essential legislation would be materially hastened if your Committee would consider the Bill promptly.

The American Academy of General Practice has enthusiastically endorsed this legislation and its President was a witness before the Senate Subcommittee on Health. The American Medical Association and the Student American Medical Association are both among the advocates of this legislative proposal.

On behalf of this Academy, I request that H.R. 15793 be given highest priority by your Committee on Interstate and Foreign Commerce.

Respectfully,

WARREN B. THOMPSON, M.D., *President.*

WASHINGTON ACADEMY OF GENERAL PRACTICE,
Spokane, Wash., July 10, 1970.

Congressman HARLEY O. STAGGERS,
Chairman, Interstate and Foreign Commerce Committee,
House Office Building,
Washington, D.C.

DEAR CONGRESSMAN STAGGERS: I am writing you on behalf of the family doctors of the State of Washington. We, who are providing the bulk of the actual medical care in this State, are deeply concerned about the decrease in the numbers of new family doctors. We are very interested in pushing House Bill HR 15793 because we hope this will help to solve the problem of primary medical care.

I am writing to ask you to exert every effort to begin hearing on this piece of legislation and we would appreciate your support of this bill both at the hearings and in the House.

Very truly yours,

RICHARD H. GANZ, M.D.,
Chairman, WAGP Commission on Legislation and Public Policy.

[Telegram]

SAN FRANCISCO, CALIF., *September 29, 1970.*

HARLEY O. STAGGERS,
2366 Rayburn House Office Building,
Washington, D.C.

The need for additional family physicians has been evident for many years. Ways are being sought by the medical profession and by the Government to meet this great need. One way is the establishment of family practice departments in medical school and at the present time we are having discussions with West Virginia University Medical School for the establishment of this department. The Congress presently have under consideration the Yarborough-Rooney bill which would help provide funds for this purpose. We in West Virginia in the Academy of Family Practice are in favor of passage of this legislation. We respectfully encourage you to not only to vote for this legislation but hope you will be able to encourage other Members of the Congress to do the same.

Respectfully,

J. KEITH PICKINS, M.D., *Clarksburg.*
JOE A. SMITH, M.D., *Dunbar,*
DEL ROY DAVIS, M.D., *Kingwood,*
CARL B. HALL, M.D., *Charleston.*
Delegates to American Academy of General Practice.

(Whereupon, at 11:10 a.m. the subcommittee adjourned.)

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