HEALTH MANPOWER ACT OF 1968

HEARINGS

BEFORE THE

SUBCOMMITTEE ON PUBLIC HEALTH AND WELFARE

OF THE

COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE

HOUSE OF REPRESENTATIVES

NINETIETH CONGRESS

SECOND SESSION

ON

H.R. 15757

A BILL TO AMEND THE PUBLIC HEALTH SERVICE ACT TO EXTEND AND IMPROVE THE PROGRAMS RELATING TO THE TRAINING OF NURSING AND OTHER HEALTH PROFESSIONS AND ALLIED HEALTH PROFESSIONS PERSONNEL, THE PROGRAMS RELATING TO STUDENT AID FOR SUCH PERSONNEL AND THE PROGRAM RELATING TO HEALTH RESEARCH FACILITIES, AND FOR OTHER PURPOSES

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HEALTH MANPOWER ACT OF 1968

TUESDAY, JUNE 11, 1968

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 2322, Rayburn House Office Building, Hon. John Jarman (chairman of the subcommittee) presiding.

Mr. JARMAN. The subcommittee this morning is meeting to receive testimony on H.R. 15757, introduced by Chairman Staggers at the request of the administration, to extend the Health Professions Educational Assistance Act, the Nurse Training Act, the Allied Health Professions Personnel Training Act, the Health Research Facilities Act, and the authorities for traineeships and training grants in public health.

Each of these programs is proposed to be extended for 4 years, with the exception of the Allied Health Professions Personnel Training Act, which is proposed to be extended for 1 year so as to enable the Department to gain additional experience with this program before proposing a major extension.

The proportion of the gross national product spent on medical care and services has increased in recent years to over 6 percent, with an estimated $45 billion a year spent for this purpose. All indications are that these expenditures, both in absolute and in relative terms, will increase in future years. This will require a substantial expansion in the numbers of persons in the health professions to meet the needs of the American people in future years. There are today about 3 million people in the health occupations. By 1975, at least another million will be needed.

Yet, as the President pointed out in his March 4 health message, "We lack the capacity to train today those who must serve us tomorrow."

This legislation will help provide the increased training capacity needed to meet our future needs for health manpower, both through providing construction assistance for new facilities, and through providing operational assistance to enable more people to be trained in existing facilities and to improve the quality of the training they receive.

Hearings have been completed on the companion legislation to H.R. 15757 before the Senate Committee on Labor and Public Welfare, and it is anticipated that the Senate bill, S. 3095, will be reported to the Senate in the near future. We hope to be able to complete early action on the measure before us today, so that we can get the legisla-

tion needed in this field to the President's desk for signature as soon as practicable.

At this point there will be included in the record the text of the bill, together with the agency reports thereon.

(H.R. 15757 and departmental reports thereon, follow:)

[H.R. 15757, 90th Cong., second sess.]

A BILL To amend the Public Health Service Act to extend and improve the programs relating to the training of nursing and other health professions and allied health professions personnel, the program relating to student aid for such personnel, and the program relating to health research facilities, and for other purposes

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 "Health Manpower Act of 1968".

SEC. 2. As used in the amendments made by this Act, the term "Secretary", unless the context otherwise requires, means the Secretary of Health, Education, and Welfare.

TITLE I—HEALTH PROFESSIONS TRAINING

PART A—CONSTRUCTION GRANTS

EXTENSION OF CONSTRUCTION AUTHORIZATIONS

SEC. 101. (a) Section 720 of the Public Health Service Act (42 U.S.C. 293) is amended by inserting after and below clause (3) of the first sentence thereof the following new sentence: "For such grants there are also authorized to be appropriated such sums as may be necessary for the fiscal year ending June 30, 1970, and each of the next three fiscal years."

FEDERAL SHARE

SEC. 102. (a) Subsection (a)(1) of section 722 of the Public Health Service Act (42 U.S.C. 293b) is amended by striking out "such amount may not exceed 50 per centum" and inserting in lieu thereof "such amount may not, except where the Secretary determines that unusual circumstances make a larger percentage (which in no case may exceed 66⅔ per centum) necessary in order to effectuate the purposes of this part, exceed 50 per centum."

(b) The amendments made by this section shall apply in the case of projects for which grants are made from appropriations for fiscal years ending after June 30, 1969.

LENGTH AND CHARACTER OF FEDERAL RECOVERY INTEREST IN FACILITIES

SEC. 103. (a)(1) Clause (b) of section 723 of the Public Health Service Act (42 U.S.C. 293c) is amended to read as follows:

"(b) the facility shall cease to be used for the teaching purposes (and the other purposes permitted under section 722) for which it was constructed, unless the Secretary determines that it is being and will be used for—

"(1) any teaching purposes for which a grant was authorized to be made under this part,

"(2) research purposes, or research and related purposes, in the sciences related to health (within the meaning of part A), or

"(3) medical library purposes (within the meaning of part I of title III),

or the Secretary determines, in accordance with regulations, that there is good cause for releasing the applicant or other owner from the obligation to do so,".

(2) Clause (A) of section 721(c)(2) of such Act (42 U.S.C. 293a) is amended to read: "(A) the facility is intended to be used for the purposes for which the application has been made,".

(b) The amendment made by subsection (a)(1) shall apply in the case of facilities for which a grant has been or is in the future made under part

B of title VII of the Public Health Service Act. The amendment made by subsection (a) (2) shall apply in the case of assurances given after the date of enactment of this Act under such part B.

GRANTS FOR MULTIPURPOSE FACILITIES

SEC. 104. (a) Section 722 of the Public Health Service Act (42 U.S.C. 293b) is further amended by adding at the end thereof the following new subsection:

"(d) In the case of a project for construction of facilities which are to a substantial extent (as determined in accordance with regulations of the Secretary) for teaching purposes and for which a grant may be made under this part, but which also are for research purposes, or research and related purposes, in the sciences related to health (within the meaning of part A of this title) or for medical library purposes (within the meaning of part I of title III), the project shall, insofar as all such purposes are involved, be regarded as a project for facilities with respect to which a grant may be made under this part."

(b) The amendment made by subsection (a) shall apply in the case of projects for which grants are made under part B of title VII of the Public Health Service Act from appropriations for fiscal years ending after June 30, 1969.

GRANTS FOR CONTINUING AND ADVANCED EDUCATION FACILITIES

SEC. 105. (a) Paragraph (3) of section 721(c) of the Public Health Service Act (42 U.S.C. 293a) is amended by inserting before the semicolon at the end thereof the following: "(and, for purposes of this part, expansion or curtailment of capacity for continuing education shall also be considered expansion and curtailment, respectively, of training capacity)".

(b) Subsection (d) of section 721 of such Act is amended by inserting "(other than a project for facilities for continuing education)" after "an existing school" in paragraph (1) (A) and after "a school" in paragraph (1) (B).

(c) Section 724(4) of such Act is amended by inserting before the semicolon at the end thereof: ", and including advanced training related to such training provided by any such school".

(d) The amendments made by this section shall apply in the case of projects for which grants are made under part B of title VII of the Public Health Service Act from appropriations for fiscal years ending after June 30, 1969.

PART B—INSTITUTIONAL AND SPECIAL PROJECT GRANTS FOR TRAINING OF HEALTH PROFESSIONS PERSONNEL

SEC. 111. (a) Sections 770, 771, and 772 of the Public Health Service Act (42 U.S.C. 295f, 295f–1, 295f–2) are amended to read as follows:

"AUTHORIZATION FOR APPROPRIATIONS

"SEC. 770. (a) There are authorized to be appropriated for the fiscal year ending June 30, 1970, and each of the next three fiscal years such sums as may be necessary for institutional grants under section 771 and special project grants under section 772.

"(b) The portion of the sums so appropriated for each fiscal year which shall be available for grants under each such section shall be determined by the Secretary unless otherwise provided in the Act or Acts appropriating such sums for such year.

"INSTITUTIONAL GRANTS

"SEC. 771. (a) (1) The sums available for grants under this section from appropriations under section 770 for the fiscal year ending June 30, 1970, or any of the next three fiscal years shall be distributed to the schools of medicine, dentistry, osteopathy, optometry, and podiatry with approved applications as follows: Each school shall receive $25,000; and of the remainder—

"(A) 75 per centum shall be distributed on the basis of—

"(i) the relative enrollment of full-time students for such year, and

"(ii) the relative increase in enrollment of such students for such year over the average enrollment of such school for the five school years preceding the year for which the application is made;

with the amount per full-time student so computed that a school receives twice as much for each such student in the increase as for other full-time students, and

"(B) 25 per centum shall be distributed on the basis of the relative number of graduates for such year.

"(2) The sum computed under paragraph (1) for any school which is less than the amount such school received under this section for the fiscal year ending June 30, 1969, shall be increased to that amount, the total of the increases thereby required being derived by proportionately reducing the sums computed under such paragraph (1) for the remaining schools, but with such adjustments as may be necessary to prevent the sums computed for any of such remaining schools from being reduced to less than the amount it received for such fiscal year ending June 30, 1969, under this section.

"(b) (1) The Secretary shall not make a grant under this section to any school unless the application for such grant contains or is supported by reasonable assurances that for the first school year beginning after the fiscal year for which such grant is made and each school year thereafter during which such a grant is made the first-year enrollment of full-time students in such school will exceed the average first-year enrollment of such students in such school for the five school years during the period of July 1, 1963, through June 30, 1968, by at least 2½ per centum of such average first-year enrollment, or by five students, whichever is greater. The requirements of this paragraph shall be in addition to the requirements of section 721(c(2)(D) of this Act, where applicable. The Secretary is authorized to waive (in whole or in part) the provisions of this paragraph if he determines, after consultation with the National Advisory Council on Health Professions Educational Assistance that the required increase in first-year enrollment of full-time students in a school cannot be accomplished without lowering the quality of training provided therein, or if he determines, after such consultation, that to do so would otherwise be in the public interest and consistent with the purposes of this part.

"(2) Notwithstanding the preceding provisions of this section, no grant under this section to any school for any fiscal year may exceed the total of the funds from non-Federal sources expended (excluding expenditures of a non-recurring nature) by the school during the preceding year for teaching purposes (as determined in accordance with criteria prescribed by the Secretary), except that this paragraph shall not apply in the case of a school which has for such year a particular year-class which it did not have for the proceeding year.

"(c) (1) For purposes of this part and part F, regulations of the Secretary shall include provisions relating to determination of the number of students enrolled in a school, or in a particular year-class in a school, or the number of graduates, as the case may be, on the basis of estimates, or on the basis of the number of students who were enrolled in a school, or in a particular year-class in a school, or were graduates, in an earlier year, as the case may be, or on such basis as he deems appropriate for making such determination, and shall include methods of making such determinations when a school or a year-class was not in existence in an earlier year at a school.

"(2) For purposes of this part and part F, the term 'full-time students' (whether such term is used by itself or in connection with a particular year-class) means students pursuing a full-time course of study leading to a degree of doctor of medicine, doctor of dentistry, or an equivalent degree, doctor of osteopathy, bachelor of science in pharmacy or doctor of pharmacy, doctor of optometry or an equivalent degree, doctor of veterinary medicine or an equivalent degree, or doctor of podiatry or an equivalent degree.

"SPECIAL PROJECT GRANTS

"SEC. 772. Grants may be made, from sums available therefor from appropriations under section 770 for the fiscal year ending June 30, 1970, and for each of the next three fiscal years, to assist schools of medicine, dentistry, osteopathy, pharmacy, optometry, podiatry, and veterinary medicine in meeting the cost of special projects to plan, develop, or establish new programs or modifications of existing programs of education in such health professions or to effect significant improvements in curriculums of any such schools or for research in the various fields related to education in such health professions, or to develop training for new levels or types of health professions personnel, or to assist any such schools which are in serious financial straits to meet their costs of operation or which have special need for financial assistance to meet the accreditation requirements,

or to assist any such schools to meet the costs of planning experimental teaching facilities or experimental design thereof, or which will otherwise strengthen, improve, or expand programs to train personnel in such health professions or help to increase the supply of adequately trained personnel in such health professions needed to meet the health needs of the Nation.

(b)(1) Subsection (a) of section 773 of such Act (42 U.S.C. 295f–3) is amended by striking out "basic or special grants under section 771 or 772" and inserting in lieu thereof "grants under section 771 or 772".

(2) Subsection (b)(1) of such section is amended by inserting after "or podiatry" the following: "or (in the case of section 772) pharmacy, or veterinary medicine".

(3) Subsection (c) of such section is amended by striking out "National Advisory Council on Medical; Dental, Optometric, and Podiatric Education" and inserting in lieu thereof "National Advisory Council on Health Professions Educational Assistance".

(4) Subsection (d)(2) of such section is amended by inserting "(excluding expenditures of a nonrecurring nature)" after "for such purpose".

(5) Subsection (e) of such section is amended to read as follows:

"(e) In determining priority of projects applications for which are filed under section 772, 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;

"(2) the relative need of the applicant for financial assistance to maintain or provide for accreditation or to avoid curtailing enrollment or reduction in the quality of training provided; and

"(3) 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."

(c)(1) Section 774(a) of such Act is amended by striking out "or podiatric education" and inserting in lieu thereof "podiatric, pharmaceutical, or veterinary education".

(2) Such section 774(a) is further amended by striking out "twelve" and inserting in lieu thereof "fourteen" and by striking out "National Advisory Council on Medical, Dental, Optometric, and Podiatric Education" and inserting in lieu thereof "National Advisory Council on Health Professions Educational Assistance".

(3) The heading of section 774 is amended to read:

"NATIONAL ADVISORY COUNCIL ON HEALTH PROFESSIONS EDUCATIONAL ASSISTANCE"

(d) The amendments made by this section shall apply with respect to appropriations for fiscal years ending after June 30, 1969.

(e) Effective only with respect to appropriations for the fiscal year ending June 30, 1969, section 772(b) of such Act is amended by inserting before the period at the end thereof ", or (3) to plan for special projects for which grants are authorized under this section as amended by the Health Manpower Act of 1968".

(f) Effective with respect to appropriations for the fiscal year ending June 30, 1968, and the next fiscal year, the third sentence of section 771(b) of such Act is amended by inserting before the period at the end thereof ", or if he determines, after such consultation, that to do so would otherwise be in the public interest and consistent with the purposes of this part".

PART C—STUDENT AID

STUDENT LOANS

SEC. 121. (a)(1) Clauses (2) and (3) of section 740(b) of the Public Health Service Act (42 U.S.C. 294) are each amended by inserting ", except as provided in section 746," after "fund" the first time it appears therein.

(2) Section 740(b)(4) of such Act is amended by striking out "1969" and inserting in lieu thereof "1973".

(3) Section 741(c) of such Act (42 U.S.C. 294a) is amended by adding before the period at the end thereof ", or (3) service as a full-time volunteer in the Volunteers in Service to America program under the Economic Opportunity Act of 1964; and periods (up to five years) of advanced professional training (including residencies)".

(4) (A) Section 741 of such Act is further amended by adding at the end thereof the following new subsection:

"(j) Subject to regulations of the Secretary, a school may assess a charge with respect to a loan made under this part for failure of the borrower to pay all or any part of an installment when it is due and, in the case of a borrower who is entitled to deferment of the loan under subsection (c) or cancellation of part or all of the loan under subsection (f), for any failure to file timely and satisfactory evidence of such entitlement. The amount of any such charge may not exceed $1 for the first month or part of a month by which such installment or evidence is late and $2 for each such month or part of a month thereafter. The school may elect to add the amount of any such charge to the principal amount of the loan as of the first day after the day on which such installment or evidence was due, or to make the amount of the charge payable to the school not later than the due date of the next installment after receipt by the borrower of notice of the assessment of the charge."

(B) Subsection (b) (2) of section 740 of such Act is further amended by striking out "and (D)" and inserting in lieu thereof "(D) collections pursuant to section 741(j), and (E)".

(b) (1) The first sentence of subsection (a) of section 742 of such Act (42 U.S.C. 294b) is amended by striking out "and" before "$25,000,000" and by inserting before the period at the end thereof ", and such sums as may be necessary for the fiscal year ending June 30, 1970, and each of the next three fiscal years".

(2) The third sentence of such subsection is amended by striking out "1970" and "1969" and inserting in lieu thereof "1974" and "1973", respectively.

(3) The fourth sentence of such subsection is amended by striking out "and" before "(2)" and by inserting before the period at the end thereof ", and (3) for transfers pursuant to section 746".

(c) Section 743 of such Act (42 U.S.C. 294c) is amended by striking out "1972" each place it appears therein and inserting in lieu thereof "1976".

(d) (1) Section 744(a) (1) of such Act (42 U.S.C. 294d) is amended by inserting "and each of the next five fiscal years" after "1968,".

(2) Section 744(c) of such Act is amended by striking out "$35,000,000" and inserting in lieu thereof "$45,000,000".

(e) Part C of title VII of such Act (42 U.S.C. 294, et seq.) is futher amended by adding at the end thereof the following new section:

"TRANSFER OF FUNDS TO SCHOLARSHIPS

"SEC. 746. Not to exceed 20 per centum of the amount paid to a school from the appropriations for any fiscal year for Federal capital contributions under an agreement under this part, or such larger percentage thereof as the Secretary may approve, may be transferred to the sums available to the school under part F of this title to be used for the same purpose as such sums. In the case of any such transfer, the amount of any funds which the school deposited in its student loan fund pursuant to section 740(b) (2) (B) may be withdrawn by the school from such fund."

(f) The amendments made by subsection (a) (1), (b) (3), and (e) shall apply with respect to appropriations for fiscal years ending after June 30, 1969. The amendment made by subsection (a) (3) shall apply (1) with respect to all loans made under an agreement under part (C) of title VII of the Public Health Service Act after June 30, 1969, and (2) with respect to loans made thereunder before July 1, 1969, to the extent agreed to by the school which made the loans and the Secretary (but, then, only as to years beginning after June 30, 1969). The amendment made by subsection (a) (4) shall apply with respect to loans made after June 30, 1969.

SCHOLARSHIPS

SEC. 122. (a) Subsection (a) of section 780 of the Public Health Service Act (42 U.S.C. 295g) is amended by striking out "or pharmacy" and inserting in lieu thereof "pharmacy, or veterinary medicine". The heading of such section is amended by striking out "OR PHARMACY" and inserting in lieu thereof "PHARMACY, OR VETERINARY MEDICINE".

(b) Subsection (b) of such section is amended by inserting "and each of the next four fiscal years" after "1969," in the first sentence and by striking out "1970" and "1969" and inserting in lieu thereof "1974" and "1973", respectively, in the second sentence.

(c)(1) Paragraph (1) of subsection (c) of such section is amended by inserting "and each of the next four fiscal years" after "1969" and clause (D) and by striking out "1969" and "1970" in clause (E) and inserting in lieu thereof "1973" and "1974", respectively.

(2) The first sentence of paragraph (2) of such subsection (c) is amended by striking out "from low-income families who, without such financial assistance could not" and inserting in lieu thereof "of exceptional financial need who need such financial assistance to".

(d) Part F of title VII of the Public Health Service Act is further amended by inserting after section 780 the following new section:

"TRANSFER TO STUDENT LOAN FUNDS

"SEC. 781. Not to exceed 20 per centum of the amount paid to a school from the appropriations for any fiscal year for scholarships under this part, or such larger percentage thereof as the Secretary may approve, may be transferred to the sums available to the school under part C for (and to be regarded as) Federal capital contributions, to be used for the same purpose as such sums."

(e) The amendment made by subsections (a), (b), (c)(1), and (d) shall apply with respect to appropriations for fiscal years ending June 30, 1969. The amendments made by subsection (c)(2) shall apply with respect to scholarships from appropriations for fiscal years ending after June 30, 1969.

PART D—MISCELLANEOUS

STUDY OF SCHOOL AID AND STUDENT AID PROGRAMS

SEC. 131. The Secretary shall, in consultation with the Advisory Councils established by sections 725 and 774, prepare, and submit to the President and the Congress prior to July 1, 1972, a report on the administration of parts B, C, E, and F of title VII of the Public Health Service Act, an appraisal of the programs under such parts in the light of their adequacy to meet the long-term needs for health professionals, and his recommendations as a result thereof.

TITLE II—NURSE TRAINING

PART A—CONSTRUCTION GRANTS

EXTENSION OF CONSTRUCTION AUTHORIZATION

SEC. 201. (a) Section 801 of the Public Health Service Act (42 U.S.C. 296) is amended to read as follows:

"SEC. 801. (a) There are authorized to be appropriated, for grants to assist in the construction of new facilities for collegiate, associate degree, or diploma schools of nursing, or replacement or rehabilitation of existing facilities for such schools, such sums as may be necessary for the fiscal year ending June 30, 1970, and each of the next three fiscal years.

"(b) Sums appropriated pursuant to subsection (a) for a fiscal year shall remain available until expended."

(b) Section 802(a) of such Act (42 U.S.C. 296a) is amended by striking out "July 1, 1968" and inserting in lieu thereof "July 1, 1972".

LENGTH OF FEDERAL RECOVERY INTEREST

SEC. 202. (a) Section 802(b)(2) of the Public Health Service Act is amended by striking out "twenty" in clause (A) and inserting in lieu thereof "ten".

(b) Section 804 of such Act (42 U.S.C. 296c) is amended by striking out "twenty" and inserting in lieu thereof "ten".

FEDERAL SHARE

SEC. 203. Section 803(a) of the Public Health Service Act (42 U.S.C. 296b) is amended by striking out "may not exceed 50 per centum" in clause (B) and inserting in lieu thereof "may not, except where the Secretary determines that unusual circumstances make a larger percentage (which may in no case exceed 66⅔ per centum) necessary in order to effectuate the purposes of this part, exceed 50 per centum".

INCLUSION OF TRUST TERRITORY

SEC. 204. Section 843(a) of the Public Health Service Act (42 U.S.C. 298b) is amended by striking out "or the Virgin Islands" and inserting in lieu thereof "the Virgin Island, or the Trust Territory of the Pacific Islands".

AMENDMENT OF DEFINITION OF COLLEGIATE SCHOOL OF NURSING

SEC. 205. Section 843(c) of the Public Health Service Act is amended by inserting before the period at the end thereof ", and including advanced training related to such program of education".

EFFECTIVE DATE

SEC. 206. The amendments made by sections 201, 202, and 205 shall apply with respect to appropriations for fiscal years ending after June 30, 1969, except that (1) section 804 of the Public Health Service Act as amended by this Act shall apply in the case of any projects for which grants have been made or are in the future made under section 803 of such Act; and (2) the amendment made in section 802(b)(2) of such Act by section 202(a) of this Act shall apply in the case of any projects for which grants are made under section 803 of the Public Health Service Act after the enactment of this Act.

PART B—SPECIAL PROJECT AND INSTITUTIONAL GRANTS TO SCHOOLS OF NURSING

SPECIAL PROJECT AND INSTITUTIONAL GRANTS

SEC. 211. Sections 805 and 806 of the Public Health Service Act (42 U.S.C. 296d, 296e) are amended to read as follows:

"IMPROVEMENT IN NURSE TRAINING

"SEC. 805. From the sums available therefor from appropriations under section 808 for the fiscal year ending June 30, 1970, and each of the next three fiscal years, grants may be made to assist any public or nonprofit private agency, organization, or institution to meet the cost of special projects to plan, develop, or establish new programs or modifications of existing programs of nursing education or to effect significant improvements in curriculums of schools of nursing or for research in the various fields of nursing education, or to assist schools of nursing which are in serious financial straits to meet their costs of operation or to assist schools of nursing which have special need for financial assistance to meet accreditation requirements, or to assist in otherwise strengthening, improving, or expanding programs of nursing education, or to assist any such agency, organization, or institution to meet the costs of other special projects which will help to increase the supply of adequately trained nursing personnel needed to meet the health needs of the Nation.

"INSTITUTIONAL GRANTS

"SEC. 806. (a) The sums available for grants under this section from appropriations under section 808 for the fiscal year ending June 30, 1970, or any of the next three fiscal years shall be distributed to the schools with approved applications as follows: Each school shall receive $15,000; and of the remainder—

"(A) 75 per centum shall be distributed on the basis of the relative enrollment of full-time students for such year and the relative increase in enrollment of such students for such year over the average enrollment of such school for the five school years preceding the year for which the application is made, with the amount per full-time student so computed that a school receives twice as much for each such student in the increase as for other full-time students, and

"(B) 25 per centum shall be distributed on the basis of the relative number of graduates for such year.

"(b)(1) For purposes of this part and part D, regulations of the Secretary shall include provisions relating to determination of the number of students enrolled in a school, or in a particular year-class in a school, or the number of graduates from a school, as the case may be, on the basis of estimates, or on the basis of the number of students who were enrolled in a school, or in a particular year-class in a school, or were graduates from a school in earlier years, as the case may be, or on such basis as he deems appropriate for making such determination, and shall include

methods of making such determinations when a school or a year-class was not in existence in an earlier year at a school.

"(2) For purposes of this part and part D, the term 'full-time students' (whether such term is used by itself or in connection with a particular year-class) means students pursuing a full-time course of study in an accredited program in a school of nursing."

CONDITIONS OF ELIGIBILITY

SEC. 212. Part A of title VIII of the Public Health Service Act is amended by adding at the end thereof the following new sections:

"APPLICATIONS FOR GRANTS

"SEC. 807. (a) The Secretary may from time to time set dates (not earlier than in the fiscal year preceeding the year for which a grant is sought) by which applications under section 805 or 806 for any fiscal year must be filed.

"(b) The Secretary shall not approve or disapprove any application for a grant under this part except afer consultation with the National Advisory Council on Nurse Training.

"(c) A grant under section 805 or 806 may be made only if the application therefor—

"(1) is from a public or nonprofit private school of nursing, or in the case of grants under section 805, a public or nonprofit private agency, organization, or institution;

"(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 nursing, 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 determinations required of him under this part 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.

"AUTHORIZATION FOR APPROPRIATIONS

"SEC. 808. (a) There are authorized to be appropriated for the fiscal year ending June 30, 1970, and each of the next three fiscal years such sums as may be necessary for improvement grants under section 805 and institutional grants under section 806.

"(b) The portion of the sums so appropriated for each fiscal year which shall be available for grants under each such section shall be determined by the Secretary unless otherwise provided in the Act or Acts appropriating such sums for such year."

CONFORMING CHANGE

SEC. 213. Clause (2) of section 843(f) of the Public Health Service Act (42 U.S.C. 298b) is amended to read: "(2) in the case of a school applying for a grant under section 806 for any fiscal year, prior to the beginning of the first academic year following the normal graduation date of the class which is the entering class for such fiscal year (or is the first such class in such year if there is more than one);".

EFFECTIVE DATE

SEC. 214. The amendments made by the preceding provisions of this part shall apply with respect to appropriations for fiscal years ending after June 30, 1969.

PLANNING FOR FISCAL YEAR 1969

SEC. 215. Effective only with respect to appropriations for the fiscal year ending June 30, 1969, section 805(a) of the Public Health Service Act is amended

by inserting at the end thereof the following new sentence: "Appropriations under this section shall also be available for grants for planning special projects for which grants are authorized under this section as amended by the Health Manpower Act of 1968."

PART C—STUDENT AID

ADVANCED TRAINING

SEC. 221. Section 821(a) of the Public Health Service Act (42 U.S.C. 297) is amended by striking out "and" before "$12,000,000" and by inserting "and such sums as may be necessary for the next four fiscal years," after "1969,".

STUDENT LOANS

SEC. 222. (a)(1) Clauses (2) and (3) of section 822(b) of the Public Health Service Act (42 U.S.C. 297a) are each amended by inserting ", except as provided in section 829," after "fund" the first time it appears therein.

(2) Section 822(b)(4) of such Act is amended by striking out "1969" and inserting in lieu thereof "1973".

(b)(1) Section 823(a) of such Act (42 U.S.C. 297b) is amended by striking out "$1,000" and inserting in lieu thereof "$1,500".

(2) Section 823(b)(2) of such Act is amended by striking "except that" and all that follows down to but not including the semicolon and inserting in lieu thereof "excluding from such 10-year period all (A) periods (up to three years) of (i) active duty performed by the borrower as a member of a uniformed service, (ii) service as a volunteer under the Peace Corps Act, or (iii) service as a full-time volunteer under the Volunteers in Service to America program under the Economic Opportunity Act of 1964, and (B) periods (up to five years) during which the borrower is pursuing a full-time course of study at a collegiate school of nursing leading to a baccalaureate degree in nursing or an equivalent degree, or to a graduate degree in nursing, or is otherwise pursuing advanced professional training in nursing."

(3) Section 823(b)(3) of such Act is amended by inserting before the semicolon at the end thereof the following: ", except that such rate shall be 15 per centum for each complete year of service as such a nurse in a public hospital in any area which is determined, in accordance with regulations of the Secretary, to be an area with substantial population which has a substantial shortage of such nurses at such hospitals, and for the purpose of any cancellation at such higher rate, an amount equal to an additional 50 per centum of the total amount of such loans plus interest may be cancelled".

(c)(1) Section 823 of such Act is further amended by adding at the end thereof the following new subsection:

"(f) Subject to regulations of the Secretary, a school may assess a charge with respect to a loan from the loan fund established pursuant to an agreement under this part for failure of the borrower to pay all or any part of an installment when it is due and, in the case of a borrower who is entitled to deferment of the loan under subsection (b)(2) or cancellation of part or all of the loan under subsection (b)(3), for any failure to file timely and satisfactory evidence of such entitlement. The amount of any such charge may not exceed $1 for the first month or part of a month by which such installment or evidence is late and $2 for each such month or part of a month thereafter. The school may elect to add the amount of any such charge to the principal amount of the loan as of the first day after the day on which such installment or evidence was due, or to make the amount of the charge payable to the school not later than the due date of the next installment after receipt by the borrower of notice of the assessment of the charge."

(2) Subsection (b)(2) of section 822 of such Act is further amended by striking out "and (D)" and inserting in lieu thereof "(D) collections pursuant to section 823(f), and (E)".

(d)(1) Section 824 of such Act (42 U.S.C. 297c) is amended by inserting "such sums as may be necessary for each of the next four fiscal years" after "1969," the first time it appears therein, by striking out "1970" and inserting in lieu thereof "1974", and by striking out "1969," the second time it appears therein and inserting in lieu thereof "1973,".

(2) The second sentence of such section is amended by inserting before the period at the end thereof ", and (3) for transfers pursuant to section 829".

(e) The first two sentences of section 825 of such Act (42 U.S.C. 297d) are amended to read as follows: "From the sums appropriated pursuant to section

824 for any fiscal year, the Secretary shall allot to each school an amount which bears the same ratio to the amount so appropriated as the number of persons enrolled on a full-time basis in such school bears to the total number of persons enrolled on a full-time basis in all schools of nursing in all the States. The number of persons enrolled on a full-time basis in schools of nursing for purposes of this section shall be determined by the Secretary for the most recent year for which satisfactory data are available to him."

(f) Section 826 of such Act (42 U.S.C. 297e) is amended by striking out "1972" each place it appears therein and inserting in lieu thereof "1976".

(g) Section 827(a)(1) of such Act (42 U.S.C. 297f) is amended by inserting "and each of the next five fiscal years" after "1968,".

(h) Part B of title VIII of such Act (42 U.S.C. 297 et seq.) is further amended by adding at the end thereof the following new section:

"TRANSFERS TO SCHOLARSHIP PROGRAM

"SEC. 829. Not to exceed 20 per centum of the amount paid to a school from the appropriation for any fiscal year for Federal capital contributions under an agreement under this part, or such larger percentage thereof as the Secretary may approve, may be transferred to the sums available to the school under Part D to be used for the same purpose as such sums. In the case of any such transfer, the amount of any funds which the school deposited in its student loan fund pursuant to section 822(b)(2)(B) may be withdrawn by the school from such fund."

(i) The amendments made by subsection (b) (1) and (2) shall apply with respect to all loans made after June 30, 1969, and with respect to loans made from a student loan fund established under an agreement pursuant to section 822, before July 1, 1969, to the extent agreed to by the school which made the loans and the Secretary (but then only for years beginning after June 30, 1968). The amendment made by subsection (c) shall apply with respect to loans made after June 30, 1969. The amendment made by subsection (h) shall apply with respect to appropriations for fiscal years beginning after June 30, 1969. The amendment made by subsection (b)(3) shall apply with respect to service, specified in section 823(b)(3) of such Act, performed during academic years beginning after the enactment of this Act, whether the loan was made before or after such enactment.

SCHOLARSHIPS

SEC. 223. (a) So much of part D of title VIII of the Public Health Service Act (42 U.S.C. 298c et seq.) as precedes section 868 is amended to read as follows:

"PART D—SCHOLARSHIP GRANTS TO SCHOOLS OF NURSING

"SCHOLARSHIP GRANTS

"SEC. 860. (a) The Secretary shall make grants as provided in this part to each public or other nonprofit school of nursing for scholarships to be awarded annually by such school to students thereof.

"(b) The amount of the grant under subsection (a) for the fiscal year ending June 30, 1970, and each of the next three fiscal years to each such school shall be equal to $2,000 multiplied by one-tenth of the number of full-time students of such school. For the fiscal year ending June 30, 1974, and for each of the three succeeding fiscal years, the grant under subsection (a) shall be such amount as may be necessary to enable such school to continue making payments under scholarship awards to students who initially received such awards out of grants made to the school for fiscal years ending prior to July 1, 1973.

"(c)(1) Scholarships may be awarded by schools from grants under subsection (a)—

"(A) only to individuals who have been accepted by them for enrollment, and individuals enrolled and in good standing, as full-time students, in the case of awards from such grants for the fiscal year ending June 30, 1970, and each of the next three fiscal years; and

"(B) only to individuals enrolled and in good standing as full-time students who initially received scholarship awards out of such grants for a fiscal year ending prior to July 1, 1973, in the case of awards from such grants for the fiscal year ending June 30, 1974, and each of the three succeeding fiscal years.

"(2) Scholarships from grants under subsection (a) for any school year shall be awarded only to students of exceptional financial need who need such financial assistance to pursue a course of study at the school for such year. Any such scholarship awarded for a school year shall cover such portion of the student's tuition, fees, books, equipment, and living expenses at the school making the award, but not to exceed $1,500 for any year in the case of any student, as such school may determine the student needs for such year on the basis of his requirements and financial resources.

"(d) Grants under subsection (a) shall be made in accordance with regulations prescribed by the Secretary after consultation with the National Advisory Council on Nurse Training.

"(e) Grants under subsection (a) may be paid in advance or by way of reimbursement, and at such intervals as the Secretary may find necessary; and with appropriate adjustments on account of overpayments of underpayments previously made.

"TRANSFERS TO STUDENT LOAN PROGRAM

"SEC. 861. (a) Not to exceed 20 per centum of the amount paid to a school from the appropriation for any fiscal year for scholarships under this part, or such larger percentage thereof as the Secretary may approve for such school for such year, may be transferred to the sums available to the school under this part for (and to be regarded as) Federal capital contributions, to be used for the same purpose as such sums."

(b) The amendment made by subsection (a) shall apply with respect to appropriations for fiscal years ending after June 30, 1969.

PART D—MISCELLANEOUS

DEFINITION OF ACCREDITATION

SEC. 231. So much of section 843(f) of the Public Health Service Act (42 U.S.C. 298b), as precedes clause (1) is amended by inserting ", or by a State agency," after a recognized body or bodies" the first time it appears therein, by inserting "or State agency" after "a recognized body or bodies" the second and third time is appears therein, and by striking out "or a program accredited for the purpose of this Act by the Commissioner of Education,". Clause (1) of such section 834(f) is amended by striking out "for a project for construction of a new school (which shall include a school that has not had a sufficient period of operation to be eligible for accreditation)" and inserting in lieu thereof "for a construction project". Such section 843(f) is further amended by adding at the end thereof the following new sentence: "For the purpose of this paragraph, the Commissioner of Education shall publish a list of nationally recognized accrediting bodies, and of State agencies, which he determines to be reliable authority as to the quality of training offered."

STUDY OF SCHOOL AID AND STUDENT AID PROGRAMS

SEC. 232. The Secretary shall, in consultation with the Advisory Council established by section 841, prepare, and submit to the President and the Congress prior to July 1, 1972, a report on the administration of title VIII of the Public Health Service Act, as appraisal of the programs under such title in the light of their adequacy to meet the long-term needs for nurses, and his recommendations as a result thereof.

TITLE III—ALLIED HEALTH PROFESSIONS AND PUBLIC HEALTH TRAINING

EXTENSION AND IMPROVEMENT OF ALLIED HEALTH PROFESSIONS PROGRAM

SEC. 301. (a)(1)(A) Section 791(a)(1) of the Public Health Service Act (42 U.S.C. 295h) is amended by striking out "and $13,500,000 for the fiscal year ending June 30, 1969" and inserting in lieu thereof "$13,500,000 for the fiscal year ending June 30, 1969, and such sums as may be necessary for the fiscal year ending June 30, 1970".

(B) Section 791(b)(1) of such Act is amended by striking out "1968" and inserting in lieu thereof "1969".

(2)(A) Section 792(a) of such Act (42 U.S.C. 295h–1) is amended by striking out "and $17,000,000 for the fiscal year ending June 30, 1969" and inserting in

lieu thereof "$17,000,000 for the fiscal year ending June 30, 1969; and such sums as may be necessary for the fiscal year ending June 30, 1970".

(B) Section 792(b)(1) of such Act is amended by striking out "1969" and inserting in lieu thereof "1970".

(3) Section 793(a) of such Act (42 U.S.C. 295h–2) is amended by striking out "and $3,500,000 for the fiscal year ending June 30, 1969" and inserting in lieu thereof "$3,500,000 for the fiscal year ending June 30, 1969; and such sums as may be necessary for the fiscal year ending June 30, 1970".

(4) Section 794 of such Act (42 U.S.C. 295h–3) is amended by striking out "and $3,000,000 for the fiscal year ending June 30, 1969" and inserting in lieu thereof "$3,000,000 for the fiscal year ending June 30, 1969; and such sums as may be necessary for the fiscal year ending June 30, 1970".

(b) Such section 794 is further amended by—

(1) striking out "training centers for allied health professions" and inserting in lieu thereof "agencies, institutions, and organizations";

(2) inserting "and methods" after "curriculums";

(3) striking out "new types of".

(c) Part G of title VII of such Act is further amended by adding at the end thereof the following new section:

"SEC. 797. Such portion of any appropriation pursuant to sections 791, 792, 793, or 794, for any fiscal year ending after June 30, 1969, as the Secretary may determine, but not exceeding one-half of 1 per centum thereof, shall be available to the Secretary for evaluation (directly or by grants or contracts) of the programs authorized by this part."

PUBLIC HEALTH TRAINING

SEC. 302. (a) Section 309(a) of the Public Health Service Act (42 U.S.C. 242g) is amended by striking out "and" before "$9,000,000" and by inserting "and such sums as may be necessary for each of the next four fiscal years" after "1969".

(b)(1) Section 306(a) of the Public Health Service Act (42 U.S.C. 242d) is amended by striking out "and" before "$10,000,000" and by inserting "and such sums as may be necessary for each of the next four fiscal years," after "the succeeding fiscal year,".

(2) Section 306(d) of such Act is amended by striking out "$50" and inserting in lieu thereof "$100".

TITLE IV—HEALTH RESEARCH FACILITIES

EXTENSION OF CONSTRUCTION AUTHORIZATION

SEC. 401. (a) Section 704 of the Public Health Service Act (42 U.S.C. 292c) is amended by striking out "and" after "$50,000,000"; and by inserting "and for the fiscal year ending June 30, 1970, and each of the next three fiscal years such sums as may be necessary," after "$280,000,000,".

(b) Section 705(a) of such Act (42 U.S.C. 293) is amended by striking out "1968" and inserting in lieu thereof "1972".

FEDERAL SHARE

SEC. 402. (a) Subsection (a) of section 706 of the Public Health Service Act (42 U.S.C. 292e) is amended by striking out "except that in no event may such amount exceed 50 per centum" and inserting in lieu thereof "but such amount may not, except as provided in paragraph (2), exceed 50 per centum".

(b) Such subsection (a) of section 706 is further amended by inserting "(1)" after "(a)" and adding at the end thereof the following new paragraph:

"(2) The maximum amount of any grant shall be 66⅔ per centum instead of the maximum under paragraph (1) in the case of any class or classes of projects which the Secretary determines have such special national or regional significance as to warrant a larger grant than is permitted under paragraph (1); but not more than 25 per centum of the funds appropriated pursuant to section 704 for any fiscal year shall be available for grants in excess of 50 per centum with respect to such class or classes of projects."

ADVISORY COUNCIL COMPENSATION

SEC. 403. Section 703(d) of the Public Health Service Act (42 U.S.C. 292b) is amended by striking out "$50" and inserting in lieu thereof "$100".

EFFECTIVE DATE

SEC. 404. The amendments made by section 402 shall apply in the case of projects for which grants are made from appropriations for fiscal years ending after June 30, 1969.

EXECUTIVE OFFICE OF THE PRESIDENT,
BUREAU OF THE BUDGET,
Washington, D.C., June 14, 1968.

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

DEAR MR. CHAIRMAN: This is in response to your request for our views on H.R. 15757, a bill "To amend the Public Health Service Act to extend and improve the programs relating to the training of nursing and other health professions and allied health professions personnel, the program relating to student aid for such personnel, and the program relating to health research facilities, and for other purposes."

President Johnson stated in his health message to the Congress of March 4, 1968, that "our increasing population and the demand for more and better health care swell the need for doctors, health professionals and other medical workers." To meet the need to train more health workers and to train them better and faster, he proposed the Health Manpower Act of 1968.

Enactment of H.R. 15757 would be in accord with the program of the President. Accordingly, the Bureau of the Budget recommends favorable consideration of H.R. 15757.

Sincerely yours,

WILFRED H. ROMMEL,
Assistant Director for Legislative Reference.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE,
Washington, D.C., March 20, 1968.

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 March 7, 1968, for a report on H.R. 15757, a bill "To amend the Public Health Service Act to extend and improve the programs relating to the training of nursing and other health professions and allied health professions personnel, the program relating to student aid for such personnel, and the program relating to health research facilities, and for other purposes."

This bill embodies the legislative proposals contained in a draft bill submitted by this Department to the Congress on March 4, 1968, to implement the recommendations on the training of health workers contained in the President's March 4, 1968 Message on Health.

We urge early enactment of this proposed legislation.

The Bureau of the Budget advises that enactment of this proposed legislation would be in accord with the program of the President.

Sincerely,

WILBUR J. COHEN,
Acting Secretary.

DEPARTMENT OF DEFENSE,
OFFICE OF THE GENERAL COUNSEL,
Washington, D.C., June 11, 1698.

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

DEAR MR. CHAIRMAN: Reference is made to your request for the views of the Department of Defense on H.R. 15757, 90th Congress, a bill "To amend the Public Health Service Act to extend and improve the programs relating to the training of nursing and other health professions and allied health professions personnel, the program relating to student aid for such personnel, and the program relating to health research facilities, and for other purposes."

The title of the bill generally states its purpose.

The Department of Defense has considered the bill. The need for extending and improving the programs in question is recognized. It is also manifest that such extensions and improvements would indirectly improve the availability of health services for beneficiaries of the Department of Defense. Accordingly, the Department of Defense favors in principle legislation which would accomplish the purpose of H.R. 15757.

The Department of Defense defers, however, to the Department of Health, Education, and Welfare on the details of this legislation.

The Bureau of the Budget advises that the enactment of H.R. 15757 would be in accord with the Program of the President.

Sincerely,

L. NIEDERLEHNER,
Acting General Counsel.

COMPTROLLER GENERAL OF THE UNITED STATES,
Washington, D.C., April 17, 1968.

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

DEAR MR. CHAIRMAN: The proposed "Health Manpower Act of 1968," H.R. 15757 which has been referred to your Committee proposes a number of amendments to the Public Health Service Act to extend and improve several programs provided for in that act. While we have no comments on the merits of this proposed legislation, we are concerned over the records maintained by recipients of grants under that act and our access thereto for audit and examination purposes.

A number of programs authorized by the Public Health Service Act provide for the making of grants of public funds to individuals, schools, hospitals, public institutions, etc., in furtherance of the purposes of the Act. However, only a few of the recipients of such grants are required by the Public Health Service Act to keep records concerning the disposition of the grant funds and to make them available for audit purposes. Consequently neither the Department of Health, Education, and Welfare, nor the General Accounting Office may be able to ascertain that the recipients of those grants have expended them solely for the purposes for which the grants were made.

As indicated above the provisions of law pertaining to several of these grant programs require the recipients of grants to keep records pertaining to those grants and provide that the Secretary of Health, Education, and Welfare and the Comptroller General or their representatives may examine and audit those records. See section 909 of the Public Health Service Act as added by Public Law 89–239, approved October 6, 1965, 79 Stat. 930, 42 U.S.C. 299i; section 399b(a) of the Public Health Service Act as added by the Medical Library Assistance Act of 1965, approved October 22, 1965, 79 Stat. 1066, 42 U.S.C. 280b–11; and section 796 of the Public Health Service Act as added by the Allied Health Professions Personnel Training Act of 1966, appproved November 3, 1966, 80 Stat. 1230, 42 U.S.C. 295h–5. Title III of H.R. 15757 provides for the extension of the grant program authorized by the Allied Health Professions Personnel Training Act of 1966 referred to above.

In view of the large number of programs providing grants for various purposes, the General Accounting Office, in an effort to protect against waste or improper use of grant funds, has recommended to the appropriate Congressional committees that there be inserted in all such legislation similar "access to records" provisions. However, rather than to enact such records requirements with respect to Public Health Service programs on a program by program basis, we recommend that H.R. 15757 be amended to include a records clause that would be applicable to all grant programs covered by the Public Health Service Act.

This could be accomplished by adding a new section 405 to H.R. 15757 which would read as follows:

"SEC. 405. The Public Health Service Act (42 U.S.C., ch. 6A) is amended by adding at the end thereof the following new title:

"TITLE X—RECORDS AND AUDIT

"SEC. 1000. (a) Each recipient of a grant under this Act shall keep such records as the Secretary may prescribe, including records which fully disclose the

amount and disposition by such recipient of the proceeds of such grant, the total cost of the project or undertaking in connection with which such grant is made or used, and the amount of that portion of the cost of the project or undertaking supplied by other sources, and such records as will facilitate an effective audit.

"(b) The Secretary 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 recipient of any grant under this Act which are pertinent to any such grant."

The primary purpose of audits by the General Accounting Office is to make for the Congress independent examinations of the manner in which Government agencies are discharging their financial responsibilities. Financial responsibilities of Government agencies are construed as including the administration of funds and the utilization of property and personnel only for authorized programs, activities, or purposes, and the conduct of programs or activities in an effective, efficient, and economical manner. Full and complete access to all records pertaining to the subject matter of an audit or investigation is necessary in order that the General Accounting Office can fully carry out its duties and responsibilities.

If the amendment proposed above is adopted it is not contemplated that the General Accounting Office will make a detailed examination of the books and records of every recipient of a loan or grant, or even a major part of them. However, selective checks will be made to provide reasonable assurance that assistance funds are being properly applied or expended.

Also, if the Public Health Service Act is amended in the manner suggested above, a new section 406 should be added to H.R. 15757 which would provide for the repeal of the "records and audit" provisions presently applicable to several programs authorized by the Public Health Service Act. The following language is suggested for that purpose:

"SEC. 406. Section 399b (42 U.S.C. 280b–11); section 796 (42 U.S.C. 295h–5); and section 909 (42 U.S.C. 299i), of the Public Health Service Act are hereby repealed."

And a new section 407 should be added to the bill which would read as follows:

"SEC. 407. Section 1 of the Public Health Service Act is amended to read as follows:

"'SECTION 1. (a) Titles I to X, inclusive, of this Act may be cited as the 'Public Health Service Act.'

"(b) The Act of July 1, 1944 (58 Stat. 682), as amended, is further amended by renumbering title X (as in effect prior to the enactment of this Act) as title XI, and by renumbering sections 1001 through 1014 (as in effect prior to the enactment of this Act), and references thereto, as sections 1101 through 1114 respectively."

Sincerely yours,

FRANK H. WEITZEL,
Assistant Comptroller General of the United States.

VETERANS' ADMINISTRATION,
OFFICE OF THE ADMINISTRATOR OF VETERANS' AFFAIRS,
Washington, D.C., June 10, 1968.

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

DEAR MR. CHAIRMAN: The following comments are submitted in response to your request for a report by the Veterans Administration on H.R. 15757, 90th Congress.

The bill would amend the Public Health Service Act to extend and improve programs relating to the training of nursing and other health professions and allied health professions personnel, student aid for such personnel, and health research facilities.

The proposed legislation applies to programs administered by the Department of Health, Education, and Welfare, and would appear to impose no additional administrative responsibility on the Veterans Administration. We, therefore, defer to the views of that Department with respect to detailed analysis of the separate provisions of the bill.

The Veterans Administration has an extensive hospital and medical program to provide care for sick and disabled veterans. In carrying out this program we employ a large number of physicians, dentists, nurses, and other professional

and allied health professions personnel. Consequently, any reasonable steps which would enhance the opportunities of the better students to enter medical, dental, and nursing schools, regardless of income, and attract more qualified persons into the health professions are of interest to us.

We make available to our veteran patients the latest technology in the diagnosis and treatment of diseases. New knowledge and techniques are developed through greater emphasis on research. We are interested therefore in any reasonable program which will increase health research facilities.

In his Health Message to the Congress on March 4, 1968, the President recommended legislation to meet the urgent need for more doctors, nurses and other health workers, and for greater emphasis on the development of research facilities meeting critical regional or national needs. We are advised that H.R. 15757 is designed to carry out these recommendations of the President.

We recommend favorable consideration of H.R. 15757 by your Committee.

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

Sincerely,

W. J. DRIVER, *Administrator.*

Mr. JARMAN. Our first witness today is our longtime friend and colleague from Iowa, the Honorable Neal Smith.

We are pleased that you could take the time to be with the subcommittee and give us the benefit of your good counsel.

Mr. ROGERS. May I say, Mr. Chairman, how delighted we are to have our distinguished colleague here.

STATEMENT OF HON. NEAL SMITH, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF IOWA

Mr. SMITH. Thank you. While I was waiting, I saw this nice crowd sitting in the room with no one talking to them, and it was an awful temptation. [Laughter.]

Anyway, Mr. Chairman and Mr. Rogers, I am happy to be here to suggest that the bill you have under consideration provide an alternative method or schedule for repaying loans. I think a rigid repayment schedule has two great shortcomings: (1) Some loan recipients are bound to have years in which they do not make enough money so that they can repay on schedule; and (2) fear that they cannot repay on schedule will cause some applicants who are needed in the health professions to not develop their skills as a nurse or in one of the fields where they are so badly needed.

I am proposing that a loan recipient be permitted, as an alternative, to become obligated to repay the loan at the rate of 5 percent of their net taxable income per year rather than on a fixed or inflexible basis.

The vast majority of nurses have been, and I assume will be, women. Young women hestiate to restrict their married life in advance by signing up for a loan which requires a fixed payment per year. To secure money with this kind of an obligation means that they will be over 30 years of age before the loan is paid off; and, until that time, they have a fixed indebtedness to meet each year.

When they are considering going to nursing school, these girls do not know if they will be married, what the obligations of their husband and family may be, if they will be out of work due to pregnancy or caring for a child, or the family moving. They simply hesitate to introduce such a fixed obligation into such an uncertain future schedule. Understandably, many of them are so afraid it will interfere with what they decide to do in the way of marriage, that they would rather not go to school than run the risk of such interference.

They would not have the same fear, nor the same problems, in meeting an obligation wherein they pay 5 percent of their net taxable income, whatever that may be, per year. In the years that they are working, they may pay more than they would otherwise, but it all depends upon their income.

In any event, since the average graduate will make 20 percent more than they would have had they not gone to school, they have about one-fourth of the extra income to repay the loan, which makes it a good investment for them. In the long run, they will have repaid the money, paid a great deal more in income tax as a result of the increased income, and they will have provided services that are going to be badly needed for this Nation many years to come.

It would not involve any additional paperwork for the nursing school which collects the money and remits it to the Government. The borrower would merely file a certificate stating what her income amounted to, and pay 5 percent of that amount each year.

Since 1961, I have been pushing this approach as a method of repayment for NDEA and other college loans. Although it was at one time accepted by the Education and Labor Committee in a proposed bill, that bill was later revised, and some people were still saying that the inflexible loan provisions would work well.

The repayment record of the last few years shows conclusively that some who have received loans do have a problem with an inflexible schedule that they would not have under this proposal. I am confident that almost every one of the loans that are in default now would not be in default if this kind of a repayment schedule had been permitted.

This idea that I am proposing has been heartily endorsed by persons I have talked with, such as Sister Mary Brigid, head of the School of Nursing at Marycrest College in Davenport, Iowa. And while she said her organization had not studied it so they could endorse it for the organization, Miss Julia C. Thompson, the Washington representative of the American Nurses Association, in testimony before the HEW appropriations subcommittee last year, said as follows:

Miss THOMPSON. This is one area we have found to be somewhat of a problem, that generally female students aren't as apt to take loans as men students because of the repayment and other responsibilities that they have in our society.

Mr. SMITH. Because they are on a rigid repayment schedule?

Miss THOMPSON. Yes.

Mr. SMITH. But if they were on a flexible schedule, they wouldn't have that kind of reluctance, would they?

Miss THOMPSON. Probably not.

Mr. Chairman and gentlemen of the committee, I sincerely urge you to include an amendment of this type in the bill. I have prepared such an amendment, which I will leave with you.

That is all I have.

(The document referred to follows:)

AMENDMENTS TO H.R. 15757, PROPOSED BY CONGRESSMAN NEAL SMITH

On page 14, after line 3, add the following and renumber the following paragraph accordingly:

(4) Section 741(c) of such Act (42 U.S.C. 294a) is further amended by adding thereto the following paragraph: "In lieu of payments required under this Act, an institution may enter into an agreement with a student providing that, beginning with the student's second taxable year which begins after the student ceases to pursue such full-time course of study, repayments shall be made at a

rate for each taxable year equal to five per centum of his personal net taxable income for such year, as defined or determined by section 63 of the Internal Revenue Code of 1954, for each year payments would be made and until such loan is repaid, but no interest shall be charged for any such loan which is repaid in this manner."

On page 32, after line 3, add the following:

(i) Section 823(b) of such Act (42 U.S.C. 297b) is further amended by adding thereto the following paragraph: "In lieu of payments required under this Act, an institution may enter into an agreement with a student providing that, beginning with the student's second taxable year which begins after the student ceases to pursue such full-time course of study, repayments shall be made at a rate for each taxable year equal to five per centum of his personal net taxable income for such year, as defined or determined by section 63 of the Internal Revenue Code of 1954, for each year payments would be made and until such loan is repaid, but no interest shall be charged for any such loan which is repaid in this manner."

Mr. JARMAN. Then it would be on a flexible, open end basis as to the number of years in which repayment would be made, simply based on the amount of income, 5 percent of the net income received in each year?

Mr. SMITH. Yes. As you know, the loans are made through the college, and when the applicant came before the college personnel, he would be told that there are two methods of repayment and that he could choose which one he wanted. From what the people who run nursing schools tell me, they have many good applicants, and if they had this alternate method to use in talking to them, they would decide to go to nursing school, whereas now they don't see some of them again.

Mr. JARMAN. It is an interesting approach to the problem, and we will bring it before the subcommittee in executive session.

Mr. SMITH. Thank you very much.

Mr. JARMAN. Our next witness is Dr. Philip R. Lee, Assistant Secretary for Health and Scientific Affairs.

Dr. Lee, it is fine to have you with the subcommittee again.

STATEMENT OF DR. PHILIP R. LEE, ASSISTANT SECRETARY FOR HEALTH AND SCIENTIFIC AFFAIRS, DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE; ACCOMPANIED BY DR. RALPH K. HUITT, ASSISTANT SECRETARY FOR LEGISLATION; DR. LEONARD D. FENNINGER, DIRECTOR, BUREAU OF HEALTH MANPOWER, NATIONAL INSTITUTES OF HEALTH, PUBLIC HEALTH SERVICE; AND DR. THOMAS J. KENNEDY, JR., DIRECTOR, DIVISION OF RESEARCH FACILITIES AND RESOURCES, NATIONAL INSTITUTES OF HEALTH

Dr. LEE. Thank you very much again.

With me are Dr. Huitt, Assistant Secretary for Legislation, Dr. Fenninger, Director, Bureau of Health Manpower, and Dr. Thomas Kennedy, Jr., Director of the Division of Research Facilities and Resources, National Institutes of Health.

This reflects in part the reorganization that has occurred. The Bureau of Health Manpower, the National Library of Medicine, and the National Institutes of Health now comprise a new agency within the Department.

Mr. JARMAN. It is good to have you with us.

Dr. LEE. Mr. Chairman, it is a pleasure to testify on, and give our full support to, the Health Manpower Act of 1968, H.R. 15757, introduced, as you noted, by the distinguished chairman of this committee.

Health manpower is vital to all our health endeavors. The Nation cannot afford any interruption or loss of momentum in the efforts we are now making to provide the people trained to meet its health needs. For that reason we strongly urge enactment of the bill this year.

The Health Manpower Act of 1968 will continue and strengthen five major health programs authorized by the Health Professions Educational Assistance Act of 1963, the Nurse Training Act of 1964, the Allied Health Professions Personnel Training Act of 1966, and the Health Research Facilities Act of 1956, as well as the Public Health Service Act authority for public health traineeships and project grants to schools for graduate or specialized training in public health. This committee has played a very important role in the development of these programs.

These laws have provided the foundation and the framework within which the Federal Government has become a partner with educational institutions in providing the facilities and the faculty for the difficult but essential task of preparing the large numbers of skilled personnel necessary to translate the Nation's expectations for health care into reality.

Under these laws new schools have opened their doors and others have significantly expanded and updated their training facilities. Schools have been assisted in strengthening their curriculums so that those who are trained are realistically equipped to serve the health needs of the people of this Nation.

Students in the health professions have received loans and other financial assistance enabling them to undertake health careers in which they could not otherwise have become engaged.

The programs authorized under the existing laws have involved a variety of institutions and agencies, varied in their organizational patterns and their social settings. Some are free standing, some are relatively independent members within a university system, some are integral parts of universities and colleges, and some are products of the community and close to the community.

Throughout our society we are experiencing shortages of trained people, and inadequacies in social arrangements, to deal with the vast, complex, and frequently long neglected problems with which we are now confronted. The problems associated with the prevention of illness and with the care of those who become ill are related to all other aspects of contemporary society and must be viewed in that context.

We are all concerned with the quality and availability of health services. Among the large number of factors involved, the most significant include public education which has led to a greater understanding of the significance of individual and community health; a rising, and sometimes unrealistic, expectation of what the medical sciences can offer; rapidly increasing medical knowledge and technology which have profoundly altered health care; increases in the population, its geographic and age distribution; and an emerging social policy that adequate high-quality health care should be available to all who need it.

The essential ingredient in the provision of health services is, of course, the people who are engaged in it.

People who contribute to our health—as individuals and as a nation—are needed in large numbers at every level of education and skill. They must be encouraged to enter the health field. They must work in settings which allow them to use their abilities most effectively. Our most important task in the field of health is to prepare enough people with adequate knowledge and skill so that the right and expectation of every individual to have good health and to fulfill himself as an individual being can be realized.

The supply and quality of America's health professionals is at the very heart of our success in achieving and maintaining the opportunity for good health services for all Americans. The great breakthroughs in medical research will be of little value if patients in need cannot have access to physicians, dentists, nurses, and other important practitioners of the health professions. Our continuing rising prosperity as a nation will not bring about better health if essential health services are not available when and where they are needed.

When these laws were first enacted, attention was directed to the critical needs for different kinds of skills in the respective areas of health manpower. It was pointed out at that time that there were often long waiting periods for medical and dental care, that hospital beds were closed for lack of staff, and that desperately overcrowded hospital emergency rooms were unable to meet urgent community needs.

The removal of financial barriers to the receipt of health care through private health insurance, medicare, and medicaid is increasing the demand for services. Costs of providing services have risen rapidly, as have the costs of education and training. The science base that is the foundation for all of our education programs for the health professions, and for the services they provide, continues to expand and provide new opportunities for service.

When these laws were first enacted, we all recognized that there was no such thing as "instant manpower" and we recognized that we were already late in meeting the need. But the commitment was made, the tasks were begun, and we are beginning to see the results.

When one stops to think that the first construction project under the Health Professions Educational Assistance Act was funded in 1965, only 3 years ago, we can see that we are making good progress. We are also aware that, as we tool up to train increasing numbers of students, the demand for health services is also increasing. We cannot afford to stand still; we must run simply to keep up.

Under the Health Professions Educational Assistance Act, first authorized in 1963, 114 schools have received $365 million for construction of teaching facilities. These dollars have assisted in the construction of 17 new schools and the expansion, renovation, or remodeling of 97 other schools. Approximately 4,000 new first-year places are attributable to such construction. Health professions basic improvement grants will aid 170 schools this year.

Construction grants under the Nurse Training Act have aided 84 schools, adding over 3,300 new first-year places.

There is much more progress to report, Mr. Chairman, and in the interest of time I will submit for the record, with your permission, a detailed description of accomplishments under these programs.

Mr. JARMAN. The committee will be glad to receive it.
Dr. LEE. Thank you, sir.
(The document referred to follows:)

SUMMARY BY THE DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE OF ACCOMPLISHMENTS UNDER EXISTING PROGRAMS

I. ACCOMPLISHMENTS UNDER HEALTH PROFESSIONS EDUCATIONAL ASSISTANCE ACT

A. Construction of teaching facilities

Since the Health Professions Construction Program was first authorized in 1963, 114 schools have received $365 million for construction of teaching facilities. These dollars have assisted in the construction of 17 new schools, and the expansion, renovation, or remodeling of 97 other schools.

HEALTH PROFESSIONS EDUCATIONAL FACILITIES CONSTRUCTION, FISCAL YEAR 1965–MAR. 1, 1968

[Dollar amounts in thousands]

Type of construction	Number of schools	Total teaching cost	Federal share	Increase in 1st-year places	1st year places maintained
Total	114	$670,994	$365,241	3,974	8,655
New schools	17	188,039	114,000	1,067	----------
Existing schools	97	482,955	251,241	2,907	8,655
Included in the above:					
Affiliated teaching hospitals	(8)	(62,003)	(35,054)	(1)	----------
University hospitals	(9)	(105,492)	(48,420)	(1)	----------

[1] These projects are in most cases 2d phases of institutional expansion programs. The 1st-year place increase has been identified with the school.

Approximately 4,000 new first year places are attributable to such construction—some are already open and occupied—others will be occupied in later years, as construction progresses. In addition, more than 8,600 first year places have been maintained through renovation and replacement of obsolete facilities.

While increases in enrollment are identified, in keeping with the legislative requirements, in terms of first-year students, this number does not reflect either the full effect on the teaching load of the school, or on the value derived from the expansion.

As each additional first-year student progresses through the program, the school must add second, third, and fourth year student places. Thus an increase of five first year students means in the fourth year, a total teaching load of 20 students, with the necessary facilities, faculty, and equipment.

As to the effect of the increase, it can be most adequately measured in terms of the school's added production of five graduates a year, or 100 graduates over a 20-year period. These, at an estimated professional life of 40 years—for example, for a physician or dentist—will give 4,000 professional years of service to the nation, extending well into the next century.

B. Health professions improvement grants

Basic improvement grants

The 1965 amendments to the Health Professions Educational Assistance Act, authorized basic improvement grants, on a formula basis, to eligible schools of medicine, dentistry, osteopathy, optometry, or podiatry. In fiscal year 1966, this grant was computed on the basis of a statutory formula of $12,500 plus $250 times the number of full-time students; for the fiscal years 1967, 1968, and 1969, the formula provided for $25,000 plus $500 times the number of full-time students.

In fiscal year 1966, basic improvement grants, totaling $10,482,000, were awarded to 159 eligible schools. This provided grants at 70 percent of the statutory formula. In fiscal year 1967, basic improvement grants, totaling $30 million and representing 95 percent of the formula amount, were made to 172 schools. In fiscal year 1968, full funding at the statutory formula level occurred for the first time with over $32 million awarded for these grants. The number of schools

receiving support and the amounts of awards by discipline for each fiscal year are shown in Table I.

TABLE I.—HEALTH PROFESSIONS EDUCATIONAL ASSISTANCE ACT, BASIC IMPROVEMENT GRANTS, FISCAL YEARS 1966–68

Discipline	Fiscal year 1966		Fiscal year 1967		Fiscal year 1968	
	Number of participating schools	Amount	Number of participating schools	Amount	Number of participating schools	Amount
Medicine	91	$6,566,249	99	$18,780,518	99	$20,242,500
Dentistry	49	2,975,283	53	8,440,653	51	8,859,500
Optometry	9	398,119	10	1,231,266	10	1,360,500
Osteopathy	5	355,834	5	983,293	5	1,063,000
Podiatry	5	186,515	5	564,270	5	635,000
Total	159	10,482,000	172	30,000,000	170	32,160,500

With basic improvement grant funds, schools are improving and expanding their educational capabilities. The majority of the funds are being used for support of teaching faculty. With these grants schools are developing new courses, improving teaching methods (including use of visual aids), expanding curriculum areas, improving library resources, and otherwise supporting and strengthening their teaching programs. For example, dental schools have added courses in community dentistry, preventive dentistry, human behavior, pathology and hospital dentistry. Schools of medicine and osteopathy have strengthened and expanded both basic science courses and clinical instruction and are experimenting with innovations in education. For example, one school designed courses to introduce students to the clinical aspects of medicine earlier than in the traditional curriculum. Students are now introduced to pediatrics and obstetrics in the sophomore year.

Special improvement grants

Special improvement grants, are to be used to overcome educational weaknesses related to accreditation problems and to carry out the specialize functions which the school serves. Funds for these grants are available for the first time in fiscal year 1968, with approximately $17.5 million available for these purposes. For this year, the statutory maximum amount of any grant to a school is $300,000.

Requests totaling $34.3 million from 136 schools were received. The National Advisory Council on Medical, Dental, Optometric, and Podiatric Education has recommended approval of 124 applications totaling $29 million.

In awarding these grants, priority will be given to schools which plan to use special improvement funds to improve further these aspects of their educational program which have placed the school's accreditation status in jeopardy.

The applications from schools whose accreditation is in jeopardy show a determination to solve those accreditation problems which, indeed, can be solved primarily with additional funds. These and other schools in serious financial straits have reflected in their applications careful planning to overcome their most critical weaknesses.

Other schools have given careful thought to using their funds to add breadth and depth to their curricula by filling in gaps in instructional areas, by the addition of new courses, and by improving student-faculty ratios.

C. Health professions student loans

The Health Professions Student Loan Program began in 1965 with 147 schools of medicine, dentistry, osteopathy and optometry participating. Schools of pharmacy and podiatry participated in the program for the first time in 1967 and schools of veterinary medicine, in 1968. Participating schools numbered 217 in 1968—an increase of 48 percent in four years. Similarly, the number of students enrolled in participating schools rose from 47,430 in 1965 to about 64,470 in 1968—an increase of 36 percent.

In 1965, 11,554 students received loans averaging $817. In 1968, an estimated 25,383 students in health professions schools, representing 39 percent of the total enrollment, received loans averaging about $1,050. The number of participating schools, students enrolled therein, students assisted, amounts allocated and average loan for each discipline for each fiscal year are shown in Table II.

TABLE II.—HEALTH PROFESSIONS STUDENT LOAN PROGRAM

Type of school	Number of participating schools	Number of students enrolled in participating schools	Number of students assisted	Percentage of students assisted	Amount allocated	Average loan
Fiscal year 1965:						
Medicine	87	31,416	7,186	23	$6,628,787	$839
Dentistry	46	12,954	3,367	26	2,870,963	815
Osteopathy	5	1,651	614	37	398,088	646
Optometry	9	1,409	387	27	302,162	706
Total	147	47,430	11,554	24	10,200,000	817
Fiscal year 1966:						
Medicine	87	32,040	9,475	30	9,834,258	1,011
Dentistry	46	13,434	4,472	33	4,623,920	990
Osteopathy	5	1,710	716	42	648,458	893
Optometry	9	1,489	564	38	493,364	871
Total	147	48,673	15,237	31	15,600,000	941
Fiscal year 1967:						
Medicine	88	32,883	11,303	34	14,217,791	1,094
Dentistry	46	13,720	5,530	40	7,132,000	1,178
Osteopathy	5	1,781	937	53	1,262,634	1,215
Optometry	10	2,016	656	33	869,782	1,040
Pharmacy	45	8,139	1,584	19	1,638,887	704
Podiatry	2	335	158	47	203,906	1,288
Total	196	58,874	20,168	34	25,325,000	1,092
Fiscal year 1968:						
Medicine	93	33,749	13,073	39	14,736,356	1,127
Dentistry	47	14,114	6,634	47	6,822,117	1,028
Osteopathy	5	1,838	1,266	69	1,044,947	825
Optometry	10	2,113	748	35	856,113	1,145
Pharmacy	48	9,291	2,311	25	1,810,357	783
Podiatry	2	413	208	50	234,800	1,128
Veterinary medicine	12	2,955	1,143	39	1,154,786	1,010
Total	217	64,473	[1] 25,383	[1] 39	26,659,476	[1] 1,050

[1] Estimated.

D. Health professions scholarships program

The Health Professions Scholarship Program provides scholarship assistance to students from low-income families enrolled in schools of medicine, dentistry, osteopathy, optometry, pharmacy and podiatry. In fiscal year 1967, 227 health professions schools participated in the program. Scholarships averaging $805 were awarded to 3,824 first-year students.

In fiscal year 1968, an estimated 7,964 first- and second-year students in 238 schools will receive scholarship assistance, representing 20 percent of the estimated first- and second-year enrollment of 38,872 students. The average scholarship award in fiscal year 1968 is an estimated $903.

The numbers of participating schools, enrollments, students assisted, amounts allocated and the average scholarship awards for each type of school for fiscal years 1967 and 1968 are shown in Table III.

TABLE III.—HEALTH PROFESSIONS SCHOLARSHIP PROGRAM

Type of school	Number of participating schools	First-year enrollment in participating schools	Number of students assisted	Percentage of students assisted	Amount allocated	Average scholarship
Fiscal year 1967:						
Medicine	88	8,754	1,635	18	$1,769,200	[1] $891
Dentistry	49	3,824	799	20	808,200	[1] 831
Osteopathy	5	469	147	31	97,800	[1] 650
Optometry	10	695	144	21	145,800	[1] 932
Pharmacy	70	5,373	1,040	19	1,003,200	[1] 655
Podiatry	5	288	59	21	51,000	[1] 760
Total	227	19,403	3,824	19	3,875,200	[1] 805
Fiscal year 1968:						
Medicine	95	17,514	3,356	19	3,293,009	[2] 981
Dentistry	50	7,785	1,585	20	1,475,826	[2] 931
Osteopathy	5	971	306	32	177,049	[2] 578
Optometry	10	1,363	303	22	248,526	[2] 820
Pharmacy	73	10,642	2,280	21	1,894,910	[2] 831
Podiatry	5	597	134	22	108,856	[2] 812
Total	238	38,872	7,964	20	7,198,176	[2] 903

[1] Based on expenditures by the schools.
[2] Estimated.

II. ACCOMPLISHMENTS UNDER NURSE TRAINING ACT

By January 1, 1968, more than $100 million had been awarded under the Nurse Training Act to schools of nursing for institutional and student assistance. During these first three and one-half years, over 3,300 grants were awarded for construction projects and payments for school improvement, and loans and traineeships—2,113 to diploma programs, 144 to associate degree programs and 1,051 to baccalaureate and higher degree programs. Seven hundred and twenty schools participated in one or more provisions of the Act; of these 490 were diploma programs, 55 were associate degree, and 175 were baccalaureate and higher degree.

Because the quality of care nurses give is dependent upon the quality of their preparation, the Nurse Training Act of 1964 was developed to provide assistance that would bear directly on the improvement of this preparation and make it more accessible to students. The Nurse Training Act was designed as a balanced program of assistance to all types of nursing education programs through financial aid to schools and students of professional nursing. Although this assistance has been available less than four years, results for this short period are encouraging. Each year, the participation has increased, and more students are benefiting. Faculty and administrators of schools of nursing have shown imagination and ingenuity in developing teaching facilities, course content, and teaching methods which are providing more students with higher quality preparation for nursing care of patients.

A. Construction of teaching facilities

Construction grant assistance to schools of nursing first became available when baccalaureate programs of nursing education were eligible to apply for construction grant funds with the other disciplines under the Health Professions Educational Assistance Act of 1963. Under that authority, grants totaling $8.8 million were made to 16 schools in 13 States. Two grants were made to new schools. The 14 other grants were made to replace existing obsolete facilities and to provide additional facilities to accommodate enrollment increases. Two of these projects involved renovation, and the remaining projects were for new construction. A total of 786 additional first-year student places will be available upon completion of the 16 projects.

The Nurse Training Act of 1964 authorized matching grants to eligible collegiate, associate degree and diploma programs for new construction, expansion or renovation of educational facilities for four years, 1966 through 1969. The construction grants awarded to 84 schools of nursing as of April 30, 1968, will enable these programs to accommodate approximately 11,000 additional students. Quality of education will be maintained and enhanced as teaching facilities are added, replaced or renovated and, in addition to the increased places, the original enrollment of approximately 14,500 nursing students will benefit.

This construction is characterized by a flexibility of plans that promotes efficient and economical use of space and specific innovations in design reflecting innovations in curricula.

The majority of construction grants have gone for replacement of obsolete buildings rather than for expansion; most schools could not consider increasing enrollments until after facilities are improved to accommodate present students. Experience with existing schools has shown that, in most cases, replacement or rehabilitation must of necessity take priority over expansion.

CONSTRUCTION GRANTS AWARDED UNDER THE NURSE TRAINING ACT, COSTS, INCREASE IN FIRST-YEAR PLACES AND PLACES MAINTAINED, BY TYPE OF PROGRAM, SEPT. 7, 1965, TO APR. 15, 1968

Type of program	Number of schools	Total eligible [1]	Federal share	Increase in 1st-year places	Student places maintained
Total	84	$84,962,160	$47,976,993	3,312	14,391
Baccalaureate and graduate	28	42,368,924	24,304,493	1,812	7,472
Associate degree	15	6,619,980	4,242,754	787	865
Diploma	41	35,973,256	19,429,746	713	6,054

[1] Portion of total construction costs to which formula for Federal funds is applied.

B. Project grants for improvement of nurse training

As of April 30, 1968, 139 project grants had been awarded to 108 sponsoring schools of nursing—diploma, associate degree, baccalaureate and higher degree. An additional 177 schools, including 68 unaccredited programs, are participating in these projects with the benefits reaching a combined enrollment of over 38,000 students. The amount of funds awarded totaled $8,965,447; funds approved for duration of the projects totaled $14.5 million. Participation to date and the funds awarded for the first three years of the program are shown in the following tables. Final figures for FY 1968 are not yet available. It is anticipated that the total appropriation of $4 million will be awarded.

PARTICIPATION IN PROJECTS FOR THE IMPROVEMENT OF NURSE TRAINING AS OF APR. 30, 1968

Type of program	Number of schools awarded grants	Number of nonapplying participating schools	Total participating schools
Total	108	177	285
Diploma	49	35	88
Associate degree	6	77	84
Baccalaureate and higher degree	53	65	113

FUNDS AWARDED FOR PROJECTS FOR IMPROVEMENT OF NURSE TRAINING

Type of program	1965	1966	1967	1968
Total	$1,989,564	$1,927,620	$3,518,833	[1] $4,000,000
Diploma	553,216	532,814	945,144	[2]
Associate degree		236,952	199,904	
Baccalaureate and higher degree	1,436,348	1,157,854	2,373,785	

[1] Appropriation.
[2] Awards incomplete.

A simple accounting of the number of grants, dollars awarded or enumeration of the project titles cannot indicate the impact of this assistance on the quality of nursing education during this short time.

One of the significant accomplishments of the project grants program is the collaboration among several schools to achieve maximum results with these teaching improvement grants. The Project Grants Program is also fostering a faculty commitment to good nursing education that surpasses commitment to a

particular school. For example, in Southern California, faculty in 9 diploma schools are taking part in a single project making possible expert teaching assistance that the schools could not afford alone. On a mid-west campus, the baccalaureate and graduate nursing programs are sharing their resources with 12 associate degree and diploma programs in a project both to prepare teachers and to master teachers available through the use of new media. These schools could have applied for and received, individual grants. This would have increased the number of projects but would have defeated the purpose.

The projects are also helping individual schools to strengthen their own programs. For example, one project has assisted a diploma program to increase enrollment by developing a more academically sound educational program and simultaneously reducing the length of time needed to prepare a bedside nurse. Other examples of specific projects follow. One project involving 18 diploma schools has produced educational materials presently being used to improve this type of education by at least 40 schools in several States. Several schools in Florida are extending the short supply of teachers by cooperating in the development of a series of television courses that will bring the few expert teachers to large numbers of students in schools throughout this State as well as others in the Southern region. In 13 western States, 43 associate degree, 35 baccalaureate, and 10 graduate schools of nursing are working together to improve the preparation and increase the numbers of the types of nurses needed in this geographic area.

With the accomplishments of the project grants program to date are important, a full realization of the program's potential for far reaching, long range results is yet to come. As more and more schools incorporate the educational improvements into curriculum and use the techniques and materials developed under these projects, the improved quality of students' preparation will be reflected in the care they give as practitioners.

C. Payments to diploma schools

Under this program of partial reimbursements of diploma schools, 1292 payments, through Fiscal Year 1968, were made to the 447 eligible diploma schools that applied. Awards totaled $9 million. Payments ranged from $250 to $40,000; the average amount of the entitlement was $8,000.

Substantial improvements were not possible with average payments at this level. However, schools used the payments to improve library resources, purchase up-to-date equipment and to make other educational improvements. The formula itself, being dependent upon increased enrollment and Federally-sponsored students, prevented extensive participation. Many schools were already operating at full capacity and could not increase enrollments; others had not chosen to participate in the loan program and therefore had no Federally-sponsored students.

D. Professional nurse traineeship program

The Professional Nurse Traineeship Program has increased by 20,000 the number of professional nurses qualified for positions as teachers, administrators and supervisors since it was initiated in 1956. Another 36,000 nurses, in or committed to key positions, have received traineeships for short-term intensive courses since these began in 1960. This program is crucial to the preparation of enough teachers to expand all types of nurse training and enough nurses to direct and give expert care as well as supervise the many people providing nursing care in all settings.

During the four years that this program has been one of the provisions of the Nurse Training Act of 1964, the awards totaled $47 million. Over 8,000 nurses received long-term traineeships and almost 18,000 received short-term traineeships, including some for study in the clinical nursing specialties made possible under the extended authority.

Quality and effectiveness of nursing education and nursing services depend directly on leadership available. The program is making significant contribution toward meeting the urgent need of teachers to train more students; for supervisors and administrators to improve and maintain patient care and to improve the utilization of nursing personnel; and for clinical specialists to give and to demonstrate expert direct patient care.

E. Nursing student loan program

The Nursing Student Loan Program assists students enrolled in diploma, associate degree, baccalaureate and graduate programs of nurse education. The program began in 1965 with 426 programs of nursing education participating. In

1968, 687 programs are participating, an increase of 61 percent in four years. In the same period the number of students enrolled in participating schools rose from 67,037 in 1965 to 104,796 in 1968. The number of loans made to students has grown from 3,645 in 1965 to an estimated 24,500 in 1968, about 23 percent of the enrollment in participating schools. The average loan in 1965 was $395; in 1968 the estimated average loan is $664. The numbers of participating programs, enrollments, students assisted, amounts allocated and the average loan are shown in table IV.

TABLE IV.—NURSING STUDENT LOAN PROGRAM

	Fiscal year—			
	1965	1966	1967	1968
Number of nursing programs participating in program:				
Graduate	23	31	37	41
Baccalaureate	106	141	149	164
Associate degree	8	29	56	71
Diploma	289	391	414	411
Total	426	592	656	687
Enrollment of participating programs:				
Graduate	1,210	1,195	2,383	2,796
Baccalaureate	23,203	30,080	32,415	38,726
Associate degree	1,112	3,145	4,092	6,625
Diploma	41,512	54,589	54,620	56,649
Total	67,037	89,009	93,510	104,796
Number of students assisted:				
Graduate	32	28	65	[1] 102
Baccalaureate	1,707	4,930	6,426	[1] 9,805
Associate degree	38	375	1,060	[1] 2,334
Diploma	1,868	6,407	9,667	[1] 12,291
Total	3,645	11,740	17,218	[1] 24,532
Percentage of students assisted:				
Graduate	3	2	3	[1] 4
Baccalaureate	7	16	20	[1] 25
Associate degree	3	12	26	[1] 35
Diploma	5	12	18	[1] 22
Total	5	13	18	[1] 23
Average amount of student loan	$395	$534	$567	[1] $664
Amount of funds allocated, fiscal years 1965-68:				
Graduate		$166,723	$306,448	$351,840
Baccalaureate	[2] $1,461,114	3,627,624	4,691,385	5,725,388
Associate degree	31,023	343,258	813,296	1,494,859
Diploma	1,597,767	4,732,963	6,865,560	8,817,798
Total	3,089,904	8,870,568	12,676,689	16,389,885

[1] Estimated.
[2] Graduate and baccalaureate.

Despite the increase in numbers of nurses and the improvements in quality of service, the demand for professional nurses continues to be greater than the increasing supply. Educational costs are increasing in all types of nursing education programs beyond the ability of students to meet them from their own or from their family's resources. The availability of this financial assistance is making it possible for more individuals to enter and remain in nursing school.

F. Nursing educational opportunity grants

The Nursing Educational Opportunity Grants were authorized by amendment in 1966 and were initiated in the summer of 1967. During the first full year of the program, Fiscal Year 1968, 248 programs of nursing have awarded these grants to an estimated 7,000 students who could not otherwise attend the school of nursing. The individual grants ranged from $200 to $800; the average grant was $535. The awards to date total $4.1 million.

The fact that these grants had to be matched by at least equal amounts of aid from other sources presented hardships in many cases. Experience has

shown that student aid must more closely approximate the costs of education to the student which range from minimal in public institutions to many hundreds of dollars for tuition and fees alone each year. Cost should not be the determining factor in the selection of a nursing program.

G. Accreditation

In the interests of quality of patient care and of the students undertaking study with Federal support, quality factors were included in the Nurse Training Act of 1964. To be eligible for participation, nursing programs had to meet standards of accreditation at the time of application or to show that these standards would be met within periods of time specified for the various provisions of the Act. In the case of projects for the improvement of nurse training, the standards would have to be met by the end of the project. Schools with reasonable assurance participating in the loan program had to meet accreditation standards after graduation of the first class receiving loans.

The Nurse Training Act has been a major factor in stimulating and assisting schools to improve and meet accreditation standards. The progress in accreditation of all types of nursing programs since enactment of the Nurse Training Act is significant. In January 1965, soon after passage of the Nurse Training Act of 1964, 776, or 67 percent of the 1,158 nursing education programs were accredited or had reasonable assurance of accreditation and were thereby eligible to participate in the provisions of the Act. By January 1968, when the total number of nursing programs had increased by over 100, the number of eligible programs increased to 917, 72 percent of the total 1,269 programs. These eligible programs enrolled 83 percent of the total students in nursing education programs. The importance of quality programs to the students themselves were evidenced recently when the National Student Nurses' Association passed a resolution urging that "* * * NLN accreditation be a primary criterion in the allocation of Federal, State or local funds to schools of nursing."

III. ACCOMPLISHMENTS UNDER ALLIED HEALTH PROFESSIONS PERSONNEL TRAINING ACT

The Allied Health Professions Personnel Training Act of 1966 was implemented in Fiscal Year 1967. Therefore, there has been only one full year of experience with the programs under it.

A. Construction of teaching facilities.

The Act authorizes grants for construction of allied health educational facilities; however, no construction grants have been made. No funds were appropriated for this program in 1967. $2,000,000 is available in Fiscal Year 1968, and applications for construction grants are now being received.

B. Allied health improvement grants

In Fiscal Year 1967, a total of $3,285,000 was available for basic improvement formula grants for the purpose of improving the quality of curricula for the eligible allied health professions. This amount provided 41% of the total statutory entitlement amount for eligible institutions. Basic improvement grants were awarded to 192 junior colleges, colleges and universities. The following curricula have been designated eligible for support under the program:

Baccalaureate or Higher Degree

Medical Technologist
Optometric Technologist
Dental Hygienist
Radiologic Technologist
Medical Records Librarian
Dietitian
Occupational Therapist
Physical Therapist

Associate Degree or Equivalent Degree

X-ray Technician
Medical Records Technician
Inhalation Therapy Technician
Dental Laboratory Technician
Dental Hygienist
Dental Assistant
Ophthalmic Assistant
Occupational Therapy Technician
Food Service Assistant
Medical Technologist [1]
Optometric Technologist

In Fiscal Year 1968, $9,750,000 was awarded to 230 schools for basic improvement grants.

Allied health professions special improvement grants are made available on a project basis from funds remaining after fulfilling the basic improvement entitlements. No funds have as yet been available for funding special improvement grants.

C. Advanced traineeships

In Fiscal Year 1967, with the $250,000 available for that year, sixty-four advanced traineeships were awarded for support of students being prepared to serve as teachers, administrators, supervisors, and specialists in the eligible allied health professions. In Fiscal Year 1968, $1,500,000 is available for this program, and 257 traineeships have been awarded this year.

D. Development of new methods

Six grants for development of new methods were funded with the $200,000 made available in Fiscal Year 1967. These projects are designed to develop, demonstrate or evaluate curriculums for the training of new types of health technologists. In Fiscal Year 1968, $1,000,000 is available for this program.

IV. ACCOMPLISHMENTS UNDER PUBLIC HEALTH TRAINING PROGRAM (PUBLIC HEALTH SERVICE ACT, SECTIONS 306 AND 309)

A. Traineeships for professional public health personnel

Section 306 of the Public Health Service Act authorizes grants for traineeships for support of graduate or specialized training in public health for physicians, engineers, nurses, and other professional health personnel. Federal support for traineeships for professional public health personnel was first authorized by the Congress in 1956. Currently more than 1300 academic traineeships are supported annually.

Since the program was initiated, it has been expanded to provide short-term training to upgrade professional and special skills for 12,000 annual trainees, 60 residencies in preventive medicine and dentistry and 500 medical and dental public health apprenticeships each year. By the end of Fiscal Year 1968, more than 10,000 individuals will have received long-term academic training, 42,000 short-term training, 150 residency awards, and 1500 apprenticeships awards.

The 1967 and 1968 funding level for the public health traineeship program has been $8,000,000 each year.

B. Project grants for strengthening public health training

Section 309 of the Public Health Service Act authorizes project grants to schools of public health and to other public or nonprofit institutions providing graduate or specialized training in public health for the purpose of strengthening or expanding such public health training. This project grant program, established by the Congress in 1960, was designed to provide special institutional support to schools of public health, nursing, and engineering to initiate, strengthen, and expand specialized public health curriculum offerings at the graduate level. In 1964 the program was broadened to include other institutions offering such training. Since the program was initiated in Fiscal Year 1961, 218 project grant awards have been made. Curriculum areas supported have included preventive medicine, medical care economics and administration, health administration, environmental public health, public health nursing and preventive dentistry. The benefits derived from support of public health curricula through

[1] Regulations are currently being modified to change "Medical Technologist" to "Medical Laboratory Technician" at the associate degree level, in accordance with Section 12(c) of the "Partnership for Health Amendments of 1967" (P.L. 90–174).

these grants include incorporation of newly developed curriculum offerings into the regular offerings of the schools, addition of new faculty positions not previously included in the schools' offerings, and revision and reorientations of curriculums in recognition of the school's role as a community resource to further community health needs.

In 1967, $5,000,000 was appropriated for the public health project grant program authorized under Section 309 of the Act. In 1968, $4,500,000 is available for this program.

V. ACCOMPLISHMENTS UNDER THE HEALTH RESEARCH FACILITIES PROGRAMS

The Health Research Facilities Construction Program (Title VIIA of the Public Health Act) has been in continuous operation for 11 years. During that period $452,000,000 has been awarded to 406 institutions in every state in the Union as well as the District of Columbia and Puerto Rico. The funds have been used to construct or remodel over 18 million net square feet of space for the conduct of research and research training in the sciences related to health.

The awards have been distributed to the following types of institutions:

	Amount	Percentage
Medical schools	$250,729,392	55.4
Dental schools	9,328,760	2.1
Schools of public health	9,749,889	2.2
Schools of osteopathy	5,469	0
Schools of nursing	500,000	0.1
Schools of pharmacy	4,976,408	1.1
Other schools	87,522,930	19.4
Private nonprofit institutions	69,945,063	15.4
Nonacademic public institutions	19,469,064	4.3
Total	452,226,975	100.0

Since the inception of the program in fiscal year 1957, 1944 applications requesting $832,026,455 have been received (as of June 1, 1968). Of this total, applications requesting $268,277,550 have been disapproved. Grants awarded total $452,226,975. Grants recommended for approval, but not awarded (due to lack of funds) currently total $54,019,872. The National Advisory Council on Health Research Facilities is scheduled to review applications requesting $42,943,133 at its June 1968 meeting. Thus, by July 1, 1968 the total of approved but unfunded applications probably will be about $80 million.

The funds awarded were for 1151 construction projects, 913 of which have been completed and 240 of which are either under construction or pending initiation of construction.

The present legislative authorization expires on June 30, 1969 and applications for grants under the program cannot be accepted after June 30, 1968 unless the authority is extended by Congress prior to that date. That continuation of the Health Research Facilities Program is essential is evident from the application pressure still being experienced—notices of intent to file currently total over $150 million. The Nation's health research community still needs substantial federal support for expansion and renovation of its inventory of health-related research facilities.

Dr. LEE. The main purpose of the legislation before you today is to sustain the Federal commitment to health manpower development, to continue, expand and improve the Federal partnership role in assisting training and educational institutions across the country in meeting these critical needs to expand programs of student aid in order to improve educational opportunity for talented youth of limited means.

The Health Manpower Act of 1968 (H.R. 15757) makes some significant improvements in the five legislative acts it amends. In the interest of time, I would like to call particular attention to some major changes made by the present bill and submit to you for the record a more detailed analysis of each amendment and justification.

Mr. JARMAN. We will be glad to have that.

(The document referred to follows:)

Department of Health, Education, and Welfare Section-by-Section Analysis of H.R. 15757

TITLE I—HEALTH PROFESSIONS TRAINING

PART A—CONSTRUCTION GRANTS

Section 101.—The program of construction grants would be extended for 4 years (fiscal year 1970 through fiscal year 1973).

"Such sums as may be necessary" would be authorized to be appropriated for each of the 4 years.

This program authorizes grants to assist in the construction, expansion, or renovation of schools of medicine, dentistry, osteopathy, optometry, podiatry, pharmacy, veterinary medicine, and public health.

Section 102.—The Federal share authorized under present law—i.e., a maximum of 66⅔ percent for new or major expansion, and up to 50 percent for other construction—would be amended to authorize the Secretary to increase the 50-percent maximum Federal share where he determines that "unusual circumstances" make a larger percentage (in no case to exceed 66⅔ percent) necessary in order to effectuate the purposes of the program.

In many established schools producing health professionals there are weaknesses of program, faculty, or facilities which are directly related to financial weakness. These institutions, beset by increasing demands on inadequate and obsolete facilities, have great difficulty in providing the institutional share of matching funds for construction projects and, therefore, have been unable to make use of Federal financial assistance toward rehabilitation of school plant.

Financial weakness in health professions schools stems from inflationary pressures and inability to secure adequate private or public State and local support.

In general, the schools not able to meet the matching requirement are institutions which are privately supported, schools without a tax base for operating and capital funds, or public schools in States with limited matching funds. These institutions are important in the production of health manpower and deserve support to prevent decline in both quality and capacity of training.

Section 103.—This permits facilities constructed for teaching purposes (and federally assisted by reason thereof) to be used for teaching purposes, or research purposes, or medical library purposes for which construction grants may be made—thus the provision for Federal recovery within 10 years of completion for failure to use the facilities for the teaching purposes for which they were constructed would not apply.

Section 104.—The present program has been limited to the construction of *teaching* facilities in the respective health professions schools. A school planning to construct a facility to include a *medical library*

and/or a *health research facility* has been required to make separate applications to the medical library construction program and the health research facilities construction program as well as to the health professions educational assistance construction program. Applications have been reviewed by three separate councils on three separate sets of criteria.

The bill would authorize a school to make one application to and to receive funds under the health professions educational assistance construction program if the project is for the construction of facilities which are to a substantial extent for teaching purposes but are also for health research purposes or medical library purposes.

Section 105.—Under the present program, work area in a medical, dental, or other health professions school can be constructed with program funds only if it is space attributable to the teaching program leading to the degree of doctor of medicine, doctor of dentistry, or other first health professional degree. This has proven to be a most undesirable barrier to sound planning and construction of the school as an entity.

The bill would allow the inclusion in the construction project of space for graduate, continuation, and other advanced training activities as well as that attributable specifically to the training of persons in the first health professional degree curriculums. This would allow for sound, coordinated planning and construction of the total school.

In the present educational system where advanced and undergraduate education arrangements for health professionals are largely interdependent, and the inability to support advanced training space has resulted in considerable difficulties for all of our applicant institutions, the institutions have been forced to pay for the entire cost of advanced training space, limit it, or eliminate it from its plan.

Part B—Institutional and Special Project Grants to Health Professions Personnel

Section 111 (*amends secs. 770–772 of the PHS Act*).—Under present law, grants may be made to improve the quality of schools of medicine, dentistry, osteopathy, optometry, and podiatry. Improvement grants are of two kinds: (*a*) *basic* grants made on the basis of a *formula* of $25,000 per school and $500 per enrolled student, (*b*) *special* grants made on a *project* basis. There is a single appropriation authorization for both types of grants. Special improvement grants are awarded from the sums appropriated and not required for making the formula grants.

This program became effective in fiscal year 1966. It has provided a source of continuing support for the teaching curriculums of the respective schools. Appropriations were not sufficient to fund the basic improvement grants under the statutory formula in fiscal years 1966 and 1967. Therefore, no special projects were funded in those years.

The bill would authorize a 4-year extension (fiscal year 1970 through fiscal year 1973) of both the institutional (formula) (sec. 771) and special project (sec. 772) grant authorities with significant modifications.

The 4-year period represents the recommended time to assure these schools of the continued support necessary for sound curriculum devel-

opment and stability. In addition, the assurance of 4 years of legislative authority for support of curriculum improvements can do much to encourage these institutions to plan for significant modifications, to recruit and retain faculty necessary for implementation of these modifications, and to risk venture into some of the areas which could contribute most to curriculum improvement.

Equally important for the schools which are in serious financial difficulties, the 4-year period of time for the continued, assured support under the formula grants, and the special assistance in meeting their operating costs through the special project grants can be a vital incentive to their marshaling of resources to upgrade their programs, or even to remain in existence.

The bill would authorize appropriations of such sums as may be necessary for both the improvement grants and the institutional grants. The portion of the moneys appropriated for each fiscal year which would be available for special project improvement grants on the one hand, and formula institutional grants on the other, shall be determined by the Secretary unless otherwise provided in the Appropriation Acts for that year.

New section 771(a)(1).—The formula would be revised as follows:

The base grant per institution would remain at $25,000. Of the sums remaining from the available appropriations:

(*a*) *75 percent* would be distributed on the basis of (i) the *relative enrollment* of full-time students, (ii) the *relative increase in enrollment* of such students (over the average enrollment of the school for the 5 preceding school years) with the amount per student computed so that a school receives *twice as much for each student in the increase* as for other full-time students, and (*b*) *25 percent* would be distributed on the basis of the relative number of *graduates.*

Under present law, the formula for determining the amount of institutional support takes into account only one variable: the number of students enrolled. A school receives $500 for each full-time student. The new formula takes into account two additional factors: (*a*) increases in number of students, and (*b*) the number of graduates.

Under the bill, a school would receive twice as much for each student *added* to its enrollment in a given year over the average enrollment of the school for the 5 preceding years. Consequently, the schools would be assisted to a greater extent by the new formula than the old. The increased funding for increased enrollment will encourage the schools to enlarge their enrollment while at the same time helping them with the cost of educating the additional students.

The new formula would provide that 25 percent of the sums remaining from appropriations after the base grant ($25,000 per school) would be distributed on the basis of the relative number of graduates. This would provide a further incentive for the schools to increase and retain their enrollments, since at graduation the student would again be counted.

This would also provide an incentive for schools to experiment with shortening the length of the training period without diminishing the quality of training, and to try to develop practical means for accepting students at advanced standing—for example, admitting a first-year student with advanced standing in courses for which he had demon-

strated competency. This would assist schools in maintaining a full enrollment and help to counteract the attrition which inevitably occurs.

New section 771(a)(2).—No school could receive less than it receives in fiscal year 1969 as a basic improvement formula grant.

New section 771(b)(2).—However, without regard to any other provision relating to the new formula, *no school could receive more in any year than it expended from non-Federal sources during the previous year for teaching purposes* (except that this proviso would not apply in the case of a school which has for such year a particular year-class which it did not have for the preceding year.)

New section 771(b)(1).—As in the present law, the bill would require, as a condition for receiving a formula grant, *assurances* from the school that the school would *increase its enrollment* by *2½ percent* or *five* students (whichever is greater) over the average first-year enrollment of full-time students of the school over a 5-year period. However, three changes have been made in this provision.

(*a*) The *5-year average period* would be changed from July 1, 1960, through July 1, 1965, to the period July 1, 1963, through June 30, 1968.

Thus, the 5-year base period against which the expansion of enrollment is to be computed would be moved up to July 1, 1963, through June 30, 1968. The effect of this is to advance the fixed period of time against which the computation is made 3 years beyond that provided for in the present law.

(*b*) The expansion would relate to the *average* first-year enrollment in lieu of the existing law's highest first-year enrollment.

The number of additional students which a school can reasonably be expected to enroll is limited. Since the beginning of the improvement grant program in fiscal year 1966, most schools have already increased their number of first-year students by at least five. To make the increase cumulative, i.e., to require that the school take five more students in addition to the five which it had so recently taken, would constitute an unreasonable burden: for example, a medical school which enrolled 100 first-year students each year during the period July 1, 1960 through July 1, 1965, made the effort and expanded to 105 students during fiscal year 1968. If the bill were to require the *highest* enrollment to be used as the base, the cumulative impact would mean a 10-percent increase in enrollment, i.e., an additional five first-year students with the responsibility on the school to assure that places are available for these students in each of their succeeding years—second, third, and fourth, as well as the first, or the equivalent of 20 school places. If the formula were structured so that the school received approximately the full cost of education for such students, such as required increase might be justifiable. However, it is not reasonable to place such a cumulative requirement of this nature on all schools. The requirement has therefore been changed so that the increases which schools have already made can be *averaged* over the new 5-year period. This will retain the stimulus for increase without undue, or even unjust, burdens on the schools.

Effective in fiscal year 1970, the bill would authorize the Secretary to waive the required first-year enrollment if he determines, after consultation with the Advisory Council, that it cannot be accomplished without lowering the quality and training provided or that a waiver

would otherwise be in the public interest and consistent with the purposes of this program. (Sec. 111(f) of the bill would also provide similar waiver authority under present law for fiscal years 1968 and 1969.)

(*c*) Experience under the expansion of enrollment requirement of the present law has demonstrated that the purposes of the health professions educational assistance program cannot be fully achieved with a rigid and inflexible enforcement of this requirement. Under present law, the Secretary may waive the expansion of enrollment, in whole or in part, if he determines, after consultation with his Advisory Council, that such an increase cannot be accomplished because of limitation of physical facilities available to the school without lowering the quality of training.

Under present law, a school must have had an approved application for a basic grant to be eligible for a special improvement grant. Therefore, schools which are ineligible for basic improvement grants are also ineligible to receive assistance under the special project authority; thus no Federal assistance is available to them through the improvement grant mechanism.

The expansion of enrollment requirement has presented a serious problem to schools which by merely maintaining or cutting back on enrollments could maintain or improve the quality of education provided for students. The dilemma of the school is particularly great when the financial resources of the school are limited. The school has the choice of further reducing the quality of its educational program by taking in more students in an already weak curriculum or going without the funds and undertaking the curriculum improvement entirely at its own cost. The bill would authorize the Secretary effective in fiscal year 1968, to waive the expansion of enrollment requirement if he determines, after consultation with the Advisory Council, that the waiver is in the public interest and consistent with the purposes of the law. This amendment would make it possible for the Secretary and the Advisory Council to weigh the many complex factors in the individual situations which the schools are confronting and to determine whether it is in the public interest to grant such a waiver and the degree to which Federal assistance would or would not be warranted in terms of the objectives of the act.

New section 772.—Under existing law, special project grants may be made to schools of medicine, dentistry, osteopathy, optometry and podiatry to improve their curricula, to contribute toward the maintenance of or provide for accreditation, or to contribute toward the maintenance of or provide for specialized functions which the school serves. In order to receive a special improvement grant, a school must have had an approved application for a basic improvement grant. There is a statutory ceiling on the amount of grant to any school: $300,000 for fiscal year 1968 and $400,000 for fiscal year 1969.

In addition to the schools presently eligible to receive special improvement grants, schools of *pharmacy* and *veterinary medicine* would be eligible for special project grants under the bill.

A school would *not* be required to have an approved application for an institutional (formula) grant in order to be eligible for a special project grant.

Effective for fiscal year 1969, the present authority for special improvement grants would be amended to authorize support of planning of special projects for which grants could be made under the amended law which would go into effect in fiscal year 1970.

The purposes of the special project grants would be—

(1) To plan, develop or establish new programs or modifications of existing programs of education in the respective health professions.

(2) To effect significant improvements in curricula of health professions schools.

(3) To conduct research in the various fields related to education in the respective health professions.

(4) To develop training for new levels or types of health professions personnel.

(5) To assist any school which is in serious financial straits to meet the costs of operation or to meet accreditation requirements.

(6) To plan *experimental teaching facilities* or experimental design thereof.

(7) Or otherwise strengthen, improve, or expand programs to train the personnel in the respective health professions or help to increase the supply of adequately trained personnel in such professions.

These are designed to stimulate schools to undertake and carry out projects such as increasing enrollment, improving the quality of educational programs, modernizing and improving the overall approach to health professions education, carrying out educational research, and training new kinds of intermediate health personnel to extend the resources and skills of highly trained professionals.

Further stimulus is given to the development of meaningful projects by the inclusion in the bill of authority, effective in fiscal year 1969, for special improvement grants for planning projects under the new special project authority which becomes effective in fiscal year 1970.

New section 773(e).—In determining the priority of projects under the amended authority, the Secretary would be required to give consideration to the following:

(*a*) The extent to which the project will *increase enrollment.*

(*b*) The relative need of the applicant for financial assistance to *maintain or provide accreditation* or to *avoid curtailing enrollment* or *reduction in quality* of training.

(*c*) The extent to which the project would result in *curriculum improvement*, improved methods of training or help to *reduce the period of required training* without adversely affecting the quality thereof.

Projects of the magnitude and of the nature envisioned for these grants require careful and time-consuming study. The availability of funds to help meet the costs of preparatory analyses of the needs of the schools and their correction should result in major improvements of the schools.

Section 111(b)(3).—This amendment makes a conforming change in the title of the Advisory Council.

Section 111(b)(4).—This amendment excludes nonrecurring expenditures from the average non-Federal expenditure of the applicant

during the last 3 years when determining how much non-Federal money the applicant must spend to get a grant.

Section 111(c).—This amendment would authorize additions to the Advisory Council of members from the fields of pharmaceutical and veterinary medical education; and change the name of the Advisory Council to the National Advisory Council on Health Professions Educational Assistance. The role of the Council is to advise the Secretary on regulations and policy with respect to institutional, special project and scholarship grants. The Secretary may not award an institutional grant nor can he grant a waiver of the expansion of enrollment requirement, nor make a special project grant, until he has consulted with the Council. It is important that the Secretary should be authorized to have the advice of persons who have expert knowledge in the fields of pharmaceutical and veterinary medical education, if schools of veterinary medicine and pharmacy are to be eligible for these grants.

Section 111(d).—Provides effective date for the amendments made by section 111.

Section 111(e).—For fiscal year 1969, special improvement grants will be authorized to support planning for special projects for which grants are authorized by the bill beginning in fiscal year 1970.

Section 111(f).—For fiscal years 1968 and 1969, the Secretary may waive the condition of eligibility for formula institutional grants that enrollment must increase if he determines it is in the public interest and consistent with the purposes of the program to waive it.

Part C—Health Professions Student Aid

Section 121.—Under present law, grants may be made to schools of medicine, dentistry, osteopathy, pharmacy, podiatry, or optometry for two types of student aid programs: loans and scholarships. Schools of veterinary medicine have also been eligible to receive grants for loans, but not for scholarships. These two programs have provided vital resources for support of students in the respective health professions.

The bill would extend the authorization for appropriations of Federal capital contributions to student loan funds for 4 years (fiscal years 1970–73) and extend the authorization for making loans (to such funds) from the revolving fund for 5 years (fiscal years 1969–73).

Existing authorization for the Federal capital contribution to student loan funds expires on June 30, 1969, and the authorization which enables the schools to borrow capital from the revolving fund expires on June 30, 1968.

The proposed extensions of 4 and 5 years, respectively, for the two methods of capitalization of student loan funds would provide for coterminous expiration of authority on June 30, 1973. Authority would be extended for three additional years for appropriations for Federal capital contributions to enable students who received a loan for any academic year ending before July 1, 1973, to complete their education.

Section 121(a)(3).—Under present law, repayment of a loan must be accomplished within a 10-year period which begins 3 years after

a student ceases to pursue a full-time course of study. However, if he is serving as a member of the uniformed services or as a Peace Corps volunteer during the period of repayment, he is entitled to an additional year of postponement for repayments for each full year of such service (but not to exceed 3 years). The bill would include service as a VISTA volunteer as a basis for such postponement. Up to 5 years of advanced professional training (including residencies) would also be a basis for such postponement.

This amendment provides (1) an inducement for health professional personnel to serve in the Volunteers in Service to America program similar to the existing provision under section 741(c) of the act which provides for postponement of repayment for borrowers serving in the Peace Corps, and (2) for lengthy advanced professional training required in fields of specialization which might otherwise be deferred because of financial burden.

Section 121(a)(4)(A).—The bill would authorize a school to charge a borrower for failure to pay all or any part of an installment when it is due or, if the borrower is entitled to postpone his repayments, or to cancel his repayment, for his failure to file timely evidence of such entitlement ($1 first month; $2 each month thereafter).

The proposed amendment would permit participating schools to place greater emphasis on terms and conditions of repayment.

Section 121(c).—This would postpone for 4 years through September 30, 1976, the date of the capital distribution of the balance of any student loan fund.

Section 121(d)(1).—This would extend for 5 years through fiscal year 1973 the authorization of loans to schools.

Section 121(d)(2).—This would increase from $35 million to $45 million the total amount of loans which may be made to student loan funds from the revolving fund.

Section 121(e) (new sec. 746).—The bill would authorize a school to transfer to its scholarship funds up to 20 percent (or a higher percentage with the approval of the Secretary) of the Federal funds paid to it for its loan fund. (There is a similar provision for transfer from its scholarship program into its loan fund.) This transfer authority will provide a most desirable flexibility to the school in tailoring its financial assistance programs to meet the needs of its individual students and will improve the effectiveness of the utilization of both the scholarship and loan funds.

Section 121(f).—This provides effective dates for the amendments made by this section.

Section 122.—This would extend the health professions scholarship program for 4 years (fiscal year 1970 through fiscal year 1973).

It would add veterinary medicine students to the eligible participants.

Veterinary medicine makes significant contributions to the field of human medicine, to medical research, and to the maintenance of an abundant and safe food supply.

Section 122(d) (new sec. 781).—The bill would authorize a school to transfer to its student loan program up to 20 percent of the amount paid to it for scholarships (or a higher percentage with the approval of the Secretary). (There is a similar provision for transfer from

its scholarship program into its loan program.) This transfer authority will provide a most desirable flexibility to the school in tailoring its financial assistance programs to meet the needs of its individual students and will improve the effectiveness of the utilization of both the scholarship and loan funds.

Section 122(c)(2).—"Students from low-income families who, without such financial assistance could not pursue a course of study at the school for such year." Change to "students of exceptional financial need who need such assistance to pursue a course of study."

This change makes the program comparable in this respect to the higher education scholarship program.

Section 131.—The Secretary would be required, in consultation with the Advisory Council to prepare and submit to the President and Congress before July 1, 1972, a report on the administration of parts B, C, E, and F of title VII of the Public Health Service Act.

TITLE II—NURSE TRAINING

PART A—CONSTRUCTION GRANTS

Under the Nurse Training Act of 1964, Federal grants were authorized to assist in the construction, expansion or renovation of diploma, associate degree, and collegiate schools of nursing.

Section 201.—The program would be extended for 4 years (fiscal year 1970 through fiscal year 1973).

Such sums as may be necessary would be authorized to be appropriated for each of the 4 years.

Section 202.—The period that a Federally assisted project would be required to be used as a school of nursing would be reduced from 20 to 10 years. (Failure to comply entitles the United States to recover present value of the Federal share.)

Section 203.—The Federal share authorized under present law would remain the same. However, a new exception would be added: It would authorize the Secretary to increase the maximum 50 percent Federal share (for construction other than new facilities or major expansion) where he determines that "unusual circumstances" make a larger percentage (in no case to exceed 66⅔ percent) necessary in order to effectuate the purposes of the program.

Section 204.—Adds the Trust Territory of the Pacific Islands to the definition of a State.

Section 205.—Under the present program space in a collegiate school of nursing can be constructed only if the space is attributable to the teaching program leading to a degree in nursing.

Extension of the program of construction grants was recommended by the Program Review Committee provided for under the nurse training program. Approximately 49,000 new places for first-year students will be needed if schools are to prepare the numbers of nurses needed by 1975. Grants for construction of teaching facilities can help to increase the number of first-year places in three ways:

1. Construction funds to replace and renovate obsolete facilities in order to retain current enrollments. Many nursing education programs occupy makeshift buildings such as barracks, dormitories, and basement areas; many are unsafe, poorly ventilated, noisy,

and not conducive to learning. These schools can scarcely maintain their present enrollments much less consider increasing their student body. The contribution which these schools can make toward maintaining the nurse manpower supply warrants the same favorable Federal share as new schools or schools which can expand enrollments substantially.

2. Construction funds for existing schools which can undertake major expansion of enrollments. Many well-established schools turn away qualified applicants due to lack of space. Given additional facilities, these schools could expand enrollments without jeopardizing the quality of their teaching programs.

3. Construction funds for new schools in areas where there is a demonstrated potential for recruitment, faculty improvement and community interest but no physical facilities for a new nursing educational program.

Schools which do not attract sufficient applicants to fill their spaces do not always provide a reservoir of unused capacity for use by applicants turned away at other schools which are filled to capacity. This might be the case if undersubscribed and oversubscribed schools were located in the same areas, and were almost equally acceptable as regards accreditation, quality of faculty, adequacy of facilities, and similar criteria which guide applicants in choosing schools.

Under the provision of the nurse training program new schools of nursing and those making a major expansion of enrollment are entitled to Federal participation not to exceed 66⅔ percent of necessary construction costs. Schools replacing, renovating, or making minor expansion of capacity may receive up to 50 percent Federal participation.

The bill would allow the inclusion in the construction project of space for advanced training activities that are not degree-oriented. This would allow for sound, coordinated planning and construction of the school as a whole, taking into consideration the several interrelated teaching mission that the school fulfills.

Part B.—Special Project and Institutional Grants to Schools of Nursing

Under the Nurse Training program, special project grants are made to diploma, associate degree and collegiate schools of nursing to assist them in meeting the costs of projects of limited duration to strengthen, improve, and expand their programs to train nurses.

Section 212 (new sec. 805).—The program would be extended for 4 years (fiscal year 1970 through fiscal year 1975).

The definition of institutions eligible to receive improvement grants would be broadened. Schools of nursing would continue to be eligible, but broadened authority would also permit grants to be made to institutions or agencies which do not have programs of nurse education but which could plan or develop such programs or could contribute to the strengthening and improvement of nursing education.

In addition to the general purposes of the project improvement grant authority—i.e., to strengthen, improve, or expand programs of nurse training—the bill would specifically clarify these purposes and would also add new authority to develop, or establish new or modified, programs of nursing education. The specific clarification of purposes

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gives special emphasis to the assistance of schools which are in serious financial straits to meet their costs of operation or to meet accreditation requirements. It also emphasizes assistance to projects for the modification of existing programs, an emphasis which is particularly vital at this time of transition in nursing education.

Present section 805 (improvement grant) authority would also be amended, effective fiscal year 1969, to include support for planning special projects to be funded under new authority coming into the law in 1970.

Content of nursing education must be improved, updated, and expanded to prepare students for present-day complexities of nursing practice and the variety of patient care setting in which they will function. Curriculum improvement is a continuous process to use new teaching methods to incorporate new knowledge and nursing skills into the student's educational experience. Many schools are in such difficult financial straits that they cannot undertake the fundamental curriculum changes and improvements necessary for quality programs which will meet accreditation standards.

Because of increasing specialization and complexity of present-day care, new ways must be found to train nursing students in shorter periods of time and to train a larger number of students with a short supply of qualified teachers. Improved utilization of qualified faculty members in all types of educational programs for nursing is one approach which is effective for expanding the present teacher supply. These activities are costly since they require the use of expensive communications equipment for large numbers of students. However, these systems can conserve the time required for teaching students and make the most effective use of the short supply of well-qualified teachers.

Recent developments in nursing education indicate the need for Federal funds to assist and insure development of the numbers and types of programs needed, and orderly transition from present patterns. These developments—the closing of hospital programs, the proliferation of associate degree programs, the enlargement and establishment of new baccalaureate and graduate programs, the increasing demand for clinical facilities for student experience, and the appropriate interlocking of education for nursing with that for other health professions—are straining the resources of the institutions and agencies which have responsibility for providing services as well as learning experiences, and of the educational institutions faced with enlarging and adding new programs.

New section 806.—Under the Nurse Training Act program, grants are authorized for payments to diploma schools of nursing to defray a portion of the cost of training federally sponsored students. Grants are made on a formula of $250 times the sum of the number of federally sponsored students and the number of students attributable to an increase in enrollment. No school could receive more than $100 times its full-time enrollment.

An entirely new program of institutional (formula) grants to all three types of schools of nursing would be authorized under this bill.

The bill would authorize a new 4-year program, beginning in fiscal year 1970 through fiscal year 1973.

New section 806.—The statutory formula provides for: A basic grant to each school of $15,000 and of the remainder:

(*a*) Seventy-five percent of the basis of the relative enrollment of full-time students and the relative increase in enrollment of such students over the average enrollment of the 5 preceding years (with the amount per student computed so that a school would receive twice as much for each student in the increase as for other students), and

(*b*) Twenty-five percent on the basis of the relative numbers of graduates.

Institutional support grants would enable all schools to improve student-faculty ratios, attract more highly qualified faculty and strengthen and enrich basic curricula. It would also permit schools to apply new educational methods and innovations to professional nursing education. Costs of the educational institutions have risen rapidly because of increasing costs of supplies, equipment, maintenance. Salaries of academic and nonacademic personnel have accelerated rapidly without commensurate increase of income.

Income from tuition and fees has never approximated costs. There has always been a deficit met through other sources. As academic costs have risen, the percentage of the cost paid by tuition has been less and the gap has widened. Income from endowments and gifts has become a very limited source of support; Federal funds are also limited. For the public institutions, increase in State appropriations is the only significant source of increased support. Privately supported institutions must look to Federal financing to assist in closing the gap between income and costs. The private institutions particularly are reluctant to increase enrollment in existing programs. Graduate programs (master's and doctoral level) incur higher deficits than those at the baccalaureate level. This is due to the need for highly specialized faculties, the need to support faculty research as well as instructional costs, and the desirability of low student-faculty ratio in practicum. Basic support grants would make the vital difference in the decision to open or continue a nursing program.

The low faculty student ratio makes a nursing major costly to the school; and there are other costs connected with the clinical practice courses. Broadening the base of the formula grants to include associate degree, baccalaureate degree and graduate programs, and application of a formula which guarantees a basic payment of no less than $15,000 to all schools would permit employment of at least one additional faculty members and supporting services. Basing the remainder of grant on enrollments and graduations would provide a total grant related to size of the programs. These institutional grants would contribute directly to high-quality education. These funds could make the difference between an excellent instructional program and a mediocre one by making it possible to attract more highly qualified faculty and improve student-faculty ratios. Such grants could make it possible and feasible for the school to allocate a certain proportion of faculty time to research activities and to programs designed to foster faculty growth and development. Basic support grants could place the school in a position to better obtain essential teaching aids to enrich the instructional program.

New section 806(*b*) (1).—The Secretary's regulations shall provide for determination of number of students enrolled in a school or number of graduates.

New section 806(b)(2).—"Full-time students" means students pursuing a full-time course of study in an accredited program in a school of nursing.

Costs for educating nurses, particularly in collegiate and graduate programs, have increased as for all health professions. Schools cannot attract qualified faculties, provide comprehensive and supervised clinical practice, and increase enrollments, without financial assistance. It is essential that continuing basic support be provided for all health curricula to maintain the necessary level of quality. Our Consultant Group on Nursing recommended that Federal funds be made available to help schools meet the costs of nursing education. The Program Review Committee endorsed the principle of basic support grants for schools of nursing, but they took serious exceptions to supporting a single segment of nursing education. The Committee recommended that basic support grants be given to all types of accredited nursing programs: diploma, associate degree, baccalaureate and graduate degree.

Section 212 (new sec. 807(a)).—The Secretary may set the date by which applications for improvement or institutional grants must be filed.

New section 807(b).—The Secretary must consult with the National Advisory Council on Nurse Training before acting on any application.

New section 807(c).—An improvement or institutional grant may be made only: (1) to a public or nonprofit private school of nursing or (in the case of an improvement grant) public or nonprofit private agency, organization, or institution; (2) if recipient assures the Secretary that it will expend an amount of non-Federal funds which are at least as great as the average amount of funds expended by applicant in the 3 fiscal years preceding year for which the grant is sought; (3) if applicant provides information and gives assurance that Secretary requires; and (4) if applicant provides fiscal control and access to records as Secretary may require.

Section 212 (new sec. 808).—The bill would authorize appropriations of such sums as may be necessary for both the improvement grants and the institutional grants. The portion of the moneys appropriated for each fiscal year which would be available for special project improvement grants on the one hand, and formula institutional grants on the other, shall be determined by the Secretary unless otherwise provided in the appropriation acts for that year.

Section 213.—This makes a conforming change specifying the time that schools with reasonable assurance of accreditation applying for institutional grants under section 806 will become accredited.

Section 214.—This provides the effective date for these amendments.

Section 215.—With respect to fiscal year 1969, appropriations (under old sec. 805(a)) shall be available for planning special projects for which grants are authorized under the amended section beginning with fiscal year 1970.

Part C—Student Aid

Section 221.—The program of traineeships of professional nurses would be extended for 4 years (fiscal year 1970 through fiscal year 1973). Such sums as may be necessary would be authorized to be appropriated for each of the 4 years.

With the incentives to expansions of enrollment and the encouragement of the planning and establishment of new programs of nursing education, it is particularly vital to extend the present authority for advanced traineeships for the preparation of teachers in the various fields of nurse training. These advanced traineeships are also a source of support for the training of nurses to serve in administrative or supervisory capacities and to serve in the various professional nursing specialties which have become increasingly important with the advanced technology in medicine.

Section 222(a)(1).—This would amend the existing Public Health Service Act to make it conform with the new section 829 (transfer of funds to scholarship program).

Section 222(a)(2).—This would extend the deadline for loan applications to 1973.

Section 222(b)(1).—This would revise the maximum limit for loans per academic year from $1,000 to $1,500.

Section 222(b)(2).—This would authorize postponement of the 10-year period for repayment of nursing student loans by adding postponement during service (not to exceed 3 years) in the uniformed services, the Peace Corps or VISTA. It would further authorize postponement (up to 5 years) for advanced professional training.

Section 222(b)(3).—This would authorize up to 100 percent cancellation of nursing student loans at the rate of 15 percent per year for service as a professional nurse in a public hospital in an area with a substantial population and a substantial shortage of nurses in public hospitals. (Retains 50 percent cancellation at 10 percent per year rate for fulltime service in public or nonprofit institutions or agencies.)

Section 222(c).—This would allow a school to charge a borrower for failure to pay all or any part of an installment. When or if a borrower is entitled to postpone repayment or cancel part or all of the loan, he may be similarly charged for failure to file timely evidence of entitlement. The charge may not exceed $1 for the first month, and $2 for each subsequent month.

Section 222(d)(1).—This would extend the authorization of appropriations for payments to student loan funds.

Section 222(d)(2).—This would make the existing Public Health Service Act conform to new section 829.

Section 222(e).—This would change the allotment formula for distribution of funds for Federal Capital contributions to student loan funds. The existing formula allocates the money among the States, 50 percent on the basis of the relative number of high school graduates, and 50 percent on the relative number of students enrolled in schools of nursing. The new formula would allow for a more equitable distribution of funds among schools of nursing by providing for allotment of the funds among the schools on the basis of the relative school enrollment.

Section 222(g).—This would extend the time that the Secretary can make loans from the revolving fund for 5 fiscal years to fiscal year 1973.

Section 222(h).—This would add a new section (sec. 829) to the Public Health Service Act providing for "Transfers to Scholarship Program." This would authorize the transfer to the school's scholar-

ship program of up to 20 percent (or higher on approval of Secretary) of Federal funds paid to a school for its student loan program. This transfer authority will provide a most desirable flexibility to the school in tailoring its financial assistance programs to meet the needs of its individual students and will improve the effectiveness of the utilization of both the scholarship and loan funds.

Section 222(i).—Provides effective dates for amendments made by the preceding provisions of section 222.

Section 223.—This provides two new sections, section 860 and section 861. Section 860 replaces the existing educational opportunity grants with a scholarship program patterned generally after the scholarship provisions for the health professions.

Section 860(a).—This would authorize the Secretary to make grants to public or nonprofit schools of nursing for scholarships.

Section 860(b).—This would authorize scholarship aid for students in all three types of nursing schools: diploma, associate degree, and collegiate. This program would begin in fiscal year 1970 and would go through fiscal year 1973. It would further provide that appropriated funds be allocated among the participating schools on the basis of $2,000 times one-tenth the number of full-time students.

Many nursing students come from low-income families who cannot help finance their educations; they will enter a profession where salaries are very low, particularly compared with the high remuneration of physicians and dentists. Consequently, proportionately more nursing students will require scholarship support.

The increasing costs of education to students are discouraging talented and interested young people from pursuing nursing careers. Availability of scholarship support would relieve financial pressure on students in school and give greater quality of opportunity to those who could not otherwise pursue a nursing career.

One-fifth of all nursing students are from families which have less than $5,000 annual income. An additional fifth come from families in the $5,000 to $7,500 income bracket. All of the students in the first category and a substantial number in the second would require financial assistance for their nursing education.

Section 860(c)(1).—To be eligible for a scholarship, a student must be enrolled as a full-time student in good standing and must be of exceptional financial need and must need the financial assistance to pursue the course of study.

Section 860(c)(2).—This would provide that students could not receive more than $1,500 per academic year.

The present scarcity of financial aid, particularly nursing scholarships, forces students from low-income families to select on the basis of its cost irrespective of the students' ability or career goals. The increasing costs of eduaction to students will discourage talented and interested youth from pursuing nursing careers unless the amount of a scholarship approximates the cost of the nursing education program. Costs of nursing education vary widely among and within different types of programs—diploma, associate degree and baccalaureate. They can range from minimal in State-supported schools to over $2,000 per year in private institutions. In many nursing programs, tuition alone is over $1,000 per year. A maximum scholarship of $1,500 will permit students more realistic planning of their educational programs.

Section 860. (d)—This would provide that regulations for nursing student loans be prescribed by the Secretary after consultation with the National Advisory Council on Nurse Training.

Section 860 (e)—This would provide that scholarship grants may be made in advance or at such intervals as the Secretary finds necessary.

Section 861—This would authorize up to 20 percent of the amount paid to the school for scholarships (or a higher percentage with the approval of the Secretary) to be transferred to its student loan program. This transfer authority will provide a most desirable flexibility to the school in tailoring its financial assistance programs to meet the needs of its individual students and will improve the effectiveness of the utilization of both the scholarship and loan funds.

Section 231—It would delete the authority of the Commissioner of Education directly to accredit programs of nurse education. This section would take effect on enactment of this act and would add State agencies to the body or bodies which the Commissioner of Education could approve for purposes of accrediting programs of nurse education. It would require the Commissioner of Education to publish a list of nationally recognized accrediting bodies and State agencies which he determines to be reliable authority as to the quality of training offered. It would authorize the reasonable assurance (of accreditation within a specified period) provision to apply, in the case of a construction project, to an existing school. (Present law relates solely to new schools.)

Section 232—This would direct the National Advisory Council on Nurse Training to submit a report to the President and Congress before July 1, 1972, on the administration of the nurse training program and recommendations with respect thereto.

TITLE III—ALLIED HEALTH PROFESSIONS AND PUBLIC HEALTH TRAINING

ALLIED HEALTH

Stimulated by the advances is medical knowledge, the population explosion, lowered financial barriers to medical care, and an emerging social concept that medical care should be related to medical need, the demand for health manpower is approaching crisis proportions. Less generally recognized than the shortages of physicians and nurses has been the need for a complex of some 85 allied health professions and occupations without which modern medical practice and total health services cannot be delivered. The adequate numbers and quality of education of these professional and technical personnel are critical to maintenance of quality community and personal health services.

All allied health occupations present manpower problems to the degree that lack and/or inefficient utilization of such personnel prevent our reaching reasonable objectives for health programs.

The allied health professions personnel training program was enacted in November, 1966. It authorizes grants for the construction of teaching facilities for allied health training centers, grants for traineeships for advanced training of allied health professions personnel to become teachers, supervisors, administrators or specialists, grants (both formula and special project) to improve the curriculums for

training allied health professions personnel, and project grants to develop, demonstrate, or evaluate curricula for the training of new types of health technologists. There has been 1 year of experience under the program.

Section 301(a).—This section would extend the allied health professions program for 1 year (through fiscal year 1970), authorizing such sums as may be necessary. This would make it possible to gain additional experience before proposing a major extension, since there has been only 1 year of experience.

Section 301(b).—This would clarify the provisions for projects to develop, demonstrate, or evaluate curricula for the training of new types of health technologists. It would make the following clarifying amendments to those provisions.

Section 301(b)(1).—At the present time only training centers for the allied health professions are eligible to apply for project support under this section. The bill would extend the present authority to include agencies, institutions, and organizations. Thus, institutions which do not qualify as training centers, but which have the competency to develop, demonstrate, or evaluate curricula, would be eligible to participate.

Section 301(b)(2).—This would make it clear that among the authorized purposes of the projects is the development, demonstration, or evaluation of curricula and methods of training health technologists. This would prevent an unduly restrictive interpretation limited only to curricula.

Section 301(b)(3).—This would delete the phrase "new types" as it relates to health technologists. Thus, projects to develop, demonstrate, or evaluate curricula and methods may be directed toward known types of health technologists as well as new types.

Section 301(c).—This would authorize a new section 797 of the Public Health Service Act.

This section would authorize the use of up to one-half of 1 percent of the amounts appropriated under the allied health professions training program for any fiscal year beginning with fiscal year 1970 for evaluation of the program.

PUBLIC HEALTH TRAINING

Project grants for graduate training of schools of public health for professional public health personnel have made a significant contribution to the expansion and improvement of public and community health training throughout the country and in increasing the numbers of trained public health specialists so badly needed in today's society. It has made possible special innovative programs in schools of public health to provide them with the capacity to become balanced centers of public health training and major public health consultative and investigative resources for the Federal, State, and local governments.

Under the present law, the Secretary may make project grants to schools of public health, to other public or nonprofit institutions providing graduate or specialized training in public health, for the purpose of strengthening or expanding such public health training. The present law further provides for traineeships for graduate or specialized public health training for physicians, engineers, nurses, and other professional health personnel.

Section 302.—This section would extend the above described provisions for 4 years (through fiscal year 1973). It would also raise the per diem limit for members of the expert advisory committee to $100 from the current limit of $50 to conform with the statutory authorization for compensation for members of other health manpower councils. This expert advisory committee, composed of persons representative of the principal health specialties in the field of public health administration and training, advises the Secretary on both the above programs.

TITLE IV—HEALTH RESEARCH FACILITIES

Under present law, project grants may be made for the construction of facilities for research, or research and related purposes, in the sciences related to health. Grants may be made to public or nonprofit institutions determined by the Surgeon General to be competent to engage in the type of research for which the facility is to be constructed.

Section 401.—This would extend the program for 4 years through fiscal year 1973, authorizing "such sums as may be necessary."

Section 402.—This would allow construction grants of up to 66⅔ percent for a class or classes of projects determined by the Secretary to have special national or regional significance. Not more than 25 percent of the moneys appropriated could be made available for these projects. This modifies the existing provision of the law which provides that the Federal share in the construction of health research facilities may not exceed 50 percent.

An appropriate analogy to this proposal was the special grant program to construct research centers investigating mental retardation causes and cures. Mental retardation is clearly a national problem, not restricted to a particular area of the Nation. Program needs projected a limited number of research centers distributed throughout the Nation. Given pressing local health priorities, no single university or medical school could reasonably be expected to take on the task of establishing mental retardation research centers without increased Federal sharing in the cost. A richer sharing was provided by law (75 percent) and the centers were planned, funded, and are now under construction. The special construction authority has been allowed to elapse.

The authority proposed in this section would remove the need for a series of individual, categorical authorities for such construction and allow the Department to respond to situations and problems as they arise.

Section 403.—This would raise the maximum per diem for members of the National Advisory Council on Health Research Facilities from $50 to $100 to conform with the statutory compensation for other Public Health Service advisory councils.

As indicated earlier in this document, the bill would authorize a school to make an application to the health professions educational assistance construction program if the project is for the construction of facilities which are to a substantial extent for teaching purposes but also for health research purposes or medical library purposes.

Dr. LEE. The Health Manpower Act of 1968 would extend all but one of the these laws for 4 years (fiscal year 1970 through fiscal year 1973). Since we have had only 1 year of experience under the Allied Health Professions Personnel Training Act, H.R. 15757 would provide for a 1-year extension of that act in order to gain more experience and evaluate the needs for modification or revision.

We believe that 4 years is the minimum period of assured continuation of this fundamental legislative authority if we are to ask schools to undertake major expansion of their teaching capacities or significant modifications of curricula. We therefore strongly urge that the extension of these laws be for the full 4-year period authorized in the bill.

HEALTH PROFESSIONS TRAINING

Construction

The first major amendment under title I of the bill relates to construction grants for health professions training. This amendment is aimed at simplifying and making more efficient the authorities related to the support of construction so that schools planning to construct facilities to serve a variety of functions will not be forced to deal with several authorities and several different review procedures and priorities.

Under present law, a medical or dental school applies under the health professions educational assistance construction program for funds to construct teaching facilities. But if a school is planning to construct a medical library or a research facility, the school must make separate application under those respective programs. Each application must be separately reviewed and must meet separate sets of criteria.

Moreover, under the present program, teaching space in a school can be constructed only if the space will be used for teaching programs leading to degrees as doctor of medicine, doctor of dentistry, or other first health professional degree. The amendment we are proposing would allow the inclusion in the construction grant of space for graduate, continuation or other advanced training activities, as well as training directly related to the first professional degree.

Our amendment would also authorize a school to make one application under the health professions educational assistance construction program if the project is for the construction of facilities which are used to a substantial extent for teaching purposes, but which will also be used for health research purposes or medical library purposes.

In short, we hope to bring about a more efficient and better coordinated support of a teaching facility.

This bill would authorize the Secretary of Health, Education, and Welfare to increase the Federal share of construction costs in "unusual circumstances."

In addition to these proposed changes relating to construction grants, the bill includes several significant revisions with respect to grants to schools for support or improvement of their teaching programs.

Institutional and special project grants

The law now provides for two classes of grants: Basic improvement grant and special improvement grants. The former are distributed

among the eligible schools on the basis of a statutory formula which now provides $25,000 to each school plus $500 for each full-time student enrolled. To be eligible for such a grant, the school must have an increase in first-year student enrollment over the highest enrollment in any of the preceding 5 school years—except that the Secretary may waive this requirement if he finds that the facilities of the school are too limited to permit an enrollment expansion without deterioration of quality of training.

Special project grants are awarded on the basis of individual project applications, but grants may be made only to schools which have been awarded a basic improvement grant, and there is a specific dollar limitation on the amount of any project grant. In addition, there is a combined appropriation authorization covering both basic and special improvement grants, with the specific condition that funds are to be available for project grants only after the requirements of the formula grants have been met.

Several key amendments to these provisions are proposed in H.R. 15757.

First, the appropriation authorization would be modified so that the availability of project grant funds would not be subordinated to the formula grant requirements.

Second, the basis for distributing formula grants would be different. Each school would still receive a basic $25,000, but of the remaining funds appropriated for these grants, 75 percent would be distributed on the basis of full-time student enrollments and 25 percent on the basis of the number of graduates. In the distribution of funds for full-time student enrollment, the schools would receive twice the per capita amount for enrollment in excess of the average enrollment during the 5-year base period.

In addition, effective with fiscal year 1968, the authority of the Secretary to waive the enrollment expansion requirement would be broadened to apply to cases in which such waiver would be in the public interest and would be consistent with the purposes of this program.

Third, the special project grant provisions would be amended to broaden the purposes for which such grants can be made. New authority is proposed, for example, for projects to strengthen the progam planning competencies of the schools—including the planning, development, or establishment of new programs, as well as modifications of existing programs.

Projects for planning experimental teaching facilities, including experimental designs, would also be authorized. Special emphasis would, of course, continue to be given to assisting schools in serious financial straits.

Fourth, the proposed amendments would eliminate the dollar ceilings on individual project grants, as well as the provision limiting such grants to schools that are recipients of formula grants.

Finally, the eligibility for special project grants would be expanded to include schools of pharmacy and schools of veterinary medicine.

We believe these proposed amendments will provide a more flexible basis for institutional assistance and a more realistic approach to incentives for enrollment expansion.

We propose to increase from 12 to 14 the membership of the National Advisory Council—on medical, dental, optometric, and podi-

atric education—and change its name to National Advisory Council on Health Professions Educational Assistance.

Student aid

There are a number of amendments in the bill which would adjust the health professions student loan program to provide greater incentives for participation in such programs as VISTA, and to encourage prompt repayment of loans as well as to increase to $45 million the total amount of loans which may be made from the revolving fund to student loan funds.

We are also asking for greater flexibility in the administration of student assistance programs by the schools by permitting transfer of a percentage of the student capital contribution loan funds to the scholarship program and vice versa.

NURSE TRAINING

Title II of the bill would extend for 4 additional years the several authorizations contained in the Nurse Training Act—including grants for the construction of teaching facilities, institutional improvement grants, traineeships for advanced training of professional nurses, and the provision of loans and other forms of financial aid for nursing students. In addition, several significant program additions or modifications are proposed.

Construction

First, the construction grant authorizations would be modified in several ways. The bill would authorize the Secretary of Health, Education, and Welfare to increase the Federal share of construction costs in "unusual circumstances."

The period during which the facilities must be used for the purposes for which the grant was made would be reduced from 20 to 10 years. Because of the ongoing transition in nursing education and the factors of obsolescence and maintenance costs, many schools today are reluctant to undertake the longtime commitment of space required under the Nurse Training Act. Ten years would be consistent with construction grants for teaching facilities for the other health professions.

The bill would allow the inclusion in the construction project of space for advanced training that is not degree oriented. The present definition of programs has prevented the awarding of construction grants for advanced training space.

Institutional and special project grants

Second, the present authority for partial reimbursement of diploma schools would be replaced with a broader authority for institutional—formula grants to all three categories of nursing schools—diploma schools, associate degree schools, and collegiate schools.

The statutory program review committee on the Nurse Training Act recommended that this kind of support be provided to all types of nursing schools as it has been for educational programs of the other health professions. Costs of educating nurses have increased as for all health professions where the existence of a high faculty-student ratio is essential. All types of schools are finding it increasingly difficult to operate their expensive nursing programs and often impossible to expand enrollments, attract more highly qualified faculty or to strength-

en the educational programs so as to produce better prepared nurses. In many cases, particularly in hospital-based schools, the deficits are passed along to patients through higher fees for hospital care.

Under this proposed formula grant, each school would receive $15,000, and the remaining funds appropriated would then be distributed in the same manner as proposed for the health professions schools— 75 percent on the basis of enrollment and 25 percent on the basis of the number of graduates. In the distribution of funds on the basis of the enrollment, the schools would receive twice the per capita amount for enrollment in excess of the average enrollment during the 5-year base period.

Third, the present special project grant authorization would be somewhat broadened with respect to the purposes for which grants may be made, and eligibility for these grants would be extended to cover institutions in addition to nursing schools. Planning groups are now studying local needs and resources for nursing education, yet their progress toward developing formal and continuing education programs to meet their requirements for nursing services is deterred by lack of support.

The broadened authority would permit grants to be made to institutions or agencies which do not have programs of nurse education but which could plan or develop such programs or could make major contributions to the improvement of programs of nurse education, as well as permitting, in this period of transition in nursing education, grants to junior colleges and colleges which are planning and developing arrangements with diploma programs.

It would also assist the hospital schools with ongoing planning and phasing processes so that this period of transition in nursing education would be orderly. Graduations from associate degree and baccalaureate programs are increasing and will continue to increase as more and more students select academically based preparation. Graduations from diploma programs, which are the predominant producers of practicing professional nurses, must also increase to insure production of the number of nurses needed. Hospitals will continue to provide the setting where students learn and practice patient care.

Student aid

Fourth, the student aid provisions of the act would be strengthened in several important respects. The present limited authority for "opportunity grants" for nursing education would be replaced with a broad program of scholarship grants patterned after the scholarship program for students in health professions schools, with a maximum scholarship of $1,500. Coupled with the loan program, the scholarships would allow institutions greater flexibility in meeting individual students' financial requirements and provide more realistic support to meet educational costs.

In addition, the student loan provisions would be amended to increase the maximum loan to individual students from $1,000 to $1,500; to postpone loan repayments during periods of service with VISTA or the Peace Corps; and to liberalize the loan cancellation or "forgiveness" provisions by increasing the annual cancellation rate for service as a professional nurse in publicly owned hospitals in substantially populated, nurse-shortage areas, and by eliminating the present 50-

percent limit on the portion of the loan that may be canceled because of such service.

Coupled with the loan program, the scholarships would allow institutions greater flexibility in meeting individual students' financial requirements and provide more realistic support to meet their educational costs.

Finally, the accreditation provision would be amended to delete the authority of the Commissioner of Education to accredit the schools directly. It would also authorize the Commissioner to utilize the services of State agencies, as well as professional accrediting agencies, in evaluating the quality of training offered by nursing schools applying for Federal assistance.

ALLIED HEALTH AND PUBLIC HEALTH

Allied health

As mentioned earlier, under title III of the bill the allied health professions program would be extended for 1 year, with a few clarifying amendments. We have been operating only a year under this authority, and we have not had sufficient experience to recommend either piecemeal amendments or major changes in the act. We feel there should be a thorough review of the program, careful analysis of its strengths and weaknesses prior to any significant modification or extension.

Public health

The program of traineeships for graduate or specialized training in public health and the program of grants to institutions for strengthening or expanding public health training would be extended for 4 years.

HEALTH RESEARCH FACILITIES

I want to turn now to title IV of H.R. 15757.

The health research facilities construction program has played a major role in improving the quality and quantity of the Nation's health research over the past decade.

Since first authorized in 1956, 406 medical schools, universities, graduate schools in the healing arts, and other nonprofit institutions have received $452 million in project funds.

These dollars have remodeled or constructed hundreds of laboratories and research facilities and provided equipment for difficult and increasingly complex research into the causes and cures of disease and the basic elements of life itself.

There have been more than 1,100 project awards, involving every State plus the District of Columbia and Puerto Rico; 913 of these projects are completed. Construction has begun on an additional 185. And 53 more are preparing for construction.

In many cases these construction grants have enabled new medical schools to incorporate research facilities into their basic design.

In other cases, existing schools and other institutions have been able to expand greatly their research capacity and enhance their training programs by attracting and utilizing researchers and their findings.

In all cases the facilities and equipment have contributed significantly to the astonishing expansion of our knowledge about disease and disability and what can be done about them.

But this is a growing program. So long as the quest for new knowledge in the health sciences continues to challenge the country's best minds there will be a continuing need for expansion of research facilities.

So long as technological progress offers new research opportunities and new avenues of exploration, we will need to modernize, expand, and remodel existing research facilities.

We are recommending an amendment which would authorize a Federal share of up to 66⅔ percent for the construction of facilities of special regional or national significance. Not more than 25 percent of the funds appropriated in any fiscal year could be used for this purpose.

The health research facilities construction program expires June 30, 1969. We ask you to extend it for another 4 years—until June 30, 1973—so that the momentum gained over the past decade will not be lost.

Mr. Chairman, I have given you only a brief description of the most significant provisions in this legislation. Such a statement can hardly convey the urgent need for early enactment of this legislation and continuing support of these programs. Nor can I, in this limited time, fully describe the impact H.R. 15757 will have on the educational opportunities for thousands of Americans and the health of all our citizens.

I and my associates will be happy to answer your questions and add whatever we can to the committee's understanding of this bill.

Thank you.

Mr. JARMAN. Thank you, Dr. Lee. I think it is an excellent presentation—succinct, and containing exactly the kind of information that we need to have as we begin hearings on this tremendously important bill. The committee is well aware of the need for support of the general objectives of the bill, and is conscious of how much has been achieved in a short period of time in these programs.

One thing I will ask at the beginning of the questioning is this. All of the authorizations in the bill are open ended. Are you in a position to give us cost estimates?

Dr. LEE. Yes, sir, and I will submit that for the record at this time, if you wish, Mr. Chairman.

Mr. JARMAN. All right.

(The information referred to follows:)

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE ESTIMATED NEW OBLIGATIONAL AUTHORITY REQUIRED FOR FISCAL YEARS 1970–73 UNDER "HEALTH MANPOWER ACT OF 1968"

[In millions of dollars]

New obligational authority	Fiscal year—			
	1970	1971	1972	1973
A. Health professions educafional assistance:				
1. Construction grants	170.0	225.0	225.0	225.0
2. Instutitional support	100.0	150.0	190.0	220.0
3. Scholarships	16.0	16.8	17.4	18.0
4. Student loans	35.0	35.0	35.0	35.0
B. Nursing:				
1. Construction grants	25.0	35.0	40.0	50.0
2. Institutional support	30.0	45.0	70.0	100.0
3. Traineeships	15.0	19.0	23.0	28.0
4. Scholarships	20.0	30.0	33.0	34.0
5. Student loans	20.0	21.0	22.0	23.0
C. Allied health:				
1. Construction grants	10.0			
2. Institutional support	20.0			
3. Traineeships	5.0			
4. New methods grants	4.5			
D. Public health:				
1. Project grants	8.5	12.0	14.0	15.0
2. Traineeships	10.0	14.0	17.0	20.0
E. Health research facilities—construction grants	35.0	50.0	50.0	50.0

The projections contained in this table represent departmental predictions and do not represent the administration position on the future program or budget requirements. Personnel requirements will be dependent on program developments and budget factors which at this time cannot be fully predicted.

Mr. JARMAN. Mr. Rogers?

Mr. ROGERS. Thank you, Mr. Chairman.

I think your statement is comprehensive. There is a great deal in it. It is going to take the committee a long time to analyze it in great detail. Perhaps we will have to have you come back to explain some things. I am not sure.

How many new students would be provided by this bill?

Dr. LEE. Well, the number of new students will, of course, be dependent eventually on the funding, both for construction and for the institutional support grants, formula and project grants. And it will also be dependent on the changes that occur in the health profession schools during the years ahead.

There is a great deal of ferment at the present time in these institutions. There is much change in the wind, and significant reforms have been undertaken in a number of schools.

One of the purposes of this kind of authority we are asking for is to permit and to encourage this kind of innovation and change. Such as experimentation with shortening of the curriculum, and development of new courses or new curricula which may decrease the costs.

We know the costs of construction are rising, that salaries are increasing. And these things make it difficult to give any exact projection of any number of new students, particularly the graduates that will result from this legislation.

But the purposes, I think, are clear: to sustain the institutions and to provide them with the stability and support they need to meet the challenges ahead. There are significant incentives to help them, when they feel it is feasible to expand enrollment. The number of graduates

may be increased by two methods: by increasing enrollment, and in some cases, shortening the period of the educational process.

Mr. ROGERS. What is the shortage of physicians presently, would you say?

Dr. LEE. We estimate 50,000. It is, of course, difficult to be exact about these things.

Mr. ROGERS. This is based on how many per how many of population?

Dr. LEE. This is based on a variety of factors. There has been an improvement in the ratio of physicians to population since 1963, and I think that the present ratio has been 142 per hundred thousand.

I am informed that is correct, 142 per hundred thousand. Needs change with the shifts in population, with the shifts in the disease patterns—the increased number of people with chronic disease, for example, who require more care—and as we eliminate certain diseases in youth and childhood, people live longer, and they require more care, more physicians' services and nursing services.

Mr. ROGERS. Could you give us a projection of the next 5 years on the shortages?

Dr. LEE. We can do that for the record, Mr. Rogers.

Mr. ROGERS. Yes, I realize you may not have it. I think that would be helpful, and for dentists as well.

(The information requested appears in statement below.)

Mr. ROGERS. What is the shortage in nurses?

Dr. LEE. About 145,000, Dr. Fenninger tells me, and there are approximately 660,000 nurses in active practice. So with a shortage of 100,000 to 150,000, we have a serious problem.

We are making a major effort, as you know, at the present time to bring back into active practice nurses who are licensed but who are married or for one reason or another have become inactive, and to provide them with the refresher training and the educational opportunities that they need to reenter practice.

There is a large pool of nurses in this category, and a number of them in the last several years have in fact returned to practice.

Mr. ROGERS. Could you give us a projection of your nurse shortage in the 5-year period, too?

Dr. LEE. Yes, sir.

(The information requested follows:)

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE STATEMENT ON PROJECTION OF PERSONNEL SHORTAGES IN THE HEALTH PROFESSIONS OVER THE NEXT 5 YEARS

Among the many factors involved in the projection of numbers of people needed in the health professions over the next 5 years are: (1) The rate at which the demand for services increases; (2) the rate of change in the age and geographical distribution of the population; (3) the rate at which medical knowledge and technology change; (4) the ways in which health services are organized and professional and technical skills are utilized; (5) the rate at which educational and training institutions can develop and acquire faculties and facilities to accommodate an increased student body and provide the students with sound educational and training experiences; (6) the recruitment of students to the health professions; (7) the length of the educational period; (8) the rate at which inactive practitioners return to work and can acquire knowledge and techniques which are current. These variables are all related to one another and must be considered in making projections.

The provisions of Title 18 of the Social Security Act involving a segment of the population (the older age group) which requires considerably more personal health care than people who are between ages 15 and 65, have increased the de-

mand for health services not only in institutions but also in ambulatory facilities and in the home. Particular demands are placed not only on physicians and nurses, but also on other health professions who deal with the problems related to chronic diseases and on those who administer health care institutions and programs. The experience with Title 18 has been brief. Its full implications for health manpower are not yet clear but it is evident that all health professions and occupations have been affected by it as well as the institutions providing care.

Since Title 19 of the Social Security Act has not been fully implemented in all States, its implications for health manpower needs are even less well defined than those of Title 18. We do know from previous experience, however, that the incidence and prevalence of illness, particularly chronic illness, among the poor and the disadvantaged is higher than that of people whose income and education have been greater. There is clear evidence also that infants and young children who are provided for under Title 19 make greater use of health services than those in the middle years, and that there is undetected illness among the group provided for under Title 19. We can, therefore, estimate that there will be an increased demand for health services, with a concomitant increase in the need for health manpower, over the next 5 years although the extent of the need cannot be predicted with certainty since health services are used only if those who need them know how to avail themselves of the services.

Medical knowledge and technology have undergone very rapid changes in the last two decades and we can predict that the rate of change will increase over the next five years. Most of the changes have required higher levels of skill and knowledge on the part of those who are providing the care. The advancement of knowledge and technology have also led to survival of people whose convalescence may be longer and who need care for a prolonged period during their recovery. While improvements in the prevention of certain illnesses, such as poliomyelitis, has decreased the need for medical care and decreased the demand for certain kinds of health services, the ability to treat other illnesses which previously could not be treated, the increase in the population and their need for care, and the increased ability to pay for care through Title 18 and Title 19 as well as through other public and private programs has more than offset the gains which have been made in the prevention of certain diseases.

Organization for the delivery of health services and in utilization of the skills and knowledge of practitioners has undergone continual change in the last two decades but these changes have not been sufficiently rapid to meet the increased demand for health services nor has it kept pace with the rapid changes in medical knowledge. We can anticipate that changes in organization and utilization of health professionals will accelerate and will alter the needs, both qualitatively and quantitatively, for those in the health professions and occupations. The extent to which these changes will take place over the next five years involves so many dependent variables that precise prediction of shortages cannot be made but can only be approximated.

Preparation of teachers in the basic sciences and the clinical disciplines of the health professions requires several years beyond the initial basic education. The capacity of existing institutions to prepare teachers is limited as is the number of candidates who wish to undertake such preparation. Schools of the health professions cannot undertake substantial expansion of their enrollments without increasing their faculties if the quality of professional education is to be maintained. In certain fields essential to the preparation of students in the health professions shortages of faculty now exist; in others there are barely enough teachers to maintain present enrollments. The lack of teachers therefore becomes a limiting factor in the increasing production of increased numbers of qualified health professionals and in the alleviation of shortages of personnel.

A number of schools are experimenting with ways of shortening the time required for professional education. It should be recognized, however, that the body of knowledge in the health professions is vast, that time is required to develop mature judgment so essential to professional practice and that professional education can only be undertaken by students who have completed their general education and the subjects requisite to an understanding of the medical sciences. Shortening of the educational period requires shortening of the entire period of education, not necessarily the shortening of professional education alone. It will take a number of years before changes in educational programs will have an appreciable effect on the production of health professionals.

The planning and construction of facilities in existing schools and for new schools are lengthy processes because of their great complexity. Federal programs for the support of the construction of facilities for education in the health

professions have been effectively in existence for little more than three years. Appreciable effects and benefits derived from these programs will not be felt before 1973. Their major impact will occur in the mid and late 1970's and 1980's. These programs are, by their very nature, long term investments as are the programs of student aid and institutional support.

Today there is essential universal agreement as to the existence of very large unmet needs for health workers. There is also agreement that the present educational capacity is inadequate to meet these needs and that production must be increased as rapidly as educational capability will permit. The shortages today are so great as to make it apparent that the greatest effort is needed even if we are to keep up with the growing demand. The statistics which are given here are to be considered not as exact measurements but as orders of magnitude. They are given in full realization that increasing demands, changing patterns of utilization, technological developments, population growth, and many other factors are constantly changing the picture, but the growing potential of medicine in this country can be expected to require a continually growing and better prepared health manpower force.

The projections of shortages prior to the enactment of the HPEA Act have, as a result of the Act, and a variety of factors relating to demand, been altered in varying degrees in the respective professions.

Current projections of shortages of *physicians* indicate a reduction in the shortage of 10,000 (from 52,000 in 1968 to 42,000 in 1973).

On the other hand, the projected shortages of *dentists* is increasing over the same period, for, although the supply is estimated to increase by 6,000 between 1968 and 1973, the estimated demand for dental services will result in a need for 12,000 dentists in addition to the 6,000 who are estimated to be added between 1968 and 1973.

The supply of nurses is estimated to increase by 95,000 between 1968 and 1973. However, the demand for nursing services is likely to rise precipitously. It is estimated that by 1973, despite the increase in the numbers of nurses trained and returning to practice, there will be a shortage of 186,000 as compared with a shortage of 141,000 in 1968.

The fields of nursing and dentistry demonstrate increasing shortages over this time period, as the growth of need will continue to outrun the growth in supply. The long lead-time in the educational process at the advanced levels of medicine, dentistry, nursing, and other health professions means that the effect of health manpower programs in increasing the health manpower force must be judged over a relatively long time period.

PROJECTION OF SHORTAGES IN THE HEALTH PROFESSIONS, 1968–73

	Medical doctor and doctor of osteopathy		Doctor of dental science		Registered nurse	
	1968	1973	1968	1973	1968	1973
Need	353,000	387,000	109,000	127,000	800,000	940,000
Supply	311,000	345,000	100,000	106,000	659,000	754,000
Shortage	52,000	42,000	9,000	21,000	141,000	186,000

Mr. ROGERS. The proposed legislation, then, has no required number of new students to be accepted by universities if they accept aid?

Dr. LEE. The proposed legislation does include an expansion-of-enrollment requirement, Mr. Rogers. It refers to the average enrollment in the preceding 5 years, and the schools will have to meet that requirement.

Mr. ROGERS. I didn't see anything in your discussion requiring an increase, that if they do, they have an incentive to double the amount instead of the amount for one student. They get the amount for two students for every new one taken over a 5-year period?

Dr. LEE. They have an increased incentive for the added enrollment.

Mr. ROGERS. It is double the amount of what they would get for one student.

Dr. LEE. That is right.

Mr. ROGERS. Why is it you don't have a requirement that they should increase 5 percent or 10 percent of their student body?

Dr. LEE. There is a requirement in the legislation at the present time.

Mr. ROGERS. It is very modest.

Dr. LEE. We have not eliminated that requirement. Mr. Rogers, we gave serious consideration to the effect of increased expansion of enrollment requirements. It is a complicated matter. As you know, most medical and dental schools have been full to overflowing for many years. Our experience has shown that, at base, the single most important factor in increasing enrollments, is construction of additional space. Next is the availability of operating moneys. Every time a medical school adds one first-year place, it assumes the responsibility for providing that place in each of the succeeding years until the student graduates. It must provide the faculty, the space, and the clinical experiences. In the proposed legislation, we have tried to give a greater incentive to increase enrollment. And one of the purposes of removing the ceilings on the project grants is that when construction expands the capacity of a school and makes it possible to expand enrollment rapidly, project grants could be used for purposes related to teaching the enlarged student body.

Mr. ROGERS. Just looking at some figures furnished by the American Medical Association, it said in 1937 medical schools graduated over 5,400; and in 1947, 6,400; in 1957, 6,800; and in 1967, 7,700; that total expenditures on medical schools, 1940–41, $32 million; 1965–66, $882 million.

And yet we only have an increase of about, at the most, 1,500 to 2,000 graduates. The money expenditure has gone up from $32 to $882 million.

Dr. LEE. I think there are several factors involved.

I think if we look back at the total expenditures on health and medical care in 1941 and compare that with the total figures this year, and we can provide that for the record, we will see not comparable increases, but very great increases in dollar costs——

Mr. ROGERS. I am talking about medical schools.

Dr. LEE. I realize that, but I am trying to relate the two.

There have been very great increases in costs. There have been significant increases in salaries for teachers.

In 1941 many of the teachers in our medical schools were not salaried. They were volunteers. They were not full-time, and there was little research in our schools at that time. We have dramatically altered the research base in our schools.

I think we have markedly improved the quality of instruction. We have markedly improved the knowledge base of professional education. And all these things do increase the cost of medical education and the education in the other health professions.

Mr. ROGERS. Look at this—medical school graduates, 1958–59, 6,860; from 1965–66, 7,574. The percentage of increase is 10.4 percent.

Full-time faculty, 1958–59, 10,350; and 1965–66, 17,149—a percentage increase of 65.7 percent. There is a percentage increase in expenditures of 176.5 percent in a comparison of those same years.

There, it seems to me, with 10,350 instructors and 6,860 graduates, in 1958–59, we find that in 1965–66, 17,149 instructors are only putting out 7,574 graduates.

Dr. LEE. I think we have to realize that the teachers in the medical schools are teaching not only medical students; they are teaching interns, residents——

Mr. ROGERS. Didn't they always do this?

Dr. LEE. There has been a marked increase in specialization. We have more specialties. We have more probing research in areas so that it takes more teachers because of the more specialized nature of medicine. And I think this is true in graduate education generally, whether it is medicine, engineering or other areas. You will find significant increases in faculty. You will find a longer period of not only medical education but the internship, residency period in a variety of areas.

The other doctoral and graduate students who are being trained in the university medical centers and the participation of the medical school faculty in these activities——

Mr. ROGERS. But this is seven instructors for seven graduates increased.

Dr. LEE. If you said their only activity was related to teaching undergraduate medical students, but they are involved in a number of other activities.

Mr. ROGERS. This was so all the time, wasn't it? We haven't had that much of a dramatic change from 1958 or 1959. That is only 10 years ago.

Dr. LEE. There is a change——

Mr. ROGERS. These are full-time instructors in medical schools?

Dr. LEE. We are just beginning to provide an adequate faculty base in our schools so that we can provide the kind of quality instruction necessary. We still have major shortages within areas in the schools and needs that must still be met.

Mr. ROGERS. It seems to me we are getting completely out of balance when we can't produce, with the shortages existing in this nature, with all the money we are now putting into medical schools, to the faculties, and we are not turning out any more graduates than we are. There is something wrong.

I hope your department will begin to look into this, and I hope this committee will do it, Mr. Chairman, to see what has happened to this ratio.

Why does it take seven more instructors? At least these figures would signal something needs to be done. Somebody is just not using their talents somewhere if you have got to have seven more instructors for every college graduate. No wonder we are having shortages.

Dr. LEE. I think that obviously we are examining the needs of each of the schools. We are examining the needs necessary to begin to tool up to meet the manpower requirements for health services.

Certainly, the schools, with fewer teachers, could turn out a much inferior product.

Mr. ROGERS. I don't know that that has to be the conclusion drawn. I am not sure it takes seven new instructors for every graduate over and above what the base is to put out a competent doctor. I am not sure that that is necessary.

Rather, I would think, we are not properly utilizing the talents we have in the instruction field.

Dr. LEE. If we look at the time of the faculty member, how he spends his time, we find that he does not spend his full time teaching the student.

Mr. ROGERS. This may be our difficulty today. He is doing too much research, perhaps?

Dr. LEE. Taking care of very sick patients.

The university medical centers have increasingly become the referral centers for patients with special problems. I have visited many hospitals, and I don't think we will find many of the faculty underemployed.

Mr. ROGERS. Perhaps we are not using them in the right way, then. These are supposed to be full-time instructors, according to the figures given by AMA.

Dr. LEE. They are full-time faculty members. But that doesn't mean they are spending full time just in teaching. They do research, they take care of patients——

Mr. ROGERS. They have interns going with them.

Dr. LEE. The highest cost programs are the fellowships, I think. In these advanced training programs you will have a lower ratio, almost a 1-to-1 ratio in some cases, of a graduate student or fellow with an individual faculty member in a specialized area, such as cardiovascular research, heart surgery, and this sort of thing.

Mr. ROGERS. Look at this: University of Kansas School of Medicine, graduates, 1957—107. In 1967 it had 103. They graduated less.

The University of Pennsylvania School of Medicine, 126 in 1957 and 122 in 1967.

This is a downward trend.

Let me ask you this: How many less nurses graduated this year than last?

Dr. LEE. Total number of nurses?

Mr. ROGERS. Yes. It seems to me we are going down. We are putting money into building up faculty, but we are not getting results.

I understand there are 2,000 less graduates this year in nurse training programs than there were last year.

Dr. LEE. We can provide those figures for the record. Dr. Fenninger and I don't have them right here.

(The information requested follows:)

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE DATA ON ADMISSIONS AND GRADUATIONS FROM SCHOOLS OF NURSING, 1957–67

Graduation figures for this year (1967–68) are not yet available.

The following table shows that graduations have increased over the last decade. In the last academic year for which figures are available (1966–67), there was an increase of 3,112 over the previous year. Graduation figures for 1967–68 are expected to be still higher. A drop in admissions in 1966–67 (2,000 below 1965–66) will be reflected in later graduations, but estimates from the 1967–68 fall admissions indicate they will be up again.

ADMISSIONS TO SCHOOLS OFFERING INITIAL PROGRAMS IN PROFESSIONAL NURSING, BY TYPE OF PROGRAM, 1957–67 [1]

	Total admissions	Type of program		
		Baccalaureate	Associate degree	Diploma
Academic year:				
1957–58	44,221	6,866	953	36,402
1958–59	46,263	7,275	1,266	37,722
1959–60	49,166	7,555	1,598	40,013
1960–61	49,487	8,700	2,085	38,702
1961–62	49,805	9,044	2,504	38,257
1962–63	49,521	9,597	3,490	36,434
1963–64	52,667	10,270	4,461	37,936
1964–65	57,604	11,835	6,160	39,609
1965–66	60,701	13,159	8,638	38,904
1966–67	58,700	14,070	11,347	33,283

[1] Includes 49 States and Puerto Rico for all years, Virgin Islands beginning 1965–66, and Guam in 1966–67. Alaska has no registered-nurse program.

Source: National League for Nursing, State-approved schools of nursing, R.N. annual editions.

GRADUATIONS FROM SCHOOLS OFFERING INITIAL PROGRAMS IN PROFESSIONAL NURSING, BY TYPE OF PROGRAM, 1957–67 [1]

	Total	Type of program		
		Baccalaureate	Associate degree	Diploma
Academic year:				
1957–58	30,410	3,671	425	26,314
1958–59	30,312	3,943	462	25,907
1959–60	30,113	4,136	789	25,188
1960–61	30,267	4,039	917	25,311
1961–62	31,186	4,300	1,159	25,727
1962–63	32,398	4,481	1,479	26,438
1963–64	35,259	5,059	1,962	28,238
1964–65	34,686	5,381	2,510	26,795
1965–66	35,125	5,498	3,349	26,278
1966–67	38,237	6,131	4,654	27,452

[1] Includes 49 States and Puerto Rico for all years, Virgin Islands beginning 1965–66, and Guam in 1966–67. Alaska has no registered-nurse program.

Source: National League for Nursing, State-approved schools of nursing, R.N. annual editions.

Mr. ROGERS. To me, this signals great mismanagement in the medical colleges, and we cannot continue to put vast sums of money building up professional pay without results.

Now, if we get results, that is different. But here we have increased 176 percent in the money, the full-time faculty has increased 7,000 over this same period of time, and the graduates have increased about 700.

Dr. LEE. I think we have to look at the timing of Federal aid and the purposes of Federal funds flowing into the medical schools.

Mr. ROGERS. It seems we are hurting it rather than helping it, according to the figures.

Dr. LEE. For a number of years the faculty of the medical schools were serving a national purpose in research, and faculties were added for this purpose. And I think that we have seen brilliant results from this effort.

We have seen, also, more knowledge and an increasing demand for services.

Mr. ROGERS. We have ongoing programs with the National Institutes of Health. That is not what I am talking about. I am talking

about medical schools whose purpose is to turn out doctors and dentists and nurses, manpower for health needs of this Nation.

Dr. LEE. Their purpose is also to advance knowledge.

Mr. ROGERS. I guess all education has to do that.

Dr. LEE. They are a national resource, and have accepted major national responsibilities in this regard.

Mr. ROGERS. Here is what I am trying to get at—what we need is manpower to minister to people even with present knowledge.

Now, the point I am trying to make is that if we can do something on manpower, and that is the thrust of what this legislation will bring about, to get the manpower out, to treat somebody who is sick, without doing so much research—all I want to do is get doctors and nurses out to treat people who are now sick, with present knowledge where they can be helped.

If we are having fewer nurses turned out, a very small increase in doctors, something is wrong with the way we are running the program. We are putting too much into fancy buildings, too much into high-paid salaries where they are not really instructing. And I think we need to review this.

I hope you will try to encourage your medical schools to look at the way they are using their teaching staff, because I want this committee to do this if the chairman and the other committees agree.

These figures signal to me that a great deal needs to be done, but we will pursue this later.

Dr. LEE. We have a common goal, without any question, Mr. Rogers.

Mr. ROGERS. I am sure we do.

Dr. LEE. On the nursing figures, the figures I have given, in 1965–66, the total graduates were 35,125; in 1966–67, 38,237. That is an increase of a little more than 3,000 in that year.

We don't have the 1968 figures.

Mr. ROGERS. I don't know. Is Miss Thomas here?

Maybe you could straighten me out. Could we go off the record a minute.

(Discussion off the record.)

Mr. ROGERS. If you could, verify this for us.

Dr. LEE. We will, most certainly.

(See p. 63.)

Mr. ROGERS. I think we do need to look into this whole matter.

You mentioned the Secretary could do certain things under "unusual circumstances." What do you mean by "unusual circumstances"?

Dr. LEE. In a situation where a school, for example, might have to close because it simply does not have the resources available to build the facilities which are essential if they are to continue their programs.

A school moving to a new location would be another example of an "unusual circumstance."

Dr. Fenninger might have other examples.

Dr. FENNINGER. There might be a school that is revamping its curriculum, where it would require a different kind of facility than the school had had in the past, and where the increase in enrollment at the time of this transition would seriously jeopardize the educational program, yet where new facilities would be needed to launch the next step. This might be an "unusual circumstance" also.

In other instances, schools having obsolete facilities and desperately needing to modernize or replace these facilities if they are to maintain

the quality necessary to attract and retain their students, are unable to raise the required 50 percent matching moneys from non-Federal sources.

Mr. ROGERS. Let me ask you two or three more questions.

The number of new students that would be required under present law is how many?

Dr. LEE. Present law requires 2½ percent of the highest first year enrollment in the school for the 5 school years July 1, 1960, through July 1, 1965, or five students, whichever is higher.

Mr. ROGERS. What would it cost, could you estimate, to have a 30-percent increase in a beginning class, or, eventually, a graduate class, if we start now?

Could you give me those figures? If you could, let us have those figures.

Dr. LEE. For each of the professional schools?

Mr. ROGERS. Yes, including nursing.

(The information requested follows:)

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE STATEMENT ON ESTIMATES OF COST OF 30-PERCENT AND 50-PERCENT INCREASE IN THE NUMBER OF PLACEMENTS IN SCHOOLS OF MEDICINE, OSTEOPATHY, AND DENTISTRY

Enrollment increases of these orders of magnitude are possible under proper conditions of availability of facilities, operating resources, and student support. These will require both time and money.

Because of the time required to prepare and acquire faculty, to construct facilities, and to develop teaching programs, the earliest realistic goal for the achievement of a 30% increase in first-year places (over school year 1968 base) will be FY 1975 (which is the school year beginning in the fall of 1974); and for a 50% increase, FY 1980 (the fall of 1979).

The following tables are based on the assumption that non-Federal support for education will increase at rates proportional to Federal support, that services rendered by primary teaching hospitals and clinical facilities of the health professions schools will be reimbursed at full cost and that research carried out by the health professions schools will also be fully funded. If there is not a proportional increase in non-Federal funds, then the Federal share would have to be increased by that difference. The projections of Federal expenditures shown in the tables would be inadequate to meet the educational expenditures of the schools under that circumstance.

Construction

Substantial increases in facilities will be required. The achievement of the proposed goal would require (in millions of 1968 dollars):

	Estimates of Federal share (30-percent increase in 1st-year enrollments by fiscal year 1975 and a 50-percent increase by 1980)	Estimates of Federal share submitted with proposed legislation
1970	$170	$170
1971	225	225
1972	225	225
1973	225	225
1974	250	----------
1975	250	----------
1976	250	----------
1977	250	----------
1978	250	----------

This is the Federal share alone. The needed matching funds would be of the same order of magnitude.

Institutional and project grants

The development of the necessary faculties and operating resources will also require both time and money. The following table is based on the same time scale as that for Construction. The Federal contribution would be represented by extension and expansion of the institutional and special project grants as follows (in millions of 1968 dollars) :

	Estimates of Federal share (30 percent increase in 1st-year enrollments by fiscal year 1975 and a 50 percent increase by 1980)	Estimates of Federal share submitted with proposed legislation
1970	$100	$100
1971	150	150
1972	190	190
1973	220	220
1974	250	----------
1975	275	----------
1976	300	----------
1977	325	----------
1978	350	----------
1979	400	----------
1980	450	----------

Student aid

The requirement for student support would also increase substantially, reflecting increased numbers of students, cost to the student for his education, and the increase in students from lower income families. An expanded traineeship and fellowship program would be a part of the cost of meeting faculty expansion (in millions of 1968 dollars) :

	Estimates of Federal share (30 percent increase in 1st-year enrollments by fiscal year 1975 and a 50 percent increase by 1980)	Estimates of Federal share submitted with proposed legislation
1970	$51.0	$51.0
1971	51.8	51.8
1972	52.4	52.4
1973	53.0	53.0
1974	70	----------
1975	75	----------
1976	80	----------
1977	85	----------
1978	90	----------
1979	95	----------
1980	100	----------

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE STATEMENT ON ESTIMATES OF COST OF 30 PERCENT AND 50 PERCENT INCREASE IN THE NUMBER OF GRADUATES OF SCHOOLS OF NURSING

Substantial expansion of nursing schools will require tremendous effort by the schools themselves, the communities, and State and Federal governments. Enrollment increases of 30% and 50% are feasible under proper conditions of adequate facilities, sufficient numbers of well prepared teachers, operating resources, an increased proportion of high school graduates who wish to undertake careers in nursing and support for students to enable them to complete their studies.

Because of the time required to prepare teachers, to construct facilities, to develop teaching programs and to recruit students, the earliest realistic goal for a 30% increase in first-year nursing students is FY 1975 and for a 50% increase by FY 1980. The corresponding increases in graduates would come in FY 1977 and FY 1982. Although levels of funding influence the rate at which schools can increase their enrollments they are by no means the only factor.

Nursing education and training, unlike medicine and dentistry, follows three paths: (1) the diploma program which is 3 years in length and is provided by hospitals; (2) the associate degree program (requiring two years), which is based in junior and community colleges with the clinical experience being provided in hospitals affiliated with the community or junior college; and (3) the baccalaureate program in colleges and universities, which is usually 4 years in length—the clinical instruction being given in hospitals, owned or affiliated with the college or university. All three programs prepare students to become registered nurses.

In addition to the programs described above, there are graduate programs in nursing. These are of the utmost importance in preparing the teachers, the administrators, and the clinical specialists who are so essential to any expansion of enrollment in nursing programs and to high quality patient care which is fundamental to nursing education.

These graduate programs have a limited capacity and limited resources. They must be strengthened and expanded before enrollments of nursing students increase so that teachers may be available to fill the many vacancies in existing schools and to staff the faculties required for maintenance and expansion of existing schools and the new schools which must be established if the number of nursing graduates is to be substantially increased.

Nursing education is in a period of transition. An increasing number of young people who wish to become registered nurses are seeking their training in educational institutions, that is, junior and community colleges and 4 year colleges and universities. These junior colleges and 4 year colleges are seeking affiliations with hospitals to provide sound clinical training for their students. Some hospitals which have heretofore had diploma programs are affiliating with educational institutions, discontinuing their diploma programs and providing the resources for the clinical experience for students in associate degree or baccalaureate programs. During this period of transition, expansion of enrollment may be quite difficult and can take place only after the transition is completed.

Orderly development of nursing programs in educational institutions, and strengthening the hospitals as clinical components of nursing programs are essential if quality of nursing education is to be maintained and the number of nurse practitioners, teachers and administrators are to be maintained and increased in the future. All three programs, diploma, associate degree and baccalaureate, must be maintained and strengthened in this transition. Planning and cooperative efforts among institutions, their faculties and staffs and the community are essential. The recent developments in nursing education have indicated the need for Federal funds to assist and insure development of the numbers and types of programs needed. These developments, the changes in hospital based programs, the proliferation of associate degree programs, the enlargement and establishment of baccalaureate and graduate programs, the concomitant increasing demand for clinical facilities for student experience and the appropriate interlocking of education for nursing with that for other health disciplines—are straining the resources of the institutions and the agencies that have responsibilities for serving patients as well as providing learning experiences, and of the educational institutions faced with enlarging their present programs and adding new ones. Institutions, communities, States and regional groups are looking to the Federal government to support and share in their efforts to assess needs and to pool resources.

The following discussion of the resources required to increase the number of graduates in nursing by 30% and 50% is based on the assumption that non-Federal support for nursing education will increase at rates proportional to Federal support and that non-Federal matching funds for construction of facilities can be acquired by the institutions in sufficient amounts to provide the very large sums that will be necessary for increases of this magnitude.

Construction of additional teaching spaces

A 30% increase over the 1966–67 graduates (38,000) from schools of nursing would require 11,500 more graduates or a total of 49,500 per year. If this number were achieved by FY 1977, the cost of constructing the necessary additional teaching space would require an estimated $500 million (1968 dollars) Federal share and non-Federal matching funds of $300–$400 million.

A 50% increase in graduates by 1982 would require an estimated additional $175 million as the Federal share between FY 1977 and FY 1979 with non-Federal matching funds of $120–$160 million.

Institutional and project grants

Expansion of enrollment of existing schools and the creation of new schools requires the recruitment of many more students, the development and recruitment of faculties, and the provision of major operating resources to support faculties and educational programs. In order to achieve a 30% increase in nursing graduates by FY 1977 approximately $870 million total Federal funds from FY 1970 through FY 1977 would be required for institutional and project grants. A 50% increase by FY 1982 would require Federal grants of approximately $600 million from FY 1978 through FY 1982. (All estimates are in terms of 1968 dollars.)

Student scholarships and loans

If able young people are to be recruited into nursing from all portions of our society, many of them will need substantial financial aid in the form of scholarships and loans. Greatest emphasis will indubitably be on scholarships as most young women are not willing to take on a major indebtedness that will be a responsibility of her future husband.

Traineeships

Funds for traineeships are of the utmost importance to enable nurses to prepare themselves as teachers, clinical specialists who participate in teaching and patient care and administrators. The rate at which traineeships can be taken depends on several factors including: (1) the capacity of collegiate and graduate schools of nursing to accept students; (2) the number of nurses prepared to undertake advanced education; (3) the rate at which nurses can leave the work force where patient care is given to return school as full-time students without adversely affecting health services; (4) the availability of funds for the support of nurses during their advanced training; (5) the availability of resources to the collegiate and university schools of nursing where advanced education is provided.

Many more nurses must have advanced preparation if schools are to expand their graduations. This advanced educational experience must be provided before faculties can be increased to take increased numbers of students.

When the various factors which affect advanced training have been weighed, our best estimate is that by FY 1974, $35 million will be needed annually for nurse traineeships.

Mr. ROGERS. How much emphasis are you going to put on diploma schools in nursing?

Dr. LEE. I think there is no question that they constitute the major source of graduates. We feel there is an increasing interest among the diploma schools and associate degree schools and the baccalaureate schools in working together to develop stronger programs. These closer interrelationships are emerging between the academic institutions and the hospital programs because of the desire on the part of the students to enter academically based programs, and the necessity for the strong and meaningful clinical hospital experience necessary for quality patient care. We will see a great deal more of this in the next 5 years.

Mr. ROGERS. I would like to see some specifics on what you are planning on diploma schools, how many you expect to try to get going, what your projections would be, how you will tie in a junior college associate degree program with a diploma and, of course, the baccalaureate degree. I would like to see some specifics.

Dr. LEE. On both construction and the institutional support grants?

Mr. ROGERS. Yes.

Dr. LEE. Yes.

(The information requested follows:)

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE STATEMENT ON INSTITUTIONAL SUPPORT FOR SCHOOLS OF NURSING

Grants are needed for planning, development and establishment of new programs of nurse training, including combinations of programs for sharing faculty and facilities, and coperative arrangements among institutions and agencies for the orderly transition from one type of nursing education program to another. New ways are being found to train nursing students in shorter periods of time and to train a larger number of students with the same short supply of qualified teachers. These would assist greatly in maintaining continuity in numbers of nurses produced and in improving the quality of nursing education in a period of transition. They would also make possible establishment of graduate programs to meet emerging urgent needs in specific areas. Existing programs are not adequate to accommodate either the initial or graduate preparation of the numbers that will be needed for quality nursing services. The planning of new schools and programs (considering the needs and resources for an area or region) and coordinating this preparation to assure balance in numbers and types of personnel for practice, are as important as the actual establishment of the program and usually requires funds in excess of those locally available.

Specifics on diploma schools

This bill will help maintain the supply of graduates from hospital schools. Today, hospital-based diploma programs produce 72% of nurse supply and it is essential that these graduations be maintained. Many of these schools are outstanding and should be continued, strengthened and expanded as a major resource of nurse manpower.

Graduations from associate degree and baccalaureate programs are increasing and will continue to increase as more and more students select academically based preparation. Graduations from diploma programs must also increase to insure production of the numbers of nurses needed.

Project grants will help schools with planning and the phasing or "orderly transition" processes so that preparation of sufficient numbers of nurses is continued.

Special project grants could assist hospitals in several ways depending on the individual situation:

Where diploma schools are to be continued, grants can help strengthen and expand educational programs. (Programs will also be eligible for institutional formula grants.)

Where hospital-based schools are becoming an integral part of an academic institution—a junior (two year) or senior (four year) college—grants will help to plan for the transition and to develop and establish the new program. The hospitals will continue to provide the students' clinical experience and will work with these institutions to develop the appropriate learning and practice setting for the new associate degree and baccalaureate programs. Therefore improving the hospital's facilities and the faculty will strengthen these new programs.

Where diploma schools are to be discontinued, the hospitals could continue to provide the clinical practice setting for several programs of nursing education of all types, including the training of clinical nursing specialists.

This bill provides assistance for those hospitals and hospital-based diploma schools which choose to plan with a junior college for an associate degree program of nursing education. Authorization of special project grants to the hospital (or the junior college, or senior college which wants to establish a relationship with the hospital) would provide for the necessary planning, development, and establishment of the different curricula, faculty preparation, and clinical experiences required if students are to be prepared in two years rather than three, and if education is to be based in an academic rather than a service institution.

The transition of diploma schools into institutions of higher education requires the establishment of a different type of educational program. Arrangements must be made for the different curriculum and different faculty of associate and baccalaureate degree programs and for the phasing of classes from old to new. Concurrently arrangements must be made to maintain, develop, or even increase, the clinical facilities for the needs of the new program.

Hospitals will continue to provide the setting where students learn and practice patient care as part of a different kind of educational program related to changes in medical knowledge and to the interests of students. Hospital train-

ing is an essential component of all nursing education programs. The affiliating hospitals need support for improving and expanding the situations where nursing students receive their clinical experience. As classes are phased from diploma to associate degree of baccalaureate programs, the institutions in which all aspects of nursing education take place will need assistance.

There is nationwide recognition of and planning for the changes in nursing education ("States Plans for Transition in Nursing Education," *American Journal of Nursing*, 67:1215–16, June 1967). The majority of States already have definite plans for the ultimate transition of nursing education into institutions of higher education. Of the diploma schools of nursing that closed during 1967, more than half coincides with the opening of associate degree and baccalaureate programs.

This trend is reflected in the construction grants awarded and in the applications pening. There were fewer new first year places constructed for diploma programs than other types. (713 diploma, 787 associate degree and 1812 baccalaureate. See table under Accomplishments.) The essential construction has been for and must continue for replacement and renovation to maintain quality of existing diploma programs as well as to provide better clinical practice areas for utilization by other programs during and after the transition. Planning by hospitals and educational institutions is increasingly for teaching facilities to accommodate the essential clinical experience of programs based in educational institutions. This trend is expected to continue. There are 46 anticipated applications from existing diploma schools and three for new diploma schools. Applications from schools of all types total 130 for existing schools and 68 for new schools.

Needs for other programs

Present authority does not provide for establishment of new schools or programs; funds can go only to established and eligible nursing education programs and only for projects for the improvement of nurse training. The broadened authority and broadened eligibility would permit establishment of new and modified programs.

The Program Review Committee for the Nurse Training Act recommended establishment of programs in colleges and universities as well as in medical and health science education centers without nursing programs. The latter must be encouraged to establish both initial and graduate programs where the educational climate and clinical resources of such centers should be utilized for nursing education. Members of the health team function and work better together when they learn together.

Many senior colleges and universities are unable, or are unwilling without additional support, to commit funds to the establishment of baccalaureate or higher degree programs which are very costly relative to other programs. If colleges and universities could be helped with the direct costs of nursing education, they might be encouraged to establish new or expand existing programs.

Including "other institutions and agencies" among the authorized grantee institutions will increase the opportunities to use the competency in a variety of educational and clinical institutions in the improvement of quality of training programs. It will permit grants to go to institutions and agencies providing a variety of clinical experience for nursing students as well as to educational institutions which do not, at the present time, have nurse training programs but which could make a major contribution to the improvement of nursing education and which might become the situs for new nurse training programs.

States and regional organizations and associations could, if financially assisted, combine the educational and health care competencies and resources of the community for planning for nurse manpower. They could also carry out demonstrations, and assist in the preparation and dissemination of materials and information from the various projects beyond the individual schools or local situation. Such comprehensive projects could have great impact and could move the educational community, the profession, and the service institutions and agencies toward better nursing care of patients.

Mr. ROGERS. Why do you think it is essential, if we are going to construct a building, to only require that that be used for this purpose for 10 years?

Dr. LEE. In the nursing area, it is our belief that with the problems that the schools are having, and with the information that we have

from them, a requirement of this type would make it more possible in the future—when an institution is undertaking such a program—for there to be modification or other uses for the facility in training other kinds of personnel, and that this is a more realistic time than a 20-year commitment on the part of the school.

Mr. ROGERS. Suppose you build a medical school. Are you only going to require it to exist 10 years?

Dr. LEE. That is a requirement, but, of course, they do use the facilities for much longer. And in most cases we anticipate they will use the facilities much longer.

Some of our nursing school facilities today are 50 years old, and older.

Mr. ROGERS. You won't have the building changed by the time he graduates, because it takes 10 years.

I think we need to look at the law again on that.

I will yield, Mr. Chairman.

Mr. JARMAN. Mr. Nelsen?

Mr. NELSEN. Usually on the floor of the House, when this kind of bill reaches us, Representatives Cahill and Bolton ask questions concerning care for bedside nursing.

Maybe a young lady would not have the resources to go ahead for a nursing degree, but her training could emphasize bedside nursing.

Every time we report a bill concerned with nursing, this question comes up on the floor. Do you have any comment about the possibility of expansion in the area of bedside nursing?

Dr. LEE. If I understand the question correctly, it relates to practical nurses, and we do have a program in the Office of Education which is supporting the training of practical nurses. We can provide for the record the numbers of students trained each year in this program in the last 5 years. It is a very significant number. But I don't have the exact figures.

(The information requested follows:)

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE STATEMENT ON PRACTICAL NURSE TRAINING

Advances in medical science and nursing practice coupled with the growing demand for health care have made it impossible for the registered nurse to provide all of the nursing services patients require. The registered nurse is now assisted by licensed practical nurses, who receive one year of formal training, generally in public vocational school systems with clinical instruction in a hospital setting, and by nurses' aides who usually receive informal, one-the-job instruction.

Registered nurses continue to give patients the nursing care which they alone are prepared to give. They have responsibility for assessing the patient's nursing needs and making decisions regarding his nursing care. The registered nurse determines and assigns to licensed practical nurses aspects of care for which she is trained. Nurses' aides relieve the registered nurse and the licensed practical nurse from the more routine tasks which are important to the patient's personal comfort. Both licensed practical nurses and nursing aides are supervised and taught by the registered nurse.

The Nurse Training Act of 1964 provides financial assistance for the education of registered nurses only. Federal aid for practical nurse education is provided under the Manpower Development and Training Act and the Vocational Education Act. The following table shows the number of practical nurse education programs and graduations for the years 1954 to 1967.

PRACTICAL NURSE[1] TRAINING IN THE UNITED STATES,[2] 1953–1967

Academic year	Approved programs ([3])	Reporting programs	Admissions	Graduations
1953–54	296	290	12,075	7,109
1954–55	395	361	15,440	9,694
1955–56	396	396	15,526	10,641
1956–57	439	432	16,843	10,666
1957–58	520	511	20,531	12,407
1958–59	607	595	23,116	14,573
1959–60	661	632	23,060	16,491
1960–61	693	660	24,955	16,635
1961–62	739	707	26,660	18,106
1962–63	851	810	30,585	19,621
1963–64	913	881	34,131	22,761
1964–65	984	941	36,489	24,331
1965–66	1,081	1,018	38,755	25,688
1966–67	1,149	1,111	41,269	27,644

[1] Includes attendant nursing 1954–1957, and vocational nursing 1956–1967.
[2] Alaska, Hawaii and Puerto Rico were included for all years, American Samoa and Virgin Islands for 1962 and later.
[3] Accredited by State agencies where licensure provisions were in force, and by the National Association for Practical Nursing Education where no licensure provisions existed.

Sources: American Nurses' Association. Facts About Nursing: A Statistical Summary, New York, The Association Annual eds.: 1955–56, pp. 147–8: 1960, pp. 171 and 173: 1965, p. 185; and 1967, pp. 177 and 181. State-approved schools of nursing—LPN/LVN, 1968. New York, The League, 1968, p. 71.

Mr. NELSEN. I think it would be very helpful if we had that information, because I am sure the question will come up again.

One of the criticisms that I have noted is that the hospital school approach has not really been developed. It was our feeling that where you have a hospital, you have the bricks and mortar, and if we could stimulate a program at that level to a greater degree, there would be a greater production of nurses, which we badly need.

Dr. LEE. One of the problems in the hospital schools—the recruitment of faculty, the difficulty of expanding enrollment, and assuming the responsibilities in terms of the increased operating costs, because we don't provide all of those costs. This has made it more difficult for these hospital-based schools to expand their enrollment and to achieve some of these objectives.

Mr. NELSEN. It is possible the level of Federal assistance in this program is too low according to present costs?

Dr. LEE. Yes, I think that is an accurate assumption.

The other point that I should make is that under the present law we provide assistance to the diploma schools on the basis of the number of their students who get Federal aid. In other words, it is only in relation to the federally aided students and not to all the students in the school, so there are limitations in the existing law on our support for those schools. That is why we are proposing a formula grant which includes a specific dollar amount per school—$15,000—and also relates to total enrollments.

Mr. NELSEN. I see. I was interested in the observation made relative to costs and that a relatively great amount goes into research.

Now, is it possible that the vast amount of research at NIH is not adequately communicated to the medical schools? As I recall, in a hearing we had a number of years ago we found a tremendous duplication of research in the same areas.

Is it possible perhaps some of the research manpower that is presently used here and there over the country, could be moved into more effective turning out of doctors which we so badly need.

Is that possible?

Dr. LEE. Well, you can take an example of a research area which is in the forefront now, and that is the area of cardiovascular surgery, the development of artificial hearts and heart transplants.

You find a number of university centers where these programs are ongoing.

We will promote, we believe, the advance of knowledge, which then, of course, is disseminated to the students and to many practitioners and actually much of it to the public as well, more rapidly, more effectively, if we don't put all of our eggs, you might say, into one basket.

There are a variety of people working in basic research in genetics, for better understanding of a variety of diseases related to heredity. These programs are supported in a number of institutions, and it would be hard, I think, to say that we should divert people from those activities.

I wouldn't really describe this as overlap. I think these are complementary research activities. We have an extensive information exchange program, not only through scientific journals, but through our own program, and through the library of medicine, which is very helpful to investigators to know what other people are doing. And through their participation with the scientists at NIH and through a variety of other activities in communication, I think that there is little—there may be some, I think it is unavoidable—when we are supporting a kind of broad base vital research program that we are now supporting.

But I think it is more of a complementary nature.

Mr. NELSEN. Congressman Rogers asked about nurses and doctors, and I want to know about the shortage of veterinarians. Being a farmer, I need to know that.

Dr. LEE. We can give you some projections on this. I don't have those immediately available. There are a variety or roles that are played by the veterinarian in public health, and not only in terms of animal health, but also in terms of domestic public health and prevention of transmission of disease to human beings and the improvement of animal health to improve our food supply, as well as the world's food supply. And, of course, this is one of the most critical problems in the world today, and veterinarians are playing an increasingly important role.

So the shortage really would depend on how narrowly, or how broadly, you define their role.

(The information requested follows:)

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE STATEMENT ON SHORTAGE OF VETERINARIANS

Veterinary science makes significant contributions to human health in the maintenance of a safe and abundant food supply, in the testing of biologicals and pharmaceuticals used in both human and animal medicine, in safeguarding humans against the diseases of animals which are transmissible to man, and in protecting American livestock and poultry against foreign animal disease.

We are aware, however, of no evidence of a shortage of veterinarians comparable in terms of a negative impact on human health to the shortages we are facing in those health professions which provide human patient care. Shortages of veterinarians in areas most directly affecting human health may be more directly related to distribution of veterinary practice than a total shortage in the profession.

Of the 26,000 veterinarians in the United States, only a fraction are employed directly in regulatory or public health aspects of veterinary medicine. Some

500 are in veterinary public health and about 1,800 in regulatory activities. Combined, these are less than 10% of veterinarian manpower.

Shortages of veterinarians in these activities exist, as evidenced by a 12% vacancy rate in State and local health agencies. These vacancies, however, are best explained by the fact that, while the average salary of veterinarians in State employ is $11,500, the net income in private practice varies from $16,000 (in solo large animal practice) to $39,000 (in group small animal practice). It seems apparent that more attractive salaries will be required to attract larger numbers to public service, rather than merely more graduates.

Of veterinarians not in public health regulatory activities, most are in small animal practice, with minimal impact on public health. About 1,800 veterinarians are exclusively, and 4,800 partially in large animal practice. Their efforts may be regarded as primarily directed toward livestock production. While in the course of this they undoubtedly suppress animal diseases transmissible to man, determination of a shortage in this type of practice must be approached from the point of view of livestock management.

The challenges of public health to veterinary medicine can best be met, we feel, through our project grant authority. With this we can direct our resources specifically to strengthening those segments of educational programs in schools of veterinary medicine which relate most directly to human health.

Mr. NELSEN. I understand. Our problem is that so many of the veterinarians are taking care of the lady's dog, and we can't get them on the farm.

Dr. LEE. We have the same problem with physicians. They are in the suburb taking care of that lady, and not where some of us think they should be.

Mr. NELSEN. No more questions.

Mr. JARMAN. Mr. Rogers?

Mr. ROGERS. How much money is contemplated for the institutional grants?

Dr. LEE. The projected institutional formula and special project grants would be $100 million in fiscal year 1970.

Mr. ROGERS. $100 million?

Dr. LEE. 150 million in 1971, up to 220 million in 1973.

Under nurse training, 30 million in 1970, fiscal year 1970, 45 million in fiscal year 1971, 70 million in fiscal year 1972, and 100 million in fiscal year 1973.

As to allied health, of course, we only have the projections for the fiscal year 1970, and those are 20 million.

Mr. ROGERS. These institutional grants go to pay faculty? Is that basically what it does?

Dr. LEE. Yes. There are other things that are related to their teaching activities, such as the equipment that may be needed, teaching equipment, and the supplies that would be needed. But fundamentally, it is to support faculty and their related——

Mr. ROGERS. That is the project grants?

Dr. LEE. Both the formula grant and the project grant would be for those purposes, and the project grant could be for a variety of other things.

Mr. ROGERS. Are both included in these amounts?

Dr. LEE. Yes.

Mr. ROGERS. And, as I understand it, you can use this money either as a project grant or a formula grant in this new legislation.

Dr. LEE. We would propose that; yes.

Mr. ROGERS. Is there any break on that that you anticipate?

Dr. LEE. Around 45 percent formula grants and 55 percent project grants in the first year of this bill, because of the more rapid change

that can be supported with the project grants. A large project grant can be used to support significant enrollment increase, significant change in curriculum, and other very important objectives, such as assisting or even salvaging a weak school in a very serious financial condition. A project grant of significant size could be used to sustain that school until it got back on its feet.

Mr. ROGERS. The formula is what, 25,000 base and then so much per student?

Dr. LEE. Right.

Mr. ROGERS. Project has no requirement as to——

Dr. LEE. Project grants would be awarded on a competitive basis, and we would remove the ceiling, which is presently 400,000 for next year.

Mr. ROGERS. What would be the ceiling? You would have no ceiling?

Dr. LEE. There obviously is not going to be an infinite amount of money, but I could envision a project grant of $1 million, for example, to aid a school making a major expansion in enrollment, so that they would have to add faculty to achieve that objective.

For a school in serious financial trouble large grants would be needed to tide it through a period of 2 or 3 years, and funds at that level, I think, could easily be required.

Mr. ROGERS. Should there be a ceiling of $1 million?

Dr. LEE. Well, I think that you could give this careful consideration. We could perhaps submit some other examples of estimated costs of projects so that you could better weigh that question.

(The data referred to follows:)

EXAMPLES OF NEED FOR AND ESTIMATED COSTS OF SPECIAL IMPROVEMENT GRANTS, AS VIEWED BY HEW

The need for more physicians and other health professional personnel to meet the spiralling demand for health services is well recognized. The serious financial plight of medical schools is less well known. Traditionally these schools have not disclosed their weaknesses nor the financial problems responsible for them. They have been concerned that in doing so there might be difficulty in recruiting top quality faculty, loss of prestige, and, in some cases, inability to compete successfully for Federal grants. The dire situation which confronts these schools is now reversing tradition and some schools are speaking out about their needs.

Dr. Robert Berson, Executive Director of AAMC (Association of American Medical Colleges) made the following statements before the Subcommittee on Labor, HEW, of the House Appropriations Committee:

"University after university is finding it necessary to sever all fiscal relationships with its medical school because of the financial drain on university funds and the damage that drain has done to other components of the university. There is grave concern that some medical schools will be forced to close for lack of funds.

"Those schools in imminent danger of closing may find (basic and special improvement grants) to be lifesaving. A second group to which they might mean everything would be those in danger of losing their accreditation because of serious weaknesses in one or two departments."

Dean Franklin Ebaugh, Jr., described the plight of the Boston University School of Medicine to the same subcommittee. He said flatly that the school will close unless *more Federal funds* are soon made available. He predicted that the annual operating deficit will increase from the half million dollar level over the past three years to $1,700,000 by 1972–73.

Dr. Ebaugh testified further that the Schools' incomes cannot keep pace with rising costs of operation.

Marquette, Tufts, and St. Louis University Schools of Medicine were described as having needs as great as, and, in some instances, larger than, those which confront Boston University.

Dr. Robert Felix, Dean of St. Louis University, said, "I cannot emphasize too strongly that the very life of my school and a number of others hangs in the balance. If assistance is not forthcoming soon, we will disappear from the scene. It is not a question of how many more students we can accept, but if we can accept any at all."

A principal aim of institutional and project grants is to salvage these important National resources. This is predicated on the fact that it is less costly, particularly with respect to time, to assist a school to continue its operation than to permit it to close and replace it with a new school at a cost of many millions of dollars, and a loss of as many as ten years of output of graduates. To say that it is "less costly" should not, however, be interpreted as being "inexpensive".

Considerable sums will be needed annually for at least several years by these and other schools which have equally grave but unpublicized problems.

Evidence was presented to the Congress that annual operating deficits approaching $2 million will be experienced by some schools. It is not enough, however, to aid a weak school in keeping its doors open. If such schools are to continue to operate, the quality of their educational programs will, in many cases, require improvement at added costs.

Before public funds were committed in the amounts which would be required an exhaustive study would be made of the school.

It is envisioned that a special site visit team or task force would be established to seek information about the school's situation and its prospects. The group would probably include representatives of the appropriate review committee (study section), officials responsible for administering the grant program, the appropriate school association (such as AAMC), and perhaps fiscal and management experts. It would also be helpful if members of the accrediting body would serve as members of, or consultants to, the group.

Information would be sought concerning such matters as the following:

1. The immediate problems confronting the school, the factors responsible for the situation, and the probability of their continuation.

2. The size of the annual deficit over the past several years, and the reasons therefor.

3. The efforts that the school has made to obtain support from non-Federal sources; its plan for and probability of success of continuation of such efforts.

4. The school's proposals with respect to its continued operations, including its plans to increase the quality of its educational program to acceptable standards, and to improve its business and fiscal management, if indicated.

5. The immediate and longer-range probable cost to the Federal Government of underwriting the school's operation.

The group's report and recommendation would be given thorough study by the review committee which, in turn, would make recommendations to the Council for its further consideration. The Surgeon General could not approve the application without favorable action and recommendation by the Council.

One of the most important objectives of this bill is to provide a mechanism for preserving and strengthening health professions schools which are dying from financial starvation.

The legislation must be sufficiently flexible to permit the Secretary to make judgments about the needs of the school and whether it would be in the public interest to underwrite its deficit.

It is not possible at this time to foresee the magnitude of grants which will need to be made for this purpose, and it is for this reason that it is proposed to delete the statutory ceiling on project grants. Such ceilings could jeopardize or thwart achievement of goals which are necessary for amelioration of existing critical health manpower shortages.

Mr. ROGERS. This would be in addition to an institutional grant?

Dr. LEE. In addition to a formula grant.

Mr. ROGERS. We could go out and build a medical school, then?

Dr. LEE. You can't use this money for construction of new buildings.

Mr. ROGERS. There are other moneys for construction?

Dr. LEE. Yes, but——

Mr. ROGERS. You could go in and staff it.

Dr. LEE. You could assist in staffing it if faculty could be recruited.

Mr. ROGERS. Should we build medical schools?

Dr. LEE. I believe we should.

Mr. ROGERS. Are we doing it in effect now?

Dr. LEE. We are. We are supporting the building of medical schools, and I see the Federal role as important in this. Take Florida as an example. The students who graduate often go to other States to practice, so it is, I think, difficult to be able to say to the taxpayers of Florida that they should support fully the training of medical students who are going to practice in California.

The same thing is true in Illinois and practically every other State in the Union, so that I think this is one of the major reasons that the Federal role should be a significant one.

Mr. ROGERS. Could you let us have a breakdown of the medical schools in this country and the amount of Federal participation in their construction and in their institutional support, or whatever moneys may come?

I would like to get that for the record.

Dr. LEE. Yes.

(The information requested follows:)

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE STATEMENT ON DIVERSITY OF MEDICAL SCHOOLS, AND FEDERAL FINANCIAL PARTICIPATION IN CONSTRUCTION AND INSTITUTIONAL SUPPORT

The question of the sources of support for operation and construction of the medical schools of the United States is of the utmost importance. It is one that is difficult to answer because of the great diversity among the medical schools, their organizational relationships and their missions. Some schools are divisions of universities. Others are independently chartered. Some are parts of State educational systems. Others are private. Some are in urban settings. Others are in smaller communities. There are two-year schools and four-year schools. In some instances, the major teaching hospitals are integral parts of the schools, owned and operated by the medical school or the university. In others, the major teaching hospitals are independent institutions with their own boards of trustees and affiliated with the medical school through an agreement. Some medical schools have nursing education as a formal part or department of the medical school. In many medical schools, members of the medical faculty participate in the teaching of graduate students from other divisions of the university. Faculty may also participate in the teaching of pre-baccalaureate students of the parent university, in the teaching of students of the allied health professions and technologies, students of nursing and students of dentistry as well as medical students and graduate students studying with the medical faculty.

In all medical schools, members of the faculty are involved in teaching interns and residents and in teaching post doctoral fellows. They are engaged in research and in rendering care to patients who may come from the local community or be referred from considerable distance to take advantage of the enormous resources, the high level of knowledge and specialized skills and the new technologies which are available through the faculty of the medical schools in the hospitals where clinical teaching is conducted.

The sources of funds are as diverse as the functions and activities which require their expenditure. Medical schools receive funds from both public (Federal, State and local) and private sources for services rendered to patients and to the community. They also receive them from individuals in the form of gifts and bequests as well as grants from private foundations or organizations. These gifts, bequests and grants may be for general purposes as determined by the schools themselves or they may be given for narrowly restricted purposes determined by the donor. They may be for the support of education, for the support of research, for student aid, or for the care of patients who cannot pay for their own care. Gifts and grants may also be provided for studies of community problems or for provision of services to the community. Federal, State and local public funds are also granted to medical schools and their teaching hospitals for education, for research and for direct health services or for participation in community or regional planning for health services. They are provided from a variety of agencies and departments of Federal and State governments. The terms of the

grants may be quite general or highly specific. The determination of allowable items of expense varies considerably from one agency to another, from one foundation to another and from one bequest to another.

Where the medical school or the university owns and operates its teaching hospitals, the sources of funds and the basis on which payment is made increase the diversity and complexity of funding, of accountability and of general management. Members of the faculty and students are intimately engaged in the care of patients as an inevitable part of clinical medical education. Determining the costs associated with patient care and those associated with education are difficult at best. The difficulty is greatly enhanced by the multiplicity of methods of payment (payment by the patient himself, by private insurance carriers which may provide reimbursement or indemnity plans, by local, State and Federal agencies under the many programs which pay for patient care, by voluntary health agencies or combinations of several or in some instances all of these).

Yet the very complexity and scope of the purposes of the medical schools, the many functions of their faculties, their many kinds of students, the great demands being placed on them to serve society, and the diversity of the sources of funds to meet their expenditures makes it essential to devise sound means of allocating costs incurred by the medical schools in carrying out their programs. For this reason, the Association of American Medical Colleges with its Council of Teaching Hospitals has undertaken with the support of the Department of Health, Education, and Welfare a study in depth of several medical schools which have different organizational patterns in different university or other settings and in which, in some cases, there are other schools of the health professions and nursing in the same university. The aims of the study include the development of clear and common definitions of elements of cost, of sources of income, and of the financial status of the institutions. Educational and fiscal officers of the university, the medical schools and their teaching hospitals are participating in this study as well as schools of other health and allied health professions and nursing where they exist within the same university. It is hoped that this study will provide a sound and reliable instrument for cost allocation and fiscal management of medical schools when it is completed, the results have been analyzed and the instrument has been tested in other settings.

Accurate information on medical school financing is critically needed in the operation of the individual educational facility and in the national effort to alleviate our health manpower shortages. The Bureau of Health Manpower considers this problem to be one of its major objectives and will be able to expand its activities in this direction under the "Health Manpower Act of 1968."

We can, however, speak to the amount of Federal participation in the construction of medical schools under the Health Professions Educational Assistance Act, and to the institutional support under the Health Professions Basic and Special Improvement Grant authority.

The following table summarizes the obligations to *medical* schools since the implementation of these respective authorities, together with the student aid provisions of the Health Professions Educational Assistance Act.

	Fiscal year—			
	1965	1966	1967	1968
Construction	$54,376,700	$42,705,626	$90,773,845	$79,702,811
Institutional support:				
Basic		6,566,249	18,780,518	20,242,500
Special			3,875,200	10,131,500
Scholarships		9,834,258	14,217,791	7,198,176
Student loans				26,659,476
Total	54,376,700	59,106,133	127,647,354	143,934.463

Mr. ROGERS. What moneys are contemplated for construction?

Dr. LEE. We will request for construction $170 million in 1970.

Mr. ROGERS. $170 million?

Dr. LEE. Yes, and $225 million in 1971, in 1972, and 1973.

On that, Mr. Fenninger might say a word about the backlog of construction.

If you would, Len, I think that could help to put these figures in perspective.

Dr. FENNINGER. At the present time, the approved but not funded projects as of April 3 under the Health Professions Educational Assistance Act was $106 million——

Mr. ROGERS. This is a backlog?

Dr. FENNINGER. Yes.

Dr. LEE. Our appropriation request this year is $75 million for fiscal year 1969.

Mr. ROGERS. Will that reduce the $100 million backlog by three-quarters?

Dr. FENNINGER. No, sir, because there will be other applications coming in within the next 12 months, which also will be eligible for funding.

Mr. ROGERS. Do we have any idea what they should amount to?

Dr. FENNINGER. For 1969, the amount is currently anticipated at about $225 million, in addition to the $106 million backlog I mentioned.

Mr. ROGERS. How many new schools are there in that?

Dr. FENNINGER. I don't know that, but I could furnish it.

Mr. ROGERS. Would you do that?

Dr. LEE. Would you want that also under the nurse training?

Mr. ROGERS. Yes, if we could, please.

(The information requested follows:)

HEALTH PROFESSIONS EDUCATIONAL ASSISTANCE CONSTRUCTION PROJECTS

	Federal share	Number of new schools	Number of 1st year places	Number of existing schools	Number of additional 1st year places	Total additional places
Approved but not funded as of Apr. 1, 1968:						
Medical	$65,410,759	2	64	10	89	153
Dental	31,591,609	2	96	4	99	195
Pharmacy	2,508,973			3	96	96
Podiatry	1,436,006			1	46	46
Veterinary medicine	5,755,245			2	121	121
Total	106,702,592	4	160	20	451	611
Pending Council as of Apr. 1, 1968:						
Medical	102,135,399	2	100	9	198	298
Dental	16,178,952			2	62	62
Pharmacy	2,919,302			1	49	49
Total	121,233,653	2	100	12	309	409
Anticipated for Council review in fiscal year 1969:						
Medical	253,300,000	8	350	27	443	793
Osteopathy	5,000,000	1	60			60
Dental	84,763,000	4	258	15	305	563
Pharmacy	14,000,000	1	60	6	155	215
Podiatry	2,000,000			1	20	20
Veterinary medicine	7,500,000			3	71	71
Public health	6,500,000			2	10	10
Total	373,063,000	14	728	54	1,004	1,732
Letters of intent, fiscal year 1970–73:						
Medical	258,700,000	3	264	12	80	344
Osteopathy	2,100,000					
Optometry	51,000,000	8	390	3	20	20
Dental	7,700,000			3	90	480
Pharmacy	1,600,000			4	45	45
Podiatry	3,100,000			1		
Veterinary medicine	4,800,000	1		2	25	25
Public health				1	50	50
Total	329,000,000	12	654	26	310	964

NURSE TRAINING ACT CONSTRUCTION PROJECTS

	Federal share	Number of new schools	Number of 1st year places	Number of existing schools	Number of additional 1st year places	Total additional places
Approved but not funded as of June 1, 1968:						
Baccalaureate	$9,136,401	3	95	7	379	474
Associate degree	402,092	1	80			80
Diploma	5,397,670			10	82	82
Total	14,936,163	4	175	17	461	636
Pending Council as of June 1, 1968:						
Baccalaureate	2,483,626	1	115	3	116	231
Associate degree	1,369,517	2	175	2	50	225
Diploma	2,482,160			4	41	41
Total	6,335,303	3	290	9	207	497
Anticipated for Council review in fiscal year 1969: [1]						
Baccalaureate		6	390	13	806	1,196
Associate Degree		12	720	20	500	1,220
Diploma		2	50	7	140	190
Total		20	1,160	40	1,446	2,606
Letters of intent, fiscal year 1970–73: [2]						
Baccalaureate		12	514	33	1,024	1,538
Associate degree		35	1,328	18	597	1,925
Diploma		1	40	39	860	900
Total		48	1,882	90	2,481	4,363

[1] Federal share: Estimated $45 million for 60 projects.
[2] Federal share: Estimated $101 million for 138 projects.

Mr. ROGERS. Is it your intention to phase out allied health programs?

Dr. LEE. No, sir. We believe the additional year of experience and a very careful review of the program in the next 6 to 9 months will help us to develop programs—perhaps the present program is just what we need. We are not at all sure about that. There are disciplines not now covered. There are a variety of complex problems coming to light that make it more difficult, and one of the reasons we did not propose a long extension at this time was because of these problems and because we believe it is necessary to give it a more thorough comprehensive review before proposing anything but a 1-year extension.

Mr. ROGERS. Have you given us a rundown of what has been done under the allied health program, how many institutions?

Dr. LEE. Yes, sir.

Mr. ROGERS. I notice health research facilities—a construction grant there. How would these be operated?

Dr. LEE. Tom, do you want to say a word about that?

Of these programs, it is one of the longest and most successful, and I would like Dr. Kennedy, who is director of that program, to speak to that question.

Dr. KENNEDY. What kind of information can I give you about them, Mr. Rogers?

Mr. ROGERS. Well, I want to know about your program. How does it operate? Do you build these research facilities at universities, or is it just nonprofit institutions? Or how do you decide?

Dr. KENNEDY. We have built over the last 12 years through about 1,150 projects in some 406 institutions, a total of some 18 million net square feet of space.

Mr. ROGERS. How much money over those 12 years?

Dr. KENNEDY. $452 million in Federal funds. That has been matched by about $600 million of private funds. The ratio, by law, is 50–50. Actual funding is about 57 percent private and 43 percent Federal. The total projects, of course, include much more than the research facilities, and there is something like $2.5 billion worth of space that has emerged from this $452 million investment of health research facilities funds.

We are in the third year of a $280 million authorization.

Dr. LEE. We should point out, I think, Tom, that we asked for only $8 million in fiscal 1969. Is that correct?

Dr. KENNEDY. Yes. This program has been hard struck in the appropriations process. About a third of the authorizations will have been requested in appropriations by the end of the year.

Mr. ROGERS. In 1968?

Dr. KENNEDY. In total for the 3 fiscal years, 1967, 1968, and 1969.

Mr. ROGERS. I see. One-third of the $280 million would have been requested?

Dr. KENNEDY. Yes.

Dr. LEE. One other point: The priorities established by Secretary Gardner required a special priority be given to new medical schools or schools that were expanding, so that he tried, even though the research facilities program is to achieve a national research objective, to relate these as best as could possibly be done to the development of new medical schools. And this, I think, put a further crimp in the objectives——

Dr. KENNEDY. We have a substantial backlog, Mr. Rogers, of $54 million——

Mr. ROGERS. How many schools are involved in that?

Dr. KENNEDY. Fifty-four approved projects at the moment.

Mr. ROGERS. Would you let us have a list of those?

Dr. KENNEDY. We will indeed, sir. We have something like $165 million worth of construction in our "intention to file" roster of information.

(The information requested follows:)

HEALTH RESEARCH FACILITIES APPROVED APPLICATIONS—NOT FUNDED (AS OF JUNE 21, 1968)

Institution	Description	Council recommendation
Alabama: Southern Research Institute, Birmingham.	Construction of a building to house animals, chiefly dogs and primates for research laboratories for pharmacological research.	$272,600
California:		
University of California, San Diego	Research space in a new building for the department of biology	1,292,000
University of California, Los Angeles	Research space in a molecular biology institute for development of effective multidisciplinary approaches to molecular biology.	1,000,000
Colorado: Colorado State University, School of Veterinary Medicine, Fort Collins.	Construction of two separate buildings for the departments of anatomy and pathology.	1,002,000
Connecticut: Yale University School of Medicine, New Haven.	Construction of a research building to house the departments of surgery, obstetrics, and gynecology.	2,578,000
District of Columbia: George Washington University School of Medicine, Washington, D.C.	Research space in a new basic science building for the basic science departments.	2,578,000
Florida: University of Florida, Gainesville.	Construction of a new research building for the Department of Psychology.	541,000
Georgia: Medical College of Georgia, Augusta.	Research space in a new research and education building for basic medical sciences.	1,786,180
Illinois:		
Northwestern University, Evanston	A new facility for research in communicative disorders	1,828,000
Presbyterian-St. Luke's Hospital, Chicago.	Completion of space in the southcenter building for portions of the departments of biochemistry, pathology, and surgery.	601,000
University of Chicago, Chicago	A new basic biological sciences research building for the departments of biochemistry, biophysics, and microbiology.	3,621,000
University of Chicago School of Medicine, Chicago.	Remodeling of the central animal quarters of Billings Hospital for the department of pathology's research programs.	146,000
University of Illinois College of Medicine.	Medical research laboratory addition to house animals and laboratory facilities.	1,566,000
Indiana: Indiana University School of Medicine, Indianapolis.	Space in a new addition to the Indiana University Hospital for OB-Gyn research laboratories and clinical research center.	539,000
Massachusetts:		
Boston University School of Dental Medicine, Boston.	Facilities for dental research	325,000
Harvard Medical School, Boston, Do	Remodeling research facilities for the physiology department	185,000
Harvard University, Cambridge	Remodeling research space for the laboratory of psychobiology	130,000
Massachusetts General Hospital, Boston.	Research space in a new center for environmental and behavioral biology.	660,000
Massachusetts Institute of Technology, Cambridge.	Remodeling the hospital research building	736,000
Michigan:		1,593,000
Michigan State University College of Medicine, East Lansing.	A new electrical engineering and communications research facility for conducting health-related research.	1,931,006
University of Michigan, Ann Arbor	Research facilities in a new life sciences building of the new medical school.	1,811,000
Minnesota:	Research facilities in the University of Michigan Center for Human Growth and Development.	
Mayo Foundation-St. Mary's Hospital Rochester	Space in the Alfred addition to St. Mary's Hospital for animal facilities and small areas for nutrition, gastroenterology, cardiovascular, and surgical research.	183,000
University of Minnesota, School of Medicine, St. Paul.	Construction of a laboratory in the veterinary school for research in leukemia, toxicology, and mycotoxin.	382,000
Missouri: Washington University, School of Medicine.	Addition of a floor to the west building for animal facilities for research use by the departments of pathology and preventive medicine.	442,500
New Hampshire: University of New Hampshire, Durham.	Research space in a new animal sciences building	204,000
New York:		726,000
Albany Medical College and Health Res. Inc., Albany (facility at Guilderland).	Research space in a new toxicology center	3,937,000
Columbia University College of Physicians and Surgeons, New York.	Research space in a new facility for the study of human reproduction.	66,400
Cornell University, Ithaca	Remodeling of research facilities for biological sciences	321,000
Cornell University, Ithaca	A new animal facility for research in nutrition	158,000
Hillside Hospital, Glen Oaks	Construction of a new facility for research in psychiatry	765,002
Maimonides Hospital of Brooklyn and the City of New York, Department of Hospitals, Brooklyn.	A new medical research building on the grounds of Coney Island Hospital.	366,384
Yeshiva University, Albert Einstein College of Medicine, New York.	Participation in space to house the computer centers and the division of biomathematics, both of which support health-related research.	2,843,000
Duke University School of Medicine, Durham.	A new research building for the departments of anatomy, medicine, pediatrics, psychiatry, and surgery.	88,000
North Carolina:		
North Carolina Baptist Hospitals, Inc., Winston Salem.	Remodeling and new construction of research facilities for the departments of radiology and surgery.	221,000
North Carolina State University, Raleigh.	Animal facility and laboratories for biological research	

HEALTH RESEARCH FACILITIES APPROVED APPLICATIONS—NOT FUNDED (AS OF JUNE 21, 1968)

Institution	Description	Council recommendation
Ohio:		
Cleveland Metropolitan General Hospital, Cleveland.	Expansion of the hospital research areas for medicine, pediatrics, and surgery.	$1,955,000
Mount Sinai Hospital of Cleveland, Cleveland.	A new addition and some remodeling of the hospital for medical research.	1,076,000
Ohio State University School of Medicine, Columbus.	A new research facility for comparative medical research	554,000
Oregon: University of Oregon, Eugene	A new science building for the department of biology	1,369,000
Pennsylvania:		
Allegheny General Hospital, Pittsburgh.	A new structure for a clinical radiation therapy research center	441,000
Children's Hospital of Philadelphia, Philadelphia.	A new research facility for the department of pediatrics	2,387,000
Pennsylvania State University, University Park.	Construction of a central animal facility to serve the research needs of the University Park campus.	861,500
Philadelphia General Hospital, Philadelphia.	Remodeling and new construction for an animal research facility	225,000
University of Pennsylvania School of Medicine, Philadelphia.	Remodeling of space for the department of anatomy and making provisions for animal quarters also.	892,000
Tennessee: Vanderbilt University School of Medicine, Nashville.	An addition to existing medical facilities to expand research in medicine, clinical Pharmacology, and psychiatry.	1,352,000
Texas:		
North Texas State University, Denton.	Remodeling first floor of masters hall for research in chemistry	74,000
University of Texas Dental Branch, Houston.	Dental science institute	2,150,000
Virginia:		
Medical College of Virginia, Richmond.	An animal research farm	128,000
University of Virginia Medical School, Charlottesville.	Expansion and improvement of vivarium	137,300
Washington:		
University of Washington, Seattle	Zoology research building	1,245,500
Washington State University, Pullman	A new comparative behavior laboratory	100,000
Wisconsin: University of Wisconsin Medical School.	A new research structure for the department of psychiatry	1,028,000
Alabama: University of Alabama Medical School, Birmingham.	Expansion of the Lyons-Harrison Building for cardiovascular research.	917,000
California: California Institute of Technology, Pasadena.	A laboratory for research in behavioral biology	1,800,000
Colorado: Colorado State University, School of Veterinary Medicine, Fort Collins.	An additional to the surgical wing for a surgical and metabolic research laboratory.	330,000
Indiana: Indiana University School of Medicine, Indianapolis.	Expansion of the medical science building for research in basic and clinical sciences.	3,400,000
Maryland: Good Samaritan Hospital and Johns Hopkins University, Baltimore.	Completion of shell space for medical research laboratories	685,000
Massachusetts:		
Boston University, School of Medicine, Massachusetts.	Completion of shell space for ophthalmology, medicine, and surgery research laboratories.	259,000
University of Massachusetts, Worcester.	Research facilities in a new medical science building of the new medical school.	4,930,000
Michigan:		
University of Michigan, Medical School, Ann Arbor.	Completion of shell space for research in animal medicine and humane care of experimental animals.	120,000
Wayne State University, School of Medicine, Detroit, Mich.	A new addition and some remodeling to the Harper-Webber Hospital complex for medical research.	255,000
New York:		
New York University, New York	Completion of shell space for psychology research laboratories	287,000
Roosevelt Hospital, New York	Research space in a new medical research building for the department of medicine.	1,430,000
Albany Medical College of Union University, Albany.	Research facilities in a new medical education building	767,000
North Carolina:		
North Carolina State University, Raleigh.	Remodeling space in Polk Hall for biochemistry and animal science departments.	232,000
Duke University, School of Medicine, Durham.	Remodeling the 2d floor of the Bell Building for the departments of microbiology and medicine. Also, remodeling the 2d floor of the Davison Building for the department of pathology.	593,000
Oregon: Medical Research Foundation of Oregon, Beaverton.	A new animal facility and research laboratories for reproductive biology of subhuman primates.	1,115,000
Pennsylvania: Temple University School of Medicine, Philadelphia.	Remodel and renovate part of the existing medical school building for the departments of anatomy, microbiology, biochemistry, pharmacology, pathology and medicine.	833,000
Rhode Island: Miriam Hospital, Providence.	A new medical research wing	363,000

HEALTH RESEARCH FACILITIES APPROVED APPLICATIONS—NOT FUNDED (AS OF JUNE 21, 1968)

Institution	Description	Council recommendation
Texas: University of Texas, Austin	A new facility for health related space for the environmental health engineering division and atmospheric science.	$579,000
Southwestern Foundation for Research and Education, San Antonio.	Facilities for research animals	156,000
Vermont: University of Vermont, Burlington.	Remodeling of space for the department of psychology	408,000
Total, 73 projects		72,859,372

Mr. ROGERS. Are these medical schools?

Dr. KENNEDY. About 75 percent of our expenditures go to the medical schools and the associated hospitals that are involved in the teaching process.

Mr. ROGERS. How do you distinguish between construction for health and research facilities and construction for the medical school itself? Isn't that quite an overlap? Couldn't either probably qualify?

Dr. KENNEDY. We have asked the applicant institutions to distinguish this, and——

Mr. ROGERS. What is your guideline that you have to distinguish it in your decisionmaking? Do you have any?

Dr. LEE. You mean as to whether it is used for research or teaching?

Mr. ROGERS. Yes. It seems to me an institution could come in and say: "Give us a construction grant for our medical school," and "Give us a construction grant for research facilities."

Dr. KENNEDY. Right. The application is reviewed in detail. A site visit team goes out to look. We get full submission of drawings, plans, and this sort of thing, and it is on this basis that the decision is made.

The schools are under obligation to maintain these for a specified period of time—10 years—for research. And we have a certification procedure under which periodically the institution attests to the fact that these are still in use for research purposes.

Mr. ROGERS. Do you teach in research facilities at all?

Dr. KENNEDY. I think the distinction becomes difficult at the graduate level.

Mr. ROGERS. I would think so.

Dr. LEE. But they do not, Mr. Rogers, use these facilities, and this is one of the purposes of getting a more flexible construction authority.

Now they have to submit separate applications and reviews for educational facilities—those primarily for education, those primarily for research, and those for the library.

Obviously, a researcher is doing teaching along with his research. But in the laboratory this is not used as a multipurpose teaching laboratory. The teaching of some of the basic sciences is done in specially constructed multipurpose teaching laboratories rather than in the investigator's own research laboratory for which they were given a construction grant for a research facility.

Mr. ROGERS. Is the manpower of HEW being handled in NIH?

Dr. LEE. The Bureau of Health Manpower and the Library of Medicine are now in NIH. Those are under the direction of NIH, and one of the purposes of this was to achieve a better coordination between these efforts.

Mr. ROGERS. Somebody in the Public Health Service on manpower, do they go to the Bureau of Manpower?

Dr. LEE. The Bureau of Health Manpower, if they have an application?

Mr. ROGERS. If they need to get manpower for the health service itself? Do they work for the Bureau to say: "Let's have us provide for the manpower here?"

Dr. LEE. If we are recruiting, for example, in Indian health program?

Mr. ROGERS. I am thinking of planning ahead for manpower in the Public Health Service. Is this planned through the Bureau of Manpower?

Dr. LEE. No, the programs estimate their own manpower needs. This estimate is then coordinated through the administrator of the health services and mental health administration, through the Director of NIH, and through our Office of Personnel. That office is being moved to the Secretary's office in the reorganization process. And eventually the Surgeon General and I will review those requirements, and they are reviewed in the Secretary's office.

And then, of course, they are presented to the Congress.

Mr. ROGERS. Why doesn't the Bureau of Manpower handle all of your manpower problems?

Dr. LEE. I think they are separable problems, and their primary task is, of course, to administer these programs, to provide us with projects of national needs. It is difficult, I think for them to make the kind of detailed assessment of the number of physicians, for example, required in the Division of Indian Health, or in other programs.

Mr. ROGERS. That is why I thought your Manpower Bureau ought to be interested in that.

Dr. LEE. We will have a manpower staff in our office, Mr. Rogers. There will be a staff to provide the overall policy direction and coordination of all our manpower efforts.

Mr. ROGERS. Thank you very much.

May I say, Mr. Chairman, that I have great confidence in Dr. Lee? I think he is doing a good job. There is much we need to do.

Thank you very much.

Mr. NELSEN. Mr. Chairman, I had one point I wanted to make.

This, perhaps, does not deal directly with this program. But for years I have been working on a project, a day-care center for the mentally retarded, and I finally scored after about 5 years of plodding.

It was my contention that many of our vacated country schools could be picked up for $1 and would become day-care centers for the mentally retarded. I cited one as an example. Finally a demonstration project was approved, and now we learn after it has been in operation for about 2 years, the funds have been frozen.

Funded by the poverty program, we had a day-care center at Swan Lake in Cottonwood County—a very meritorious project. This funding was canceled and instead a center to take care of the alcoholics was started.

The day-care center that I first mentioned—where a project had been approved and funds were frozen—not many dollars were involved.

Yet, in my judgment, in the area of the mentally retarded, anything we can do is a worthwhile project. I am a complete liberal as far as that is concerned.

I wish you would check into that for me. I have been in contact with Dr. Cavanaugh, who has been very cooperative, but now the funds have been frozen. I think this is a tragic situation.

Dr. LEE. We will check on that specific project today and give you a report this afternoon and let you know what the status is.

Mr. NELSEN. Thank you very much. I hope that it will be rehabilitated. Thank you.

Mr. JARMAN. Dr. Lee, and gentlemen, we think a good start has been made in the hearings in your presentation of these programs, which are of such great importance and scope.

A number of questions have been raised and information requested, and we will appreciate having that. Then, after witnesses have been heard on various aspects of the bill, it may be that we will ask you to come back for additional clarification and discussion.

Thank you very much.

Dr. LEE. Thank you very much, Mr. Chairman.

Mr. JARMAN. We have as our next witness our colleague from New York, Congressman Rosenthal.

STATEMENT OF HON. BENJAMIN S. ROSENTHAL, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW YORK

Mr. ROSENTHAL. Thank you very much, Mr. Chairman.

I want to thank you for the opportunity to appear. I know the hour is late, and I shall be reasonably brief.

I have been concerned for some time with the need for increased attention to the quality of our Nation's medical care system. As a member of the Government Operations Committee, and its Subcommittee on Intergovernmental Relations, I have followed with great attention the operations of the Public Health Service and the National Institutes of Health and their responsibilities for improving medical care services.

The passage of Public Law 89–751, the Allied Health Professions Personnel Act of 1966, offered an excellent opportunity for the Public Health Service both to respond to the considerable innovation evident within American medicine on health manpower and to stimulate additional innovation.

A careful study of the operation of this legislation during its first 18 months indicates to me that there has been little response and even less stimulation in these fields by the Public Health Service.

I was pleased, therefore, that the President's health message considered the need to improve Public Law 89–751 by expanding the scope of Section 794: New Methods. I regret that the improvements suggested are limited, however, to that section and do not take sufficient account of the need for more responsibility within the Public Health Service for encouraging the innovation so badly needed—and so well recognized elsewhere in the President's health message—in promoting new approaches to medical care.

Specifically, I suggest consideration by this subcommittee of these additional amendments to H.R. 15757:

(1) That it is the sense of Congress that the Department of Health, Education, and Welfare has the responsibility for stimulation of new approaches in health manpower. This responsibility should be discharged, initially, by reporting in 1 year:

(*a*) On the extent to which the medical profession is already involved in developing new health professions, and, specifically, in developing training programs for physicians' assistants who can assume some of the important, but routine, burdens of medical care, under the supervision of doctors, so that our limited professional resources can be more fully and efficiently used;

(*b*) The steps which the Department of Health, Education, and Welfare has taken to encourage and assist there developments; and

(*c*) The further steps by which HEW can assist and stimulate the medical profession in developing curriculums, training institutions, and approaches to accreditation and licensing necessary to achieve the fullest possible use of such new health personnel.

Mr. Chairman, I have spoken many times in the past few months before doctors and medical educators on the state of our medical care and the need for increasing the efficiency with which we use our health manpower. I have found, as I anticipated, considerable reluctance by many doctors both to accept the basic criticism that our present medical care system is inefficient, discriminatory, and unfair, and the need for broadening and improving the use of paramedical personnel.

But I have been amazed and pleased to find many doctors who agree with these criticisms and who favor more help for the new pioneers in medical care research who are already at work today in America.

Today's doctors are aware of the kind of work being done by Dr. Eugene Stead at Duke University in training a whole new class of physicians' assistants and by Dr. John Niebauer's orthopedic team at the Presbyterian Medical Center in San Francisco which is training former army medical corpsmen to take over some of the routine and even menial duties performed traditionally by orthopedists. Doctors are becoming aware, in short, that there might be better ways to practice medicine than those they know today.

One of the bars to further development of these ideas is the resistance to change not only within the medical profession, and specifically within the American Medical Association but within the Federal Government which finances so many important medical research programs.

It is this unspoken but influential alliance between traditional medicine and some program administrators in the Public Health Service and the National Institutes of Health which is the real obstacle to more and better clinical medical research.

This amendment will encourage those leaders both in HEW and in medical education who want to improve our medical care system by updating clinical medical research. It will provide Congress with the information we need to judge the adequacy and extent of our support for promoting better medical care. And it will demonstrate to both

the medical profession and to the public our determination in Congress to start a critical evaluation of Federal medical research programs.

In addition to this amendment, I would like to urge this committee to support completely the President's request for the extension and expansion of programs to aid our medical schools. Unless the "have-not" medical schools, and particularly the poorer dozen schools in this country, get vital financial aid in the very near future, we face the possibility of medical schools closing precisely when we most need their production of doctors.

When it costs $40 to $50 million to start a new medical school—and we will have to pay these sums for a substantial number of new schools if we want to raise our medical standards—it would be inexcusable to allow 10 or 12 schools to close down for lack of operating subsidies.

The Federal Government's medical research programs are, I believe, largely responsible for the financial problems of some of these "have not" schools. We have led them to the brink of financial disaster. We must support them now if they are to support our efforts in the coming years to improve medical care by supplying more and better trained doctors and allied health personnel.

Mr. JARMAN. Thank you very much.

Mr. NELSEN. No question, but thank you for the very fine statement.

Mr. ROSENTHAL. Thank you.

Mr. JARMAN. We have listed as a final witness for today's session Dr. Doris Ross, of the American Society of Medical Technologists.

Dr. Ross, the House has gone into session. We would appreciate it if you would submit your statement for the record and then give us extemporaneously some of the highlights of what you recommend to the committee.

STATEMENT OF DR. DORIS LAUNE ROSS, AMERICAN SOCIETY OF MEDICAL TECHNOLOGISTS

Dr. Ross. I will be glad to give the statement. I will be brief.

We support this bill. We don't think it is the answer to our problems, all of them, but we do support it.

We would like to mention some things we hope will be considered when this act is reviewed. We hope when it is reviewed that consideration will be given to undergraduate loans with cancellation clauses, which has already been discussed, more scholarship funds for undergraduate students, and more money for graduate students to help encourage medical technologists to take part in this education.

We would hope we could fund programs for teachers in medical technology to train the people we need in this field.

Thank you again for allowing me this opportunity, and if there is any information you need from me later, I will be glad to give it to you.

(Dr. Ross' prepared statement follows:)

STATEMENT BY DR. DORIS LAUNE ROSS,[1] AMERICAN SOCIETY OF MEDICAL TECHNOLOGISTS

On behalf of the American Society of Medical Technologists, I would like to thank you for the opportunity of presenting our support of H.R. 15757, the Health Manpower Act of 1968.

We appeared in support of passage of the Allied Health Professions Personnel Training Act of 1966. We said then that to meet today's and future needs, educational programs for medical technology require emphasis on sound academic curriculums properly balanced with clinical experience to prepare the graduate for demands being made of him. The quality of any medical laboratory service depends on the quality of personnel. A study in Minnesota [2] to determine "whether participation in an evaluation study over a period of time would cause improvement in laboratory results", showed that:

1. Laboratories employing well-trained technologists demonstrate a higher level of accuracy and precision than those employing less well-trained laboratorians.

2. Well-trained technologists are capable of significantly improving laboratory performance by participating in evaluation studies, while less-well-trained laboratorians gain little or no benefit from participation."

Recently the Hermann Hospital laboratory installed a new Technicon Instruments, Sequential Multiple Analyzer (SMA 12/60), an instrument which will automatically determine and print out results of 12 different chemical determinations on one sample in 60 seconds. We have not evaluated the skill required to operate this instrument, a medical technologist (ASCP) and a pathologist have been operating it, but it appears now that it will require the services of a highly trained and skilled person.

The basic scientific knowledge and skills needed by the medical technologists can be obtained only through a strong academic and professional program under the best instructors available.

We have recommended before and do again now, the emphasis of the law on quality of education programs for medical technologists—that is programs based in junior colleges, colleges and universities. And we would like to reiterate our belief that bolstering these programs through the basic improvement grants program is the best way to fulfill the intent of the law to improve the quality of education for medical technologists and other allied health professionals.

I must mention that the limited funds allotted for these programs has not made a great enough impact to meet the other intent of the Act—to increase the numbers of personnel. One of the reasons for this is that practically no money has been appropriated for physical facilities.

The shortage of medical technologists may be attributed to several causes such as 1) the increased growth in businesses and other professions which utilize their skills, 2) the unappealing outlook of years of study and clinical experience in preparation, 3) the long road leading at best to a top position of little authority to make changes and institute new programs, 4) a top salary after graduate study or 20 years of experience or as chief medical technologist of less than $9,000 a year, and 5) a limited number of good educational programs in medical technology. The latter may be alleviated by developing sound education programs under good instruction, and by funding construction of adequate facilities for classrooms and laboratories. The unappealing outlook of years of study and clinical experience in preparation could be brightened by financial support for educational opportunities in medical technology.

In the proposed amendments to the Allied Health Professions Act, included in H.R. 15757, Title III, few changes are recommended. As this section has been in effect for only one and a half years, Congress apparently wishes to extend it

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[1] Dr. Doris Laune Ross, M.T. (ASCP) is a biochemist in the Department of Pathology at Hermann Hospital in Houston, Texas. She is also a registered medical technologist and has been on the faculty of the Hermann Hospital School of Medical Technology for over fifteen years.

Dr. Ross has been on the Board of Directors of the American Society of Medical Technologists and appears before this hearing representing the American Society of Medical Technologists. This organization was created in 1932 to promote higher standards in clinical laboratory methods and research. Membership is based on certification by the Board of Registry of Medical Technologists of the American Society of Clinical Pathologists, or academic degrees and experience in an area of medical technology such as biochemistry, microbiology, and hematology.

[2] Merritt, B. R., *et al.*, A Two-Year Study of Clinical Chemistry Determinations in Minnesota Hospitals, Minnesota Medicine 48 : 939–956, (July) 1965.

for only one more year, and hopefully will be making major adjustments next year. Of the changes recommended, however, I would like to comment on the ones concerning "Development of New Methods" as they relate to medical technology. We strongly urge that the public and nonprofit private agencies, organizations and institutions that are to receive grants to develop, demonstrate, or evaluate curriculums and methods for medical technology be those in which medical technologists themselves are active, and be those which have shown by their activities in the past and their interest at present to be concerned with this area of improvement of medical technology education.

The clause on funds for evaluation purposes indicates that the government may be evaluating curriculums. We suggest that the role of evaluator is better and more properly fulfilled by educational accrediting agencies outside the government.

I have indicated that while the Allied Health Professions Act is very much the right step in the direction of solving the shortages of manpower in the medical laboratory, the present law for all its good intentions cannot in its present form and under its present appropriations move noticeably toward solving all the basic problems.

In order to make a thoroughly rounded attack, we feel that other provisions need to be included in the Allied Health portion of the Act. These are provisions that would aid all the allied health professions concerned and not just medical technology.

(1) Undergraduate loans with cancellation clauses are needed in a manner comparable to those provided for nursing, physical education, social work, medicine, dentistry and others. While medical technology students may avail themselves of National Defense Education Loans, the fact is that a medical technologist averages about $6,000 during her first years of employment, a very inadequate salary for bearing the burden of a large loan. Furthermore, this puts us at a distinct disadvantage in recruitment especially since we must compete with other professions with accessability to such loans.

(2) No scholarship funds are available for undergraduate students in medical technology, as there are for nursing, medicine, dentistry, veterinary medicine and others. Again, this puts us at a disadvantage in recruiting.

(3) Although graduate traineeship money is available for graduate study, there is no provision in the present law for the development of graduate curriculum into which these graduate trainees could enroll. There are only five universities in the United States today which offer graduate education in medical technology. These few graduate programs are chiefly devoted to masters programs in the technology education are sorely needed. Over 780 schools of medical technology and laboratory assistants in hospitals as well as the academic programs on campus are crying out for more teachers and instructors. It becomes obvious that if we are to produce more medical technologists, we must, at the same time, produce more teachers to keep up with the enrollments.

(4) Support of part-time study for graduate education through which current faculty and superviors could upgrade their knowledge and skills could go a long way in improving the educational process.

Hopefully, these suggestions will be incorporated into law to give it additional strength in developing educational programs, opportunities for students, teaching facilities and expansion of educational facilities.

Again, I thank you for the opportunity to bring you the views of the American Society of Medical Technologists and their support of H.R. 15757.

Mr. NELSEN. No questions, but thank you for cooperating with the committee so well.

Mr. JARMAN. We appreciate your being with us, and we certainly will give careful consideration to your statement and your comments today.

Dr. Ross. Thank you very much.

Mr. JARMAN. The subcommittee will stand adjourned until the same time tomorrow morning, at 10 o'clock.

(Whereupon, at 12:15 p.m. the subcommittee adjourned, to reconvene at 10 a.m., Wednesday, June 12, 1968.)

HEALTH MANPOWER ACT OF 1968

WEDNESDAY, JUNE 12, 1968

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 2322, Rayburn House Office Building, Hon. John Jarman (chairman of the subcommittee) presiding.

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

We continue today the hearings on H.R. 15757, to amend the Public Health Service Act to extend and improve the programs relating to the training of nursing and other health professions and allied health professions personnel, the programs relating to student aid for such personnel, and the program relating to health research facilities and for other purposes.

Our first witness this morning is our colleague from New York, the Honorable Thaddeus Dulski. You may proceed as you wish Mr. Dulski.

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 ways to deal with the increasing shortage of health manpower.

President Johnson spelled out the problem very clearly in his health message to Congress last March 4.

I have been particularly concerned with the urgent necessity for more nurses. The nursing shortage is a severe national problem and one that we must face if we are to meet our responsibility to society.

Last November 28, I introduced legislation calling for establishment of a temporary 5-year program of Federal assistance. My proposal would help not only the nursing schools to reestablish their financial footing, but also would give limited tuition help to student nurses.

I believe very strongly that these steps are in order.

Congress sought to deal with the shortage of nurses in 1964 with the Nurse Training Act which I supported. We had high hopes for that program, but it developed that so many schools already were in such financial plight that they could not qualify for assistance.

It is not only the nursing schools that are having their financial difficulties, but also the would-be students. In their effort to meet

operating costs, schools have had to raise tuition rates to a point which is now beyond what many students can afford.

In your deliberations, Mr. Chairman, I am sure that you will receive considerable expert testimony and many suggestions for dealing with the health personnel shortage.

I have no pride in authorship of a solution. I do have intense interest in practical and prompt action toward alleviating the shortage.

Mr. Chairman, be assured of my full and continuing cooperation and thank you for hearing my observations.

Mr. JARMAN. Thank you for your brief statement Mr. Dulski. Your views will most assuredly be given every consideration by the committee.

Our next witness is also a colleague. We are pleased to have the Honorable Frances Bolton with us this morning. Please proceed as you wish Mrs. Bolton.

STATEMENT OF HON. FRANCES P. BOLTON, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF OHIO

Mrs. BOLTON. Mr. Chairman, thank you for giving me an opportunity to submit a statement in connection with the hearings on H.R. 15757, the Health Manpower Act of 1968. For many years my colleagues in the House have known of my deep concern with the needs of the American people for adequate health care in general and for nursing services in particular.

Last fall I introduced H.R. 13937, to provide assistance to hospital diploma schools of nursing, as follows: (1) annual grants ranging from $12,000 to $24,000 per school, depending upon enrollment; (2) up to $6,000 per school on a 50–50 matching basis to improve library resources; (3) $400 per pupil grants to each school; (4) annual grants based on 75–25 percent Federal-State matching for establishment of and operation of a State comprehensive planning committee for nursing education.

If we are to meet the nursing needs of the Nation the essential role of the hospital diploma schools must be recognized. These schools now supply about 75 percent of new nurses, but in spite of their importance more and more of them are going out existence. The high costs of hospital service join with the rising costs of education to make these programs prohibitively expensive to the average individual. Hospitals attempt to defray tuition and training costs, but they cannot do so much longer. The fact that the diploma schools have not had access to the public funds available for the other types of nursing schools—collegiate and associate degree—has been a serious handicap, and unless we recognize the special needs of the hospital schools more of them will be discontinuing operation.

I need not tell you that the shortage of nurses is acute. Unfortunately, only too often this problem is disregarded except by people who are sick and in dire need. The recently published review of the nursing situation by the Department of Health, Education, and Welfare indicated that by 1975 we will have need for 1 million nurses. Presently, there are approximately 640,000 registered nurses in practice; the current need is estimated to be for 775,000 registered nurses.

This indicates that we will have to increase the supply to approximately 60,000 nurse graduates a year. The critical nature of the situation facing the Nation will be seen when it is realized that during the period 1964–65 there were 34,686 nurse graduates and during the period 1965–66 there were 35,125—or an increase of less than 500 graduates in nursing. Thus, even with the Nurse Training Act of 1964 in effect, we have continued to fall very substantially short of meeting the need.

Just what does this shortage mean? The needs of the military have grown with the Vietnam war and these needs require continued and active recruitment of nurses who can come only from the civilian pool. The 1967 published figures indicate that the Federal Government employed 32,793 nurses. The medicare and medicaid programs will continue to increase substantially the health care being provided, and various studies reveal that the nursing requirements of aged patients are much greater than those for younger patients. The Government has assured the 19 million senior citizens of the country the right to access to care not only in hospitals, but in extended-care facilities and home health services.

A great many hospitals report serious shortages affecting their ability to provide care. In some instances, whole sections or floors of hospitals are closed because they cannot be staffed. Some institutions are being forced out of the medicare program because they cannot provide the required nursing supervision. The Federal Government is investing large sums of money in medical research which, when translated into patient care, inevitably means additional essential nursing care.

I am including herewith for the record a page of newspaper accounts illustrating the effects of the shortage of nurses on various hospitals throughout the country:

THE NURSE SHORTAGE: EXAMPLES OF EFFECTS ON AVAILABILITY OF PATIENT CARE

Los Angeles, California.—"Cedars-Sinai Hospital reports closing of ten percent of its bed capacity due to a shortage of nurses." (*Los Angeles Citizen-News*, 8/3/66.)

Boston, Massachusetts.—"Some 25 badly needed beds stand empty in the Pratt and Farnsworth Buildings of the New England Medical Center Hospital in Boston because there are no nurses to care for the patients they would hold." (*Washington Post*, 9/18/66.)

Louisville, Kentucky.—"The opening of one unit of a two-unit, 22 room addition to the Floyd County Memorial Hospital may be delayed because of a nursing shortage, hospital administrator William I. Fender said today." (*Louisville Times*, 10/24/67.)

Atlanta, Georgia.—"Governor Lester Maddox transferred $50,000 from his emergency fund to finance a 'blueprint for action' to meet Georgia's nursing needs by 1975." [The Governor said] "I sure do know about the shortage of nurses. I had to take the third shift at the hospital when my wife was sick." (*Atlanta Constitution*, 19/28/67.)

Providence, Rhode Island.—"Lloyd H. Hughes, executive director of the Rhode Island Hospital, said, 'We are unable to completely staff the hospital. As a result, 76 beds representing all of the beds on our ninth floor and eight beds in the emergency room are not available to take patients' . . . The situation is part of a national dilemma in which 79,000 registered nurses are needed immediately." (*Providence Bulletin*, 9/15/67.)

Washington, D.C.—"Despite a shortage of nursing home beds in the Washington area, the District's own facility—D.C. Village—has never opened a new 50-bed cottage because of a shortage of nurses . . . [it] needs 16 more registered nurses." (*Washington Post*, 9/23/67.) . . . "A shortage of nurses has forced

D.C. General Hospital to close one of its three children's wards." (*Washington Post*, 5/29/67.)

Baltimore, Maryland.—"Montebello State Hospital is so short of registered nurses and licensed practical nurses that it was forced to close a men's ward. . . . The hospital has space for 392 patients but, because of lack of staff, was treating only 278 patients as of yesterday." (*Baltimore Sun*, 9/28/67.)

Mrs. BOLTON. While I am very much in favor of continuing and increasing all forms of nurse education—collegiate, associate degree, and diploma—I hope very much that the provisions of my bill, H.R. 13937, will be included in the legislation which is finally reported by the committee. It makes very little sense to see hospital schools close where they have faculty, buildings, and equipment available to produce the needed nurses. Each of the three types of nursing education has a role in meeting the needs.

The 1964 Nurse Training Act gave special recognition to hospital schools of nursing, but I am told that many schools have been discouraged from participating because of the complex language of that act and administrative regulations; also, the subsidy was related partially to increased enrollment, and many of the schools had already reached their physical capacity. I hope that these objections will be met in the new legislation.

Mr. JARMAN. Thank you for your views, Mrs. Bolton. They certainly will be given every consideration.

At this time we will hear from another colleague, Congressman Berry, of South Dakota. I understand you have a short statement, Mr. Berry, so if you will proceed.

STATEMENT OF HON. E. Y. BERRY, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF SOUTH DAKOTA

Mr. BERRY. Mr. Chairman, I am most happy to endorse H.R. 15757 which provides for increased assistance to hospital diploma schools of nursing.

By 1970 we will need at least 210,000 more nurses than we have now to provide adequate care for our growing population, and this legislation will help in alleviating the shortage of nurses by stimulating development of comprehensive plans for nursing education, including development of facilities and recruitment of students in each State.

The measure also bolsters training resources and staff through annual grants ranging from $12,000 to $24,000 per school, based on enrollment; improves library resources through matching fund grants not exceeding $6,000 per year; will ease the problem by helping to reduce training deficits and control rising tuition costs through $400 per pupil grants to diploma schools, and authorize the Surgeon General to participate in determining eligibility of diploma schools for assistance.

Virtually every school of nursing in the country is confronted with serious financial problems in the struggle to keep its doors open, and this legislation would do much to assure the continuance of the high standards of the nursing profession we have come to expect.

I urge that H.R. 15757 be given early and favorable consideration.

Mr. JARMAN. Thank you for your concise statement Mr. Berry.

Our next witness this morning is Dr. William A. Sodeman, a member of the executive committee on medical education for the American Medical Association.

STATEMENT OF DR. WILLIAM A. SODEMAN, MEMBER OF THE EXECUTIVE COMMITTEE ON MEDICAL EDUCATION, AMERICAN MEDICAL ASSOCIATION; ACCOMPANIED BY DR. C. H. WILLIAM RUHE, DIRECTOR, DIVISION OF MEDICAL EDUCATION; AND HARRY N. PETERSON, ATTORNEY, LEGISLATIVE DEPARTMENT, AMA

Mr. JARMAN. Dr. Sodeman. Doctor, if you would introduce your associates this morning.

Dr. SODEMAN. Thank you, Mr. Jarman. Mr. Chairman, members of the subcommittee, I am William Sodeman, a physician and formerly dean of the Jefferson Medical College in Philadelphia, Pa. I am scientific director of the Life Insurance Medical Research Fund, Rosemont, Pa. I also serve as a member of the AMA Council on Medical Education. Seated with me to provide additional information as may be requested are Dr. C. H. William Ruhe, on my left, director of the division of medical education, and Mr. Harry N. Peterson, an attorney of the AMA's legislative department on my right.

We are pleased to have this opportunity of presenting the American Medical Association's comments on H.R. 15757, the Health Manpower Act of 1968.

In August, 1963, the American Medical Association, in testimony presented on legislation before the Congress, urged priority for the increase and improvement in the physical facilities available for medical education. We then expressed the belief that there was need for assistance in the construction of new medical schools and for expansion and replacement of the facilities of existing medical schools. As a result of that legislation and the ongoing efforts of the American Medical Association and the American Medical Colleges to encourage the development of new schools and the expansion of existing schools, 17 new medical schools are now officially classed by the liaison committee of the two associations as "in development". Further, the number of first-year students in all American medical schools has increased from 8,298 in 1960 to 8,964 in 1966 and is expected to increase to 10,200 by 1970.

As encouraging as these results may be, the urgent need for more physicians still exists. Recently, in a March 5, 1968, joint statement on health manpower, the American Medical Association and the Association of American Medical Colleges said, "to meet national expectations for health services, the enrollment of our Nation's medical schools must be substantially increased." Both associations have endorsed the policy that all medical schools should now accept as a goal the expansion of their collective enrollments to a level that will permit all qualified applicants to be admitted. To achieve expanded enrollment, it will be necessary to have increased financial support from both Government and private sources for the construction of additional facilities at existing schools and to create new schools. Equally important is increased support for the operational

costs of medical schools and for educational improvement and innovation which could shorten the time required for medical education. The bill before the subcommittee provides a means of furnishing the Federal component of the necessary financial resources.

Mr. Chairman, we would now like to comment specifically on the provisions of H.R. 15757 relating to the training of health personnel.

HEALTH PROFESSIONS TRAINING

Construction grants

H.R. 15757 extends for 4 years the program of grants for construction of teaching facilities for medical personnel and authorizes "such sums as may be necessary" for appropriation in each year. As was pointed out in the joint AMA–AAMC statement on health manpower, "initiative for development of new schools and expansion of the established institutions should be locally determined." It is difficult to predict exactly how many new schools will be initiated and how many existing schools will choose to expand in any given year, but it is important that Federal matching funds for construction be available as the plans of individual schools are developed and the local matching funds are obtained. Delays in Federal funding not only complicate local planning but may greatly increase total costs because of rising costs of construction and general inflation. Therefore, Mr. Chairman, we would urge in this legislation, and in providing appropriations, that necessary Federal funds be made available when needed so that the orderly development and expansion of medical schools will continue without unnecessary delay.

Another provision of the proposed legislation permits a school to make one application to the health professions educational assistance program rather than separate applications to different agencies for teaching, research and library facilities. Since these are integral portions of any medical school it is reasonable to incorporate them in a single application which can be considered as a whole. This desirable provision should simplify and facilitate the process of obtaining Federal matching funds for construction.

The bill would also permit space for graduate and continuing medical education and other advanced training to be included in the construction project. This is a significant improvement, since graduate and continuing education should be treated as a part of the continuum of medical education in the modern medical center.

Institutional and special project grants

The American Medical Association has long favored "diverse sources of support for medical schools under circumstances that prevent any extramural source from exercising controlling influence." Recently, the American Medical Association's Commission on Research recommended that there should be increased funds from both public and private sources for the support of educational programs in medical schools, to correct the imbalance between biomedical research and education caused by the "heavy, but desirable, Federal support of research." The recommendation further stated that there should be a greatly increased allotment of Federal funds for the operational expenses of medical schools, to be matched by those schools through pri-

vate or local governmental sources, "with every effort—made to keep the Federal contribution on a supplemental basis."

H.R. 15757 provides general institutional grants on a formula basis and special projects grants, which together could provide the necessary level of operational support for medical schools. The proposed formula for the institutional grants appears reasonable and contains the desirable provision that no school could receive more in any year than it expended for teaching purposes from non-Federal sources during the previous year. This would insure the important local matching and would "keep the Federal contribution on a supplemental basis."

The bill also requires expansion of enrollment as a condition for receiving an institutional grant and the proposed formula provides further incentives for expansion. While this is generally desirable in view of the urgent need for more physicians, the American Medical Association feels some concern on conditioning operational support to expansion. There are currently some medical schools in rather severe financial straits. These schools need increased operational support to maintain their present activities and a requirement that they must increase the student load in order to qualify for such support may serve to defeat the purpose of the program. Accordingly, we stress the importance of retaining the provision which authorizes the Secretary to waive the requirement for expansion if he determines that the increase in enrollment would lower the quality of the training provided.

The enumeration and clarification of the purposes of the special project grants should prove helpful. In addition, we believe that the assigned priorities for project applications will encourage the development of curricular innovations and changes in the educational program to the end that enrollments will be increased and the time required for medical education shortened, if possible. These are two important objectives cited by the recent AMA–AAMC joint statement on health manpower.

Before closing on the subject of health professions training, I would like to call your attention to a special situation. I have previously referred to provisions which limit the Federal contribution in any year to the amount of non-Federal funds expended during the previous year. As you are well aware, Howard University College of Medicine, located here in the District of Columbia, receives a substantial amount of its operating funds through appropriations from the Congress. That medical school should receive adequate financial assistance to permit its improvement and development to the fullest extent. Accordingly, we urge that no application of the Health Professions Educational Assistance Act in providing various grant assistance be imposed which will operate to the detriment of Howard University College of Medicine's eligibility for participation in benefits under this act.

ALLIED HEALTH PROFESSIONS AND PUBLIC HEALTH TRAINING

H.R. 15757 extends for 1 year the Allied Health Professions Personnel Training Act. The American Medical Association recognizes the importance of developing adequate numbers of allied health professions personnel, and accordingly, we support a 1-year continuation of the construction and improvement grants provided for in that act.

The bill extends for 4 years the program of grants to schools of public health and other public and non-profit private institutions to provide

graduate or specialized training in public health. It also extends for 4 years the program of grants to cover the costs of traineeships in graduate or specialized training in public health for physicians, engineers, nurses, or other professional health personnel. Mr. Chairman, the American Medical Association supports these provisions extending the programs assisting public health training.

HEALTH RESEARCH FACILITIES

H.R. 15757 extends for 4 years the program of grants for construction of health research facilities. The association appeared before this committee in 1965 and, at that time, supported an extension of this act. We believe that the continuation of this program is still warranted and we recommend adoption of provisions in H.R. 15757 extending the program of grants for construction of health research facilities.

Mr. Chairman, the association is presently reviewing the provisions of the bill relating to an extension of the Nurse Training Act. For that reason, our statement does not include any comments on that portion of the legislation before you.

Mr. Chairman, once again let me express my appreciation and that of the American Medical Association for the opportunity of presenting medicine's views on the important subject of health manpower. Today, in every medium of communication, health care is a principal topic for discussion. We believe that the extenson and improvement of the programs discussed above will serve the interests of our country by encouraging a greater production of health manpower.

We will be pleased to attempt to answer any questions that the subcommittee may have.

Thank you, sir.

Mr. JARMAN. Doctor, yesterday a strong point was made in the hearing with reference to the tremendous increase in Federal funds made available with the objective of more doctors, more dentists, more manpower in the medical field in the country. Concern has been expressed over the fact that there has not been the kind of increase that many of us have expected. In the first stage of your statement you refer to the number of first year students in all medical schools in America, increasing about 675 from 1960 to 1966. Would you care to comment with reference to that point that was made in the hearings yesterday, the very slow increase in number of doctors that are coming out of the overall program?

Dr. SODEMAN. Mr. Chairman, I was not here for the hearings yesterday, but we are concerned, of course, with the lack of speed with which the increase is taking place.

The construction of new medical schools and the evolution of new medical schools is time-consuming and takes 5 or 6 years to get one of those shows on the road, so to speak. For that reason there are difficulties in the evolution of these new schools in a short period of time.

Of the 17 schools in development, I believe five new ones took students this year, is that correct, Dr. Ruhe?

Dr. RUHE. Yes.

Dr. SODEMAN. And, I think the same thing will be true next year. When local matching grants, matching moneys are necessary, and these must be correlated with Federal moneys to make an effective

program. When it is necessary to bring a faculty together in an area in which manpower is short, as far as teaching is concerned, there is difficulty in this kind of evolution.

The medical schools that are in action at the present time are concerned about increases in the numbers of students and again this is a difficult matter for some of the very same reasons.

The self-determination of what schools should do, of course, is one of the factors of importance in this respect and the incentives to increase are important. The American Medical Association has been greatly concerned about this matter and has advocated, and does advocate, as many new schools and expansion in as many of our existing schools as can possibly take place. But this is a slow process, Mr. Chairman, and we are as concerned about this as you are.

Mr. JARMAN. Mr. Rogers raised this particular point in yesterday's hearings and may have some additional questions along that line.

Let me ask you this: Is the AMA position, in general, that there is some imbalance between Federal funds for research and funds for educational purposes at medical schools?

Dr. SODEMAN. This is true. This is the AMA position, but the position rests in the fact that we feel that there are not enough moneys for the educational component. We do not feel that a reduction in the research component is in order, but we feel that a balance by developing the educational component is in order to effect a balance which would be suitable.

Mr. JARMAN. Mr. Rogers?

Mr. ROGERS. Thank you very much.

Doctor, I think your statement was very helpful to the committee. I am concerned and would like to get some of your thinking, though, about increasing manpower, which this is trying to do. I notice from the fact sheet on physician population and medical education in the United States, which is an AMA publication, some facts that are quite disturbing to me, and a lack of results, I think, comparable with the amount of money invested.

What would you say the shortage of doctors is in our Nation today?

Dr. SODEMAN. The actual number? This would have to be an educated guess, Mr. Rogers.

Mr. ROGERS. I understand.

Dr. SODEMAN. But the figure commonly given is around 50,000.

Mr. ROGERS. I see. And, have you projected that figure, say, for the next 5 years? Could you give us your estimate for the record? I realize you may not have this with you.

Dr. SODEMAN. We can give you this estimate, of course, and we would be happy to do so if you wish. Perhaps Dr. Ruhe would be in a position to answer some of these questions now.

Mr. ROGERS. Fine.

Dr. SODEMAN. The document you have before you is one of his documents.

Mr. ROGERS. Good.

Dr. RUHE. I am not sure that I understand the question about the projection. Do you mean——

Mr. ROGERS. In other words, do you project that this present shortage will increase? Will it decrease in the next 5 years, or next 10 years, or with the increase in population that we have in this country, will it remain constant, or what?

Dr. RUHE. It is a very difficult question to answer——

Mr. ROGERS. Yes; I realize it is speculation.

Dr. RUHE (continuing). Because the question of need is what determines the definition of "shortage" and it is awfully difficult to anticipate what public expectation or demand will be. I think it has grown far out of proportion to what we had anticipated in past years.

Mr. ROGERS. The demand has.

Dr. RUHE. That is right.

Mr. ROGERS. Yes.

Dr. RUHE. And, the estimate of 50,000 physicians short today is really not our estimate; it is a commonly used figure. One of the things which disturbs us is that it has been very difficult to identify an exact goal, in terms of numbers of physicians, that we are seeking. It is a fact that the proportion of physicians to population has actually been improving. It has been getting better and, if our projections are accurate, it will continue to increase. We currently have a ratio of total physicians to population of somewhere around 152 to 100,000, and if our estimates on this are accurate, we will be up to somewhere between 160 and 165 per 100,000 by the year 1975. But whether this will meet the demands for physicians' services is something quite different. All that we can say, really, is that we are adding to the numbers of physicians, but all the people who study this field and attempt to predict what the population will want estimate that, in spite of the rising ratio of physicians to population, we will not meet the demand. So there seems to be a general agreement—and we would concur in this—that in spite of all our efforts to produce more physicians, we are not likely to meet the full demand for physicians' services in the immediately foreseeable future.

Mr. ROGERS. Well, now, I wonder if the AMA in its study has a solution proposed to meet the demand. Have you suggestions of how the demand can be met now or what action should be taken?

Dr. SODEMAN. Mr. Rogers, we are concerned about this. To supplement some of what Dr. Ruhe has said, the President's Manpower Commission report points out that during the period from 1955 to 1965 the population increased about 17 percent, the number of physicians increased about 22 percent, but the services of physicians increased 18 percent. If this relationship continues, it means that the demands on physicians are going to be greater despite the fact that our physician population is going up. For this reason, the utilization of physicians and the utilization of physicians' time are important and how the arm of physicians can be extended in their use and how the services can be rendered is an important part of this total problem. The American Medical Association, as well as everybody else, is greatly concerned about the methods whereby this can be accomplished efficiently, effectively, and for the benefit of the public.

Mr. ROGERS. Yes. I understand. What I was thinking about, have you suggested that so many new medical schools be built to be able to turn out so many physicians or have you adopted such a program as that, a specific program to meet the actual shortage? I wondered if you had done that.

Dr. SODEMAN. If you mean have the universities been solicited to establish medical schools——

Mr. ROGERS. No. That is not what I mean.

Dr. SODEMAN. No.

Mr. ROGERS. What I mean is, I wonder if what the AMA has set forth here is the shortage. It will take so many new medical schools or an increase of students in the existing schools. It will require so much money to do this. So much should be Government, so much private or whatever it may be. I just wondered if you had projected such a program as this.

Dr. SODEMAN. Projections of a program of this sort I do not know. Dr. Ruhe, do you know?

Mr. ROGERS. I just wondered.

Dr. RUHE. No. The answer is we have no formal specific goal for either number of schools or number of graduates. We have estimates of what this is likely to be but again, as I said earlier, because it has been difficult to estimate exactly what the demand for services will be, we have not an exact goal for numbers of graduates.

Mr. ROGERS. Well, if you could give us some information as to your projection for the record, based on present ratios, not even projected into what the increased services might be called upon, we hope the services maybe can be decreased if we get the allied health program going where we can use the physician services in a more effective manner.

Dr. SODEMAN. We do know, Mr. Rogers, that we are so far behind we need all the new medical schools we can get and all the expansion we can get, but this is not quantitative and you would take quantification.

Mr. ROGERS. And, this is what I think would be helpful to the committee so we can project concretely what this Nation must do to close this gap, you see.

Now, let me ask you this. What about dentists or did you make any study? Do you want the dentists to tell us?

Dr. SODEMAN. I think we would defer to the Dental Association.

Mr. ROGERS. What about nurses, the shortage?

Dr. SODEMAN. We recognize the critical nature of this shortage. We recognize the problems in the Nurses Training Act and the needs. We are currently deep in discussions on this. We would rather transmit to you in written form at a later time opinions about this than give them during the middle of our discussions.

Mr. ROGERS. Fine.

Now, I notice from your chart, from 1958 to 1966 we had a percentage increase of medical school graduates of 10.4 percent. We had an increase in medical schools in this same period of time of 8.6 percent, 81 to 88, full-time faculty increased 65.7 percent, and total expenditures increased 176.5 percent.

Now, I notice that just in the last number of years from 1961 until 1967, full-time faculty in medical schools increased from a little over 11,000 to 19,000, but graduates did not increase even 1,000 according to figures here because your medical school graduates from 1957, which is even before 1961, you had 6,796 and in 1967 you had 7,743. So, you have an increase in the full-time faculty of some 8,000 persons and yet we only produced 1,000 more graduates. Does not this seem strange to you?

Dr. SODEMAN. No; it does not, sir.

Mr. ROGERS. It does not? Tell me why not.

Dr. SODEMAN. There are many reasons for this that are not patent, I think.

In the first place, our schools traditionally in the past have had very large numbers of part-time teachers.

Mr. ROGERS. No. These are full-time.

Dr. SODEMAN. Yes, but we have had many part-time teachers in the past and full-time teachers are replacing them, Mr. Rogers.

Mr. ROGERS. Well, I assume—these figures I have given you are full-time faculty members, not part time.

Dr. SODEMAN. Right, sir; but they are replacing part-time faculty that do not appear in the figures.

Mr. ROGERS. I do not care who they replace. The numbers increased from 11,000 to 19,000 and they are full time.

Dr. SODEMAN. During that period of time part-time teachers have dropped off rather remarkably as full-time teachers increased. Then, too, one cannot teach medical students in a vacuum. Medical schools are not medical schools with a hospital attached any more. They are major medical centers with many components in teaching. The graduate programs are important. The research programs are important. Allied health is important. The dispensing of service that is satisfactory is important. We are extending activities into the community and teaching in community services, and so on, outside of the medical center.

Mr. ROGERS. Well, has not this basically been true since the early 1960's?

Dr. SODEMAN. Not to the——

Mr. ROGERS. Has it changed that much in the last seven years?

Dr. SODEMAN. It has changed remarkably, sir. And, all of these things, when they add up, make a rather remarkable difference in these figures. People do not teach all of the time. They do research part of the time. They give service part of the time. And——

Mr. ROGERS. Well, this is what I am wondering now. Are we properly using the personnel to instruct to get the doctors out to teach the present knowledge and to heal people on present knowledge?

Dr. SODEMAN. I believe that it is necessary to do this in this way because you must teach medical students in the total setting and pattern of medical care if they are to grasp the whole spectrum of medical care.

Mr. ROGERS. Let me ask you this. Why would it be that out of 85 schools, 85 medical schools in 1957, 32 of those schools graduated fewer or the same number of physicians in 1967 as they did 10 years earlier in 1957, and yet we have had an increase in faculty, we have 176 percent increase in funds. I cannot reconcile these figures.

Dr. SODEMAN. One must consider that our faculties—our medical school status at the time where the point of reference takes place, were not in optimal condition and optimal state at that time.

Mr. ROGERS. But, this has decreased since the time when it was not even optimal.

Dr. SODEMAN. But, quality is increasing at the same time.

Mr. ROGERS. Well, how do we know this?

Dr. SODEMAN. We can tell this by the way in which students react to the qualifying examinations and by other techniques.

Mr. ROGERS. Well, we might get into a big argument on this but I will not go into that now. I would hope this is true in every school. I am not sure that it is true.

Dr. SODEMAN. I think it is, sir. I think it is true.

Mr. ROGERS. In every school?

Dr. SODEMAN. I cannot vouch for every school.

Mr. ROGERS. No, I would think not.

Dr. SODEMAN. And then, too, one must realize that medical education is not a 4-year proposition. Students go to medical school 4 years and get an M.D. degree. They take varying amounts of training after that, some of them spending a total of 7 to 8 years, whether they are going into family practice or a specialized practice of some sort. This means that the educational components are twice as long as the area we are talking about support for. Some of the individuals are concerned in the teaching process in that whole spectrum of those 8 years rather than the simple 4 years of the medical school.

Mr. ROGERS. Yes.

Dr. SODEMAN. You cannot take those 4 years out of context with the total pattern.

Mr. ROGERS. I was just using the figures you gave for comparison, in your paper, which I presumed was a correct comparison.

Dr. SODEMAN. Yes. The tables need some explanation, sir. I think that is true.

Mr. ROGERS. Well, maybe we need more figures. Perhaps you could furnish the committee the proper figures you think should be compared. Would you do that for the committee?

Dr. SODEMAN. We will be happy to.

(The information requested appears on p. 303.)

Mr. ROGERS. Because I am very concerned about this, and then particularly with your statement that you do not think we ought to require as a precedent for Federal funds to be invested in medical schools any increase in student body.

Now, if we do not require some increase in production here in effect, with more funds invested, are we not really not meeting the problem? Are we not just saying, well, you do not have to? Here are 35 schools so we just give you and you drop in graduates rather than increase? This does not meet the problem. What we are faced with is a very practical problem. We want quality education, everybody is agreed on this, but still we must set some goals to see some results begin to happen. We cannot keep voting funds, millions and millions of dollars of tax funds, and not see any results in the number of physicians or nurses or whatever it may be.

Now, I would hope you could consider this in your recommendations to us and perhaps give us your thinking on what would be a realistic figure. We have had under the present law a 2½ percent increase of student body or five people, which is nothing. I realize in some medical schools it is something. But for the most part this is not meeting the problem. So, what we have got to do is say what is it necessary to do to bring this school up, to bring it where it is going to produce some more doctors? And, unless we meet this problem, we are going to have chaos in this country because they are now going into all this medicare business where people are expecting care and if we do not start turning out physicians and the manpower to handle this, I think we are going to be in dire straits, and I am sure you share this feeling,

and I know from your testimony this is so. But, I think we must have some concrete guidelines. If we are going to put Federal funds, we are going to have to be assured that there are at least more people turned out and I would hope you could give us some figures in looking over—because you do have expert knowledge in this area—of what you think it would not be unreasonable for us to ask for medical schools. Maybe we could do it on a school by school basis and I do not see why we could not, if necessary, because there will be some schools that can take 20 or 30 or 50 more with a little increase. So, maybe only five. But, we ought to know how many new schools we must really gear for because I think we have not handled the situation well. I am very discouraged by the figures that I see before me in your information here where we have had such an increase of faculty but no doctors basically. A thousand. And yet, 7,000 new instructors.

Now, it may be true, maybe this is a part-time thing and I would like to get those figures as you say.

Dr. SODEMAN. There are some equivalents in here.

Mr. ROGERS. I understand that, but still these are shocking figures. And, it may be that the whole medical education setup in this country needs to be looked at to see how they are using these instructors. I do not know that we are really using them effectively. Maybe the man is spending too much time in research when he ought to be teaching ten more people to really solve the most pressing need we have. So, I hope this committee is going to do a study on manpower use and I would hope your organization would help us in this and support it.

Dr. SODEMAN. Dr. Ruhe would like to say something, Mr. Rogers.

Dr. RUHE. May I comment on this, Mr. Rogers? I certainly agree with virtually everything you have said. I believe that the figures are a little bit misleading in the way they are put here. They were put for a particular purpose and sometimes that purpose needs to be explained somewhat.

Mr. ROGERS. I understand this and any figures you want to submit on this will be satisfactory.

Dr. RUHE. I think the problem in looking strictly at the growth of full-time faculty and in comparing this with the growth of graduates is that it does not account for the multitude of other activities which are carried on by these full-time faculty.

Mr. ROGERS. Well, are we doing too much, then? Should we confine faculty members more to teaching? Should this be done or—

Dr. RUHE. Well, I think one has to make a judgment based on what the current needs and the current demands are. I think emphasis over the past 10 or 15 years has been more in increasing the research activity of our medical centers than it has been in increasing numbers of physicians, and this has been in response to the public interest and, of course, the funds that have been provided for such. In addition—

Mr. ROGERS. I would agree with you. I think the Congress has emphasized research so much with the billions we have put in it that it appears now that we are reaping this by lack of physicians where we should have put perhaps greater emphasis on instruction, and so forth, in the medical schools to produce the physicians that can minister present knowledge to people because a lot of people are not going to even get ministered with present knowledge, and this is what causes concern, I think.

Dr. RUHE. Yes. I do not mean to minimize the importance of research in any way.

Mr. ROGERS. I would agree. I do not, either.

Dr. RUHE. We believe what has been done in the medical centers has been tremendous in the way of increasing the research potential and what has been developed. There has also been the development of graduate medical education, of nursing education, of the education in the allied health professions and services. All of these things have been coming along at the same time, and Dr. Sodeman mentioned the involvement of the medical man in the community. The regional medical programs are in demand in the communities, and other programs of this nature and all of these things are important and it is difficult sometimes to say which is the most important at any given time. One of the problems, I think, is that there is usually a time lag between recognition of the need for a particular service and the time you can get geared up to supply that service.

I think this is particularly true in medical education where there is a time required from the beginning of the pipeline to the end of the pipeline before the people begin turning out.

Now, we do have these 17 medical schools currently in development of which seven now have medical students in them and five will next year, and the others will within a couple of years from now, so the pipeline will begin to deliver more people. But we do feel there has been an overemphasis perhaps on some of these other things rather than the producion of physicians over the past few years. I think the joint statement of the AMA and AAMC now emphasizes that and we have been urging all the medical schools now to make their No. 1 priority the production of more physicians.

Mr. ROGERS. Good.

Dr. RUHE. Now, one word about the question of what the individual school can and should do and whether it should be required to increase. I think we have always supported the concept that in this country the individual university developed on its own initiative and with its own goals and with its own concept of how it should reach those goals provides the strongest education. We still support this. We believe that the individual institution should be permitted to determine what its objective should be and whether it should greatly increase its numbers or try to maintain a position doing other things without increasing numbers. However, as I said before, our two associations have now taken jointly the position of urging all the schools to consider if they cannot increase their numbers. We would prefer as an association not to have every institution required to do this but to provide all an encouragement and incentives to persuade them, those which see this as part of their mission and part of their goal in line with their objectives, to be able to do it.

Mr. ROGERS. Now, let me ask you this.

Dr. RUHE. Most medical schools are doing this, I would say.

Mr. ROGERS. Except the 35 that have decreased. Let me ask you this.

Dr. RUHE. Even many of those schools today are now expanding or gearing up for an expansion in numbers of graduates.

Mr. ROGERS. Good. Well, I hope so. Let me ask this. Of course, I think all of us agree with the concept that we want the institution to develop its own goals, no question about that, but take our viewpoint

now, ready to vote millions of dollars. Do you not think it is realistic to say they ought to have some increase before we put Federal funds in?

Dr. RUHE. I think it is in most instances.

Mr. ROGERS. We have got to do something like that.

Dr. RUHE. In most instances. I think there are some schools in severe financial straits so the provision for an exception in the legislation, we think, is a very good one.

Mr. ROGERS. Well, perhaps.

Dr. SODEMAN. Mr. Rogers, in our statement there is not the implication that money should be given without an incentive to increase. As Dr. Ruhe has just indicated——

Mr. ROGERS. I am glad that is clear.

Dr. SODEMAN (continuing). We do have schools where the quality of education is such that they need support now to maintain an increased quality with the number of students they have and there should be some individualization on this and——

Mr. ROGERS. We may have to do it.

Dr. SODEMAN (continuing). And the Secretary having the right to give waivers.

Mr. ROGERS. I do not like too many waivers to the Secretary. You get everything waived.

Let me ask you this now. You say you approve the special project grants. The proposed legislation, as I understand it, says that this money that is allocated either for institutional project grants can be interswitched. They would hope to use it 40 percent institutional grants, 60 percent project grants. No limitation on project grants.

Now, there is a limitation of $400,000. Do you not think there ought to be some limitation on a project grant?

Dr. SODEMAN. I think there should be justification for use of any funds up to any amount.

Mr. ROGERS. I assume this is so of all of them.

Dr. SODEMAN. Yes.

Mr. ROGERS. But, otherwise it seems to me, they could use the 60 percent or actually they could use 100 percent in project grants, give it to five universities. I do not think they would do this but we never know.

Now, we have got to write the law where we are going to get some results here. I wish you would give that some thought and let us know what you think would be a realistic ceiling on project grants. It has been $400,000. I would not mind raising that limitation some as far as I am personally concerned, but I think just unlimited, I would not support.

Dr. SODEMAN. We will give you a considered opinon on this, Mr. Rogers.

(The information requested appears on p. 303.)

Mr. ROGERS. That would be helpful, and then if you let us know the number of medical schols we should build to meet the actual shortage and then if you would let us know what reasonable increases might be on these medical schools for new students.

(The information requested appears on p. 303.)

Mr. ROGERS Thank you. It has been most helpful.

Mr. JARMAN. Mr. Nelsen?

Mr. NELSEN. Thank you, Mr. Chairman.

With the reference to the table of instructors, as I understand it, previously part-time instructors did the work in many of the colleges, medical schools. Is that true?

Dr. SODEMAN. That is true and it is still true in some degree, Mr. Nelsen.

Mr. NELSEN. Now, if the part-time instructors were tabulated, would the comparison be so completely out of line as it is now?

Dr. SODEMAN. This is an estimated guess of mine, but the answer is it would not be so far out of line. Still, we have increases in the number of full-time people doing research, and carrying out other functions that were not carried out by part-time instructors before. Full-time people teaching paramedical personnel, nurses, carrying on continuing education and doing other matters, that there would be some discrepancy in these figures certainly, but they would be clarified and justified by the activities of these people in the total spectrum of education. Today continuing education of a physician is extremely important because of the rapid increase in knowledge, as you know very well.

Mr. NELSEN. Now, in the dollar comparison, of course, in fairness one must take into account the inflationary trend which has driven all costs up. Isn't it true that there has been quite a change?

Dr. SODEMAN. And, it is more remarkable in the health field because the shortage of personnel and because of the the need to go into the marketplace and bid for personnel means that the costs have gone up more remarkably than the average increase for personnel generally across the country.

Mr. NELSEN. With reference to the States determining whether they should increase their enrollments, I think there is an attitude developing in the Congress that if Federal money is to be involved the medical schools should expand their enrollment and thus expand their production. I think this wish should be respected because this is the prime reason why we are trying to help with the total burden.

Dr. SODEMAN. Mr. Nelsen, we believe that the most rapid way to get more physicians is to expand existing schools where it is possible to do so. The process is a shorter process than in developing new schools.

Mr. NELSEN. Getting into the area of research, I have noticed that there seems to exist a nationwide competition as to who can make the best heart transplant. Has there been too much emphasis in these areas and a lack of emphasis on the production of doctors that the country so badly needs?

Dr. SODEMAN. I do not think, sir, this is either/or. I think these things can go along in a parallel way and that the emphasis that has taken place in that kind of process that you are talking about has not been detrimental to the process of trying to develop more physicians.

Mr. NELSEN. Yesterday in the hearing I asked whether there should be a greater emphasis on the practical nurse approach in view of the very obvious shortage of nurses. Many competent young ladies that might have a great aptitude in psychology and concern for a patient, might become a practical nurse of great value in a hospital, even though they could not afford to go on to become an RN. I was informed that there were certain obstacles in the program that might actually deter the hospital schools from proceeding with a more broadly accelerated program. Do you have any comment on that?

Dr. SODEMAN. We are deeply concerned about the problem of shortage of nurses in all categories of nursing. As I indicated earlier, we are discussing this and doing some analyses of this at the present time. We would prefer, if you would permit us, to supplement this with a written statement later on.

Mr. NELSEN. Please do so.

Dr. SODEMAN. We would be happy to do so.

(The information requested had not been supplied at time of printing.)

Mr. NELSEN. I am not sure if I understood Dr. Lee accurately, but it is my understanding from what he said, that Federal money would be directed to the school only in connection with those who qualify for a student loan. I am not sure if I understood him correctly, but if there is any aspect of the program that needs to be changed to accelerate the training of bedside nurses I would like to know about it. This is one area where a minimum of dollars would result in a maximum of production and I hope that this could be given more consideration.

Dr. SODEMAN. We hope that our statement will cover the whole spectrum, Mr. Nelsen.

Mr. NELSEN. Thank you. No more questions.

Mr. JARMAN. Mr. Skubitz?

Mr. SKUBITZ. Doctor, if I understood you correctly, you said the ratio of doctors to population, was approximately 152 doctors to 100,000 people.

Dr. SODEMAN. That is right. That is what Dr. Ruhe said.

Mr. SKUBITZ. That is one doctor for 666 people. Is this unreasonable?

Dr. SODEMAN. I do not think——

Mr. SKUBITZ. Would that overwork the doctor?

Dr. SODEMAN. Beg pardon?

Mr. SKUBITZ. Would that overwork the doctor?

Dr. SODEMAN. It does overwork them; yes, sir.

Mr. SKUBITZ. 666? Do you think you would get a young graduate to go to a community that just had 666 people in it?

Dr. SODEMAN. There are matters of distribution.

Mr. SKUBITZ. I think now you are putting your finger on the point—distribution of doctors. I think this is one of our big problems. The second point is the field of research. I think we have enough doctors but they are not distributed properly.

Dr. SODEMAN. The physicians doing research and the percentage component of the physicians in this activity is relatively low for the total number of physicians. It is important that this component be maintained because this is the way in which you improve health in the future.

Take the Salk vaccine, for example. If these people were not producing this vaccine, we would have physicians taking care of patients with poliomyelitis which they do not have to take care of now, so in the long run the components of the physicians in research is extremely important and I do not think this percentage is getting out of hand in terms of the past percentages and trends.

Mr. SKUBITZ. Do you have to run the whole gamut of the medical profession in order to be a research man?

Dr. SODEMAN. No, sir.

Mr. SKUBITZ. Maybe too many doctors are going just into the field of research and not enough into the practice of medicine. Maybe we should make some changes in this field. What do you think?

Dr. SODEMAN. Personally, I do not think so, sir. I think that we need those that we have in research at the present time and we are not increasing this component out of reason.

Mr. SKUBITZ. Well, Doctor, in 1967 there were 7,743 graduates. How many of them would you say went into the field of practicing medicine, how many into the field of research, how many into teaching, and how many employed by government and industry?

Dr. SODEMAN. Perhaps Dr. Ruhe has some figures. I can give an educated guess, if he does not have the figures.

Dr. RUHE. We do not have those figures because as you may be aware, it is some years after the man graduates from medical school before what he finally does is determined. He has of course, 2 years of compulsory military service. He has several years generally of graduate education at the internship and residency level.

Mr. SKUBITZ. Can you take any one year, I do not care what year you take, 1961, 1962, 1967, and give us a breakdown of just how many doctors actually go out into the field and practice medicine and how many go into the field of research and how many stay in teaching, and so forth? You know, I have a feeling, Doctor, that a lot of graduates are like Congressmen and Government employees. They get accustomed to a paycheck. When they get out of college, they get into the research field until they can earn a little money but they stay in this field. They never want to get out and practice medicine.

Mr. NELSEN. Off the record.

(Discussion off the record.)

Dr. RUHE. Actually, the percentage that go into research as a major activity is still quite small. Based on informal estimates, it is running somewhere between 5 and 8 percent of our graduating classes. In terms of our numbers of total physicians, the active physicians as they identify their activities, the number really is quite small that identify themselves as being with research as their major activity. As of December 31, 1967, out of 294,000 active physicians in this country, only 4,600 classified themselves——

Mr. SKUBITZ. I am interested in classes. How many of our graduates immediately start practicing medicine or into research or teaching or become salaried doctors in industry? Would you provide this information?

Dr. RUHE. Yes; we certainly can supply that information.

(The information requested appears on p. 303.)

Mr. SKUBITZ. That is all, Mr. Chairman.

Mr. JARMAN. Are there further questions? Gentlemen, we very much appreciate your taking the time to be with us and to add to the record of the hearing on this important bill.

Dr. SODEMAN. Mr. Chairman, may I express the thanks of all three of us for your kindnesses to us.

Mr. JARMAN. Our next witness is our colleague, the Honorable William T. Cahill, of New Jersey, who will make a personal presentation.

STATEMENT OF HON. WILLIAM T. CAHILL, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW JERSEY; ACCOMPANIED BY NICHOLAS D. HEIL, LEGISLATIVE ASSISTANT

Mr. CAHILL. Thank you very much, Mr. Chairman, and members of the committee. May I say before starting my statement that I think Mr. Rogers has pretty well anticipated what my views, as expressed in this statement, will be, and I will say to Mr. Skubitz that I think I can supply him specifically with the figures that he wants because we have made a survey of the 88 medical schools in the United States for the purpose of determining the very question that he has asked. I should also like to say to Mr. Nelson, sharing as I do his views on the practical nurses, and knowing the chairman's intense interest in this entire program, that I hope that my testimony will point out the scope of the problem and perhaps make several suggestions that might, hopefully, contribute to its solution.

I think that all of us know that during the past several years hospital officials, medical educators, the press, representatives of organized medicine, and the public representatives in Government, have spoken of an "impending" crisis in our Nation's system of health care. However, it has become evident that far from threatening in the remote future, crisis conditions presently exist. As reported by the President's National Advisory Commission on Health Manpower several months ago, and I quote:

> The indicators of such a crisis are evident to us as Commission members and private citizens; long delays to see a physician for routine care; lengthy periods spent in the well-named "waiting room," and then hurried and sometimes impersonal attention in a limited appointment time; difficulty in obtaining care on nights and weekends except through hospital emergency rooms; unavailability of beds in one hospital while some beds are empty in another; reduction of hospital services because of a lack of nurses; needless duplication of certain sophisticated services in the same community; uneven distribution of care as indicated by the health statistics of rural poor, urban ghetto dwellers, migrant workers, and other minority groups which occasionally resemble the health statistics of a developing country; obsolete hospitals in our major cities; costs rising sharply from levels that already prohibit care for some and create major financial burdens for many more.

Now, gentlemen, however, despite knowledgeable estimates that our Nation is presently short 50,000 doctors, and that by 1970 we will be short 250,000 nurses, the Advisory Commission fails to conclude that these conditions of crisis are primarily the result of a national shortage of health manpower. Rather, it places major emphasis on integrating and coordinating America's medical care delivery system. The major portion of the Commission's report is devoted to demonstrating the need for reorganizing this delivery system with its present "duplication, high cost, wasted, efforts and overlapping aspects."

In my opinion, the Commission has misjudged the nature and causes of what is wrong with the American health care system. While I recognize that this crisis is not simply one of numbers, I am convinced that it will be impossible to improve our medical care system without a massive national effort to provide large increases in available physicians, nurses, and allied health personnel. In my judgment, without sufficient health manpower there can be no integrated system of health care in the United States.

I would thus commend the major thrust of H.R. 15757 which has been called the Health Manpower Act of 1968.

This legislation, in my opinion, represents a major departure from the thrust of previous legislation directed to training doctors, nurses, and allied health personnel. Largely, the Federal Government's role has been to provide massive grants for research activities. In 1967, for example, the Federal Government expended over $1.5 billion for medical research and development. Largely, this amount was for research efforts conducted by private or State medical schools pursuant to NIH or other Federal Government agency grants.

The effect of this massive research support by Government has been to detract from the number of health manpower graduates each year. In short, our national medical education system has not produced treating physicians for 90 percent of the public's illnesses, but rather a professional corps of researchers and specialists.

There is complete agreement, even by representatives of the medical schools and by organized medicine, that research has diverted physicians away from the patient and hospital and into laboratories. Medical schools have found it necessary to support education and teaching programs through grants intended for research. Moreover, other results have been serious questions of accountability for funds, wasteful duplication of research projects and equipment, and an academic grantmanship that has often provided poor research projects and results.

In short, even a special study group of the AMA has concluded, and I quote:

> The adverse effects of Federal research grants on medical schools arise from many sources. Primarily they arise from the imbalance caused by burgeoning financial support for research in the midst of a relative scarcity of funds for educational programs.

Now, however, the Health Manpower Act of 1968 seeks to provide a balance between the functions of education and research by providing an improved and more intensive program of Federal financial assistance to medical and professional health care education. Under the act Federal grants for teaching facilities, grants for demonstrating the need for reducing the number of years needed to train health personnel and institutional grants which provide broad support to the educational functions of medical schools are expanded. It is especially encouraging to note that the institutional grants will be allocated to medical schools on the basis of a formula which provides incentive to expanding student enrollments.

However, in my judgment, the Health Manpower Act contains many features which tend to perpetuate inadequacies in the existing system of medical and health education. Primarily, this legislation continues to place undue emphasis on research and specialization.

In my judgment, this legislation should be carefully analyzed by the appropriate congressional committees to determine whether it will produce the intended results of providing widespread health care or whether it will merely institutionalize the existing tendencies of medical and health professional graduates to enter into specialties or research and academic oriented careers. I am convinced that these are the directions that most of the nation's medical school graduates will take unless something is done.

Now, Mr. Skubitz, to ascertain the seriousness of this, Mr. Heil, who is from my staff, under my direction forwarded a letter to the deans of our Nation's 88 medical schools. And we said:

Dear Dean, pursuant to my continuing interest in biomedical education and research, I am presently attempting to compile data which will indicate the broad needs of medical education institutions. While much secondary information exists preliminary investigation indicates that medical schools have often been bypassed in determining these needs. I would thus greatly appreciate an indication from you of the professional trends that recent graduates of your medical school have taken or may be expected to take. While your own convenient and available information may permit a more comprehensive analysis, I would request an estimation of the following for your graduating classes of 1967 and 1968.

(1), the total number of medical graduates, (2) the percentage that will serve in the Armed Forces, (3) the percentage that will serve with the Armed Forces on a career basis, (4) the percentage who will specialize in one particular area of patient service-oriented medicine, (5) the percentage who will enter an academic or research career, (6) the percentage who will pursue graduate studies to achieve a specialty or an academic or research career, (7) the percentage who may be expected to enter general practice, (8) the percentage of graduates who will enter miscellaneous careers not mentioned above.

Now, we had a response from approximately 60 percent of the schools. We are continuing our evaluation of those schools and if the chairman or any members of the committee would like to see the information, it will be supplied at your request. Our entire file is at your disposal.

Mr. ROGERS (presiding). We would like to have that very much.

Mr. CAHILL. We would be happy to supply it. Our breakdown is shocking. First, primarily research or academic-oriented careers, 11 percent.

Second, general practice, 15 percent.

Third, career military service or administrative medicine, 4.5 percent. And here, I think, is the clincher. Specialists, 69.5 percent.

Now, may I say parenthetically, I cannot blame these young men. When you consider the tremendous work involved in general practice and the literally minimal return financially for that work, and the moderated and regulars hours that come with the specialty and the proportionate increase in income, and you relate that to the tremendous number of years that these men really put in to get their medical degrees, many of them sacrificing a great deal, many of whom we all know whose wives worked to help them through, they really do under our present system, undergo a tremendous personal sacrifice and expense to become a doctor, you really cannot blame them.

Mr. ROGERS. What was that figure?

Mr. CAHILL. 69.5 percent are going into specialties.

Mr. SKUBITZ. Will the gentlemen yield? I do not blame a young fellow for going into specialties.

Mr. CAHILL. Nor do I.

Mr. SKUBITZ. But as a taxpayer and as a person interested in getting doctors into a community, if we are going to put up money to educate these people, provide the facilities, then this is what we should demand.

Mr. CAHILL. Yes, but Mr. Skubitz, respectfully I may say that under our present system we are not going to get them.

Mr. SKUBITZ. This is right.

Mr. CAHILL. So, we have got to change the system.

Mr. SKUBITZ. This is right.

Mr. CAHILL. You cannot expect a young man today under our present system to get into general practice.

Now, I have some interesting things here.

Mr. ROGERS. Just on that, of course, these who are specialists are also treating the public.

Mr. CAHILL. Oh, yes.

Mr. ROGERS. So, it is not a case of their being taken out of the treatment pattern but the point you are making is that they are just not in general practice.

Mr. CAHILL. That is right, although I would say—I think Mr. Heil can confirm this—that many of the specialists are also in the the field of research. In other words, they are specializing in some area of patient oriented medicine while teaching or working on research.

Now moreover, if further evidence of the flight from family medicine is required, the dramatic statistics indicating ratios of family doctors to population should be considered. While family doctors are in short supply especially in rural areas, the need for doctors is even greater in hospitals. Twenty percent of the internships and 15 percent of residencies remained unfilled in 1966, even after, and this is a shocker to Mr. Cahill, even after nearly 10,000 foreign trained medical graduates were hired to fill these position. Moreover, the 51,800 positions available in hospitals in 1965 represented an increase of 1,400 over the previous year. So, it is fair to assume they are even greater today than they were based upon the statisics that I have.

In view of present career directions away from the patient's bedside, away from the hospital, and away from where physicians are most acutely needed, I would urge that we must undertake a national plan to produce general practitioners in a far shorter time of training than that which is required by the present system of medical education.

In my judgment this can be accomplished within the resources and funds available at a Federal level, first, by a deemphasis in the amounts that are spent on medical research. Second, by an increase in Federal assistance to the construction and expansion of existing and new medical teaching facilities and programs. And third, by an immediate effort to improve and abbreviate medical school curriculum so that general practitioners can be graduated and undertake the treatment of myriad illnesses that can be healed without specialization within a 4-year period.

Judged by these standards, the present Health Manpower Act is an important advance in meeting our Nation's health needs. Yet, I believe it will fall far short of attaining this purpose. I am concerned, for example, that title IV provides "Such sums as may be necessary," through fiscal 1973 and an increase from 50 percent Federal assistance to 66⅔ percent assistance for health research facility construction. In the absence of a formula which would provide any incentive for applicants to increase annual enrollment for the number of graduates, this provision can only further the present flight from general practice and patient treatment. I would suggest that the mentioned additional Federal assistance above 50 percent should only be available to applications by medical schools where it is demonstrated that the planned research facility would significantly increase medical school teaching and enrollment capacity.

I would commend the formula contained in part B of title I which provides that "institutional grants" for meeting educational expenses will be allocated in a manner that will encourage higher enrollment.

Under this formula each school will receive a basic grant of 25,000 with the remainder of appropriations distributing according to relative enrollment and relative increases in enrollment. However, in my judgment, these incentives to increase enrollment will have a major national effect on the output of medical graduates only if there are massive appropriations. Most medical schools will continue to find that research is the easiest and the most lucrative way of obtaining funds. What I believe should be undertaken is an effort to tie NIH and other research grants to medical schools to a formula which will require increased enrollments as a condition precedent to receiving Federal research assistance. I would thus advocate that amendment to the proposed Health Manpower Act be considered which would reduce the number of categorical project research grants administered by NIH, substituting therefor expanded "institutional research grants." These institutional research grants should be granted to medical schools rather than to principal chief investigators as is the current practice, and should be allocated on the basis of a formula which would give a weighted priority to those schools undertaking enrollment expansion.

May I say parenthetically, it has been brought to my attention and it is presently under investigation, that some of the medical schools in this country are attracting and inviting men to join their staffs and to have high positions on their staffs based in some measure at least on the amount of their Federal grants which they bring with them and which is shared by the institution, and secondly, it has been represented to me, and I am not prepared to present it factually at the moment, although this is also under investigation, that this is having a very marked effect upon the teaching in those institutions because these men, rather than being clinical professors, are really research professors. These practices are seeping down into the students and instead of having the professors available in the classroom, we find they are in the laboratories and some assistant is in the classroom. The whole system, in my judgment, Mr. Chairman and members of this committee, needs a real good examination by this committee and I am delighted to see such interested and knowledgeable men on this committee who are going to do just that.

Let me close by saying that while I recognize that this general position is opposed by the AMA and the AAMC, independent preliminary investigation convinces me that such an allocation of research funds is necessary. The AAMC is quick to urge that research is necessary to "maintain a balance in the multiversity concept of research, education, and community service."

Let us examine this proposition. According to information provided me by the Department of Health, Education and Welfare and the American Medical Association library, the following is the effect on the number of medical graduates at the 10 medical schools in our Nation receiving the most research money.

No. 1, Yeshiva University, the Albert Einstein College of Medicine, received grants of $10 million—I will just give you the millions without the thousands—$10 million. They graduated in 1965, 89 students as compared to 87 in 1966. That is a decrease. In 1965, 89, in 1966, 87. That is a decrease of two.

Columbia University, $10 million. Graduated in 1965, 114; 1966, 109. That is a reduction of five.

Harvard Medical School, $10 million. 133 in 1965; 141 in 1966. Plus eight.

University of California, $10 million. 71 in 1965; 70 in 1966. That is a decrease of one.

University of California School of Medicine, San Francisco—the first being Los Angeles—$9,500,000. 100 in 1965; 99 in 1966. Decrease of one.

University of Washington, nine million, 65 in 1965; 81 in 1966. An increase of 16.

Washington University, $8 million. 83 in 1965; 85 in 1966. Plus two.

University of Chicago, $8 million. 67 in 1965; 59 in 1966. Minus eight.

University of Pennsylvania, $8 million. 124 in 1965, 132 in 1966. Plus eight.

Johns Hopkins, 82 in 1965, 84 in 1966. Plus two.

So, out of a total Federal grant expenditure of $94 million, we graduated from these 10 schools in 1965, 928 students, in 1966, 947, for a net gain of 19, with almost $100 million.

Certainly I would agree that medical research has brought about dramatic improvements in medical technology and education, and I certainly concede what the eminent doctor who preceded me said about the Salk vaccine. The thing that does disturb me, however, is that with the elimination of all of the patients that ordinarily would be treated by reason of the discovery of Salk vaccine, why do we not have enough doctors at the present time to take care of the other ailments, diseases and injuries, and why have not medical costs in most areas of treatment been reduced.

However, I am convinced that there is a major gap between the presently available advanced technology and the manpower now available to apply that technology.

This brings us to the argument of quantity versus quality. The contentions that any reduction in Federal research funds or abbreviation of medical school curriculum will result in diminished quality of the physicians is in my judgment, nonsense. It is the same contention that the National League of Nurses has employed to retain its power of accreditation over nursing schools. Acceptance of that contention by the Congress and by the Department of Health, Education and Welfare, has had disastrous effects on nursing education, particularly on diploma training schools which do not fit in the NLN's plans to make nursing a 4-year college degree program.

I thus view the title I, special project grants, section with hope, yet with some degree of apprehension. This section will provide Federal assistance to projects designed to "improve medical school curriculum with a view to helping increase the supply", and here is the key word, "increase the supply of adequately trained personnel in health professions."

Now, while I am talking about quality, as a member of the Subcommittee of the Judiciary Committee on Immigration and Nationality, I have been terribly disturbed by the number of foreign doctors who are coming into the United States and I know the gentleman from Florida realizes the work we have done in that committee in providing the State of Florida with needed help. But the figures as I have them, indicate that in the United States in 1966, we had 2,795

interns, we had 9,483 residents, and we had 34,000 practitioners who were educated outside of the United States who are foreign trained doctors.

Now, I am not able to judge the competency or the quality of all of the medical schools in the world, but I think it would be fair to say that many of them do not meet the high standards established in this country, and yet I have seen myself on the night shift at a good many of the hospitals in my state, men who find it difficult to speak the English language who are there as interns, but who are there taking care of the desperately ill during the night hours.

Priority is to be accorded those projects which will result in increased enrollments with "no reduction in quality of training." I would hope that the qualifying words "adequately" trained personnel and "no reduction in quality" will not be used to prevent truly innovative and effective plans to abbreviate med school curriculum.

Now, I do not object to this. I merely say that when we talk about quality, let us be rational and let us be realistic, and let us, if we can, Mr. Chairman, get a statement from the AMA and from the AAMC of what is quality education, because if we have that, we then can objectively judge the foreign students and the foreign interns and the foreign graduates, and if all that is necessary is to pass a test along the same lines that a foreign doctor must pass in order to be admitted to practice in this country, then why cannot we train our boys in this country who can have this same amount of education that will permit them to pass a similar test. Why cannot they then practice the same way as the foreign doctor? In my judgment, we as legislators cannot completely defer to organized medicine in determining what is "quality." Now, I am a lawyer and I know many of you are. I cannot practice certain fields of law. Why? Because I am not qualified. I am a general practitioner. What happens if a client comes to my office and wants my assistance? If it is in the field that is over my head, I refer them to a specialist, and it seems to me that a good practitioner, a good general practitioner, need only know the limits of his own competency and his ability to take care of his clients within the limits of his own ability, and if he is a good one, his client is going to benefit, not be harmed, so it seems to me it would be with a medical doctor. The young general practitioner who is not as learned, who does not have the years of training, would recognize immediately that an orthopedic problem required the services of an orthopedic surgeon. He would not attempt to set the broken leg but he would recognize it was a broken leg, but if it were something else, cold, fever, something that would upset a mother in the midde of the night or a father, who was deeply concerned about some growth, he might be able to allay those fears, give the people something that would hold them over until they could get to the specialist, and it seems to me this is what we need in this country.

Mr. SKUBITZ. Would my colleague yield? Is it not a fact, Congressman Cahill, that your general practitioner in the field usually refers problem cases?

Mr. CAHILL. Then, Mr. Skubitz, my point is why, then, insist upon training all of these men in research methodology and in highly specialized fields that they will never use?

Mr. SKUBITZ. You do not have to convince me. I have raised this very question time and again, Mr. Cahill, with some of my doctor friends.

Mr. CAHILL. All right. Well, I have already taken much more time than I intended to take but let me just say this. I would certainly urge this committee to draft amendments to this legislation that would assure the establishment under the special projects section of a demonstration project designed to prove the feasibility of a 4-year medical school curriculum. When a boy graduates from high school, why cannot he go to a medical school? Why can he not go for 4 years? Why can he not be trained in the general elementary, rudimentary, primary facets of medical education? Why can he not then like the lawyer, serve an externship with the family general practitioner? Why can he not work in the hospital? And, why at the end of the 5-year period can he not be given a limited medical license so that the farm areas and the ghettoes of this country and the families that need a doctor at night and on weekends, can at least have somebody who can distinguish between what is serious and what is not serious. And, it seems to me, if we have that, we would have more specialists willing to get up in the middle of the night.

One of the great cries and justifiable complaints of a specialist is that he is disturbed in the middle of the night and he finds that there is nothing really wrong. It is an apprehension that just anybody who had a little bit of rationale, a little bit of knowledge, could allay and say: "You do not have to worry about it until tomorrow morning. The doctor will be in the hospital tomorrow morning. We can take care of it then." But, they get specialists up at 2, 3, 4 o'clock in the morning, call him in, and it is not an emergency at all. So, it seems to me, this whole concept should be tried.

This was brought to my attention by the article that was written by Dr. J. Gershon Cohen, who incidentally, had intended to be here today to testify, who called from Philadelphia that because of a plane cancellation, could not make it. He is preparing and sending to the committee a statement. But, he is the one who brought this concept to mind.

He suggests, and I am not going to testify for the doctor, but he suggests that some of the large medical centers in the United States could be very easily converted into such a teaching school, that all we would really need would be the dormitories and classrooms. They have the facilities. Many of them are 1,000 bed hospitals. They have the doctors, many of whom would be delighted, be honored really, to be able to teach, who cannot get on the staff of an accredited medical school. And, every man in this Congress can testify to literally hundreds of boys in his district who are qualified, who are A and B students, who are financially able to pay their way and who cannot get into medical school. And the reason for it is that there is a limited number of seats and only the very best can get in. And, I often think that a boy today has much more difficulty becoming a doctor than he has anything else in this country, and, gentlemen, I think the time has come when the American people are not going to wait any longer, and if your area of the country is like my area of the country, the Congress of the United States better do something about it because we cannot go on this way much longer.

Gentlemen, I am very grateful for the time you have given me. I am sorry I have taken so much of your time, but as you must observe, it is a matter that I have had a very personal interest in for some time.

I have a very intense conviction that we must produce more doctors and we must produce more nurses if we are to take care of the needs of the American people in the foreseeable future.

Mr. ROGERS. Thank you very much, Mr. Cahill, for a very excellent statement and for some of the thoughts you have developed. And this committee will certainly consider them. I know in line with your thinking about a 4-year college education a great deal is being done in this area which this committee has encouraged because we feel that this is a possible approach, and I think you have stated it very well. We are very grateful to you.

We would like to have the figures that you have gotten, too, from the various colleges.

Mr. CAHILL. I will be happy to do so.

Mr. ROGERS. Mr. Nelsen?

Mr. NELSEN. Thank you, Mr. Chairman.

Mr. Cahill, I remember the statements made on the floor by you and Mrs. Bolton about the lack of bedside nurses, and the fact that so many young ladies would find it impossible to become a registered nurse because of the financial obstacles involved. I have made reference to this in the hearings several times. I think the point is well taken because there are so many things that can be done by such a nurse who is not necessarily an RN. I want to thank you for that observation.

I wish to say, too, that while you have stated that you are a general practitioner and not a specialist in the field of law, I would like to have you plead my case any time, judging from the presentation you have made here today. I think it has been very good and I think it will have a great impact on the action of this committee. I can assure you we are going to study your statement in the record which I know will be helpful.

Mr. CAHILL. Thank you, Mr. Nelsen. May I just say for the moment that the thing that troubles me about the nurses, and I, incidentally, have a daughter who is a nurse, the thing that troubles me, is a lot of these kids do not want to go to college. They want to be nurses. They want to take care of the poor. It seems to me that we are just crazy in this country. We have so many kids that want to do so much and we will not let them. We will not let them. We will not give them the opportunity to go into a hospital to learn patient care. We will let them go in and serve candy, let them do all these things, but we will not let them take care of patients, gain experience through doing, and let them become nurses. This is crazy!

We have got literally hundreds of thousands of good kids and we just will not let them do it because they do not have a college education. It does not make sense to me.

So, I hope you will pursue that, Mr. Nelsen.

Mr. NELSEN. Another point I would like to call attention to is that Art Younger, a former member of this committee, tried to provide incentives and provisions in our training of doctors to encourage them to go to a rural area as a general practitioner. It has not seemed to work but we do encourage it, but it has not worked. Maybe we need to closely examine the whole process.

Mr. CAHILL. Mr. Nelsen, the profit motive has to work with medicine as it does with law and everything else and if we do not make it financially feasible for these young men, reasonably; we cannot expect them to do it.

Mr. NELSEN. No more questions.

Mr. ROGERS. Mr. Skubitz?

Mr. SKUBITZ. I want to commend you on your statement, Mr. Cahill. I think it was excellent and I, for one, want to express my appreciation for you appearing here today.

I have always felt that our colleges today are competing for grants—research grants. The net result is they are taking bright boys and putting them on a research project rather than teaching them to be doctors.

Mr. CAHILL. You are right.

Mr. SKUBITZ. This is why we are not getting trained people in the field. We are getting researchers.

Mr. CAHILL. It would be very interesting to me—I am sure I will not get the information, but I think the committee could—it would be very interesting to me to see what the deans and the leading professors of the leading medical schools of this country have by way of personal grants. It would be very, very educational.

Mr. SKUBITZ. Mr. Cahill, you mentioned students going to college. A lot of them do not want to go to college because they are taking 4 years of things that they do not think are going to do them one whit of good. They cannot get into the field, the field of their choice without taking a lot of courses which seem unimportant and unrelated to them.

Mr. CAHILL. Exactly.

Mr. SKUBITZ. I have a nephew. He quit college after 2 years and went into the service. When he received his discharge, I asked him what he planned to do? "I just do not know Uncle Joe," he replied. Then he went on to say that he couldn't see where the courses he had taken in college prior to his Army service would do him one bit of good in earning a living. I sent him to art school. Today he is an artist in the Government service. He had flunked college because he could not see any relationship between the courses in history, et cetera, to the kind of work he wanted to do.

Mr. CAHILL. Right. You can have the kids today that are going into all sorts of fields to help their fellowman. I think medicine and nursing really is a great attraction to all of them.

I have taken too much time.

Thank you very much.

Mr. ROGERS. Thank you very much.

(Dr. Gershon-Cohen's statement follows:)

STATEMENT OF DR. J. GERSHON-COHEN, M.D., D. SC. (MEDICINE), DIRECTOR EMERITUS, DIVISION OF RADIOLOGY, ALBERT EINSTEIN MEDICAL CENTER; PROFESSOR OF RESEARCH RADIOLOGY, TEMPLE UNIVERSITY SCHOOL OF MEDICINE

The physician shortage is decried on all sides. In the medical, scientific, and lay press, on television and on radio, the subject is discussed and documented. Even the American Medical Association, which for 25 years denied that a shortage was in the making, now admits its exists.

When the Flexner Report was published in 1911, the substandard practices of many of the 150 medical schools then in existence were exposed. Sweeping reforms closed about 50 percent of them. Today we have 89 medical schools in operation. We now turn out no more physicians per year than we did in 1911, although the quality of their education has been upgraded until it is among the highest in the world.

However, in the intervening 57 years our population has almost tripled. The supply of physicians which was adequate to meet demands for service in the

early 1900s is hopelessly inadequate to meet those of the late 1960s. In other words, there is a serious imbalance in the law of supply and demand, and when this law is flouted or ignored, trouble invariably follows.

This law has been by-passed particularly in the area of general practitioners, the physicians the public needs most. But our current medical educational system consistently produces almost exclusively specialists. By its very length and content, the system makes specialization almost inevitable. The medical student views it as the only way in which he can recoup the inordinate amount of time, money, and energy he has been obliged to invest. While his high school classmates have graduated from college and are making respectable livelihoods with their degrees in engineering or metallurgy in their early 20s, he is still a medical student until he is almost 30, a virtual stranger to his growing family, and piling up indebtedness.

The courageous few graduates (about 15 percent) who undertake to be primary physicians find themselves too overworked and spread too thin to be the unhurried, compassionate doctor with the listening ear that once prevailed. The public, knowing only that it can no longer find a doctor when it needs one but not understanding why, becomes increasingly irate. No longer is there a balanced competition among the members of the medical profession to supply the service the public expects. A remedy is being demanded—and quickly! A situation of this type is a perfect setting for political intervention.

A prescription to remedy this grave state of affairs is offered here. It opposes a new-type medical student trained in a new-type medical school. It could lead to the production, in goodly numbers, of the primary physician, or "general practitioner."

A NEW-TYPE PREMEDICAL STUDENT

Since the length of the physician's education is central to the dilemma, that phase of it deserves first consideration. It is a fact that we lose many bright young physician-prospects to shorter courses in other scientific fields because of the long, expensive haul the medical career entails. I believe we could "reclaim" many of these young people by offering them an abbreviated medical preparation which would permit them to by physicians while they are still in their early 20s, about the same time their classmates were striking out on their own in other fields.

The first step in this abbreviation should be elimination of the four premedical college years, which could be done by retroplacing the essential basic science courses into the high school years. This concept has been discussed with eminent high school teachers, and most of them feel it is practicable. Actually, only five subjects are de rigueur for entrance to our current medical schools: (1) inorganic chemistry; (2) organic chemistry; (3) physics; (4) biology; and (5) calculus. The catalogues of more than 20 universities and colleges were studied thoroughly and, with a rare exception, bear this out. All other courses the premedical student takes in college contribute only to his well-rounded education; they are not specific to medicine per se.

The high school students embarking on this career would, of course, be exceptional youngsters. They would be unusually intelligent, emotionally mature, and have a scientific bent. Above all, they would be motivated by a zeal for public service. Good instructors would have to teach these high school courses, and adequate laboratory facilities would have to be available. A suggested roster of study is shown in Table 1.

Having mastered these curricula successfully, the high school graduate would matriculate directly into a medical school prepared for him, one that is tailored to educate him specifically for the unique niche in the medical profession that he would occupy.

A NEW-TYPE MEDICAL SCHOOL

The new-type medical school designed to receive this youngster would be unlike any medical school extant. Its purpose would be to educate the student for general practice specifically, from his first year to his last.

Our traditional medical schools compel every student to take an incredible spectrum of complicated, esoteric, over-specialized subjects because it has not been decided at the outset by anyone, and least of all by the student himself, what his future role will be. So he is taught endlessly about everything, by the best faculties in the various special fields, so that he may become (if he chooses) a specialist, a teacher, or a research worker in exotic fields. But he is never

taught as if he will be a "family doctor." In fact, the subject is rarely mentioned in the medical school curriculum he pursues. And since all his teachers are specialists, he will seldom brush up against a general practitioner who can explain the rewards of this type of practice to him.

During years 1 and 2 in the new-type medical school, the student's education would approximate that of the traditional freshman and sophomore (Table 2). But because he has already received a good deal of the necessary basic science instruction during his high school years, less time would be spent on these subjects than would occupy his traditionally-educated counterpart. In year 1, for example, about 30 per cent of his time would already be spent on subjects germane to general practice. In year 2, it would climb to 65 per cent, as nonessential subjects were pared away. In years 3 and 4, all of his time—100 per cent of it—would be expended on the problems and illnesses encountered in general practice. He will learn of them not from books or classroom instructors, but will see them in ambulatory patients who attend out-patient clinics or when he attends ill patients in their homes to which he has been assigned (Table 2).

His teachers will be general practitioners of repute and internists of professoral status. These faculty members know the problems a family doctor must deal with. They also know how to differentiate common ills from those that require the skills of a specialist, and will pass this knowledge on to the student.

Specialists, too, will instruct our neophyte, for he must be aware of what specialists and specialties can offer his patients when his own limits have been reached. But the instruction here, too, will be "live" and "by example," not from didactic lectures and textbooks. The specialists will demonstrate using the very patients the student has been following in clinic or at home, whose illness has progressed to a stage that requires hospitalization and greater skills.

Allowing the student to collaborate with specialists in the care of hospitalized patients is a form of education that cannot be excelled. While the student watches the specialist at work he not only learns about highly sophisticated medical techniques of diagnosis and treatment, and how they can help his patients, but from casual small talk he becomes familiar with many intangible aspects of medical practice.

In the fifth, or mandatory "intern year" (Table 2), the student physician is working pretty much on his own. He is now precepted to a traditionally-educated physician (M.D.) practicing alone, or to a group. Thus, the emphasis of the student's training never wavers in the five years; it is family practice-oriented from high school onward.

This single-purpose educational system will engender a very important attitude in our young physician—that of being responsible for the *comprehensive* care of his patients. He learns to be responsible for the decisions that affect their welfare whether they are very young or very old, in good health or bad. The only time he surrenders his province to the specialist is when a problem arises that he has been trained to recognize as lying beyond his capabilities. The tacit agreement between his specialist instructors and him is: "You teach me (the primary physician) how to differentiate the various special problems from the ordinary, and when they arise I will turn them over to you (the specialists) for treatment. But I will remain, as I have been, the patient's personal doctor." For the return of such an arrangement the public would be immensely grateful, for the disappearance of a "doctor of one's own" is one of its chief complaints.

HOW DO WE CREATE, STAFF, AND FUND SUCH NEW-TYPE MEDICAL SCHOOLS?

Medical schools geared to training primary physicians exclusively could be created quickly and at very little cost if we *use existing medical centers as their nuclei.* Many of the faculty that now staff these centers could teach the new-mold medical students. Expanded classroom and office space is all that is required. Every medical center already has the most necessary component to any physician's medical training—an established hospital and its busy cluster of out-patient clinics.

ALBERT EINSTEIN MEDICAL CENTER—AN EXCELLENT PROTOTYPE

In Philadelphia, for example, the Albert Einstein Medical Center is eminently suited for conversion to such a medical school. In this institution is a broad spectrum of physical facilities and teaching personnel. Most staff members are general practice oriented and would make ideal instructors for the new-type medical student.

Also at this center is a flourishing basic research department, with more than 20 Ph. D.'s of professorial rank, who could teach all the preclinical sciences, including anatomy, physiology, pharmacology, microbiology, genetics, pathology, higher mathematics, cybernetics, biophysics, biochemistry, and bio-engineering.

In the geographic area of this superb center are two exceptional high schools—The Central High School for Boys and The Girls High School of Philadelphia. Because of the superiority of their faculties and the challenge of their curricula, these schools attract the brightest minds of the entire city. Their student bodies probably represent the top 10 per cent of the high-I.Q., highly-motivated young people of the metropolis. To pupils such as these, during their first high school year, we would offer the new-type medical career. We would present its assets and liabilities honestly at the outset, so the students could consider them objectively and make a considered choice of this career as their life's work.

Can young people this age decide their futures? There are those who contend they cannot; or that, if they decide at 14 to become a doctor of this type, at 18 they may very well decide against it. It is the nature of young people to be indecisive. We expect avid enthusiasm one minute and indifference the next in many other things, such as mode of dress, choice of friends, and recording stars. We would anticipate many to drop out despite initial expressions of interest, even dedication. But if only a fraction of those who began the courses completed them, we would still have more than enough students to accomplish what we have in mind. And, with the background in the sciences achieved by the drop-outs, they could easily turn their attention to other fields of their choice.

The first matriculates to this new-type medical school could quickly be mustered from those excess applicants who are currently denied entrance to existing schools. We have a yearly application rate of some 18,000 for the 8,900 berths available!

Our physician-to-be entering from high school would be about 22 years of age when he graduates from medical school. People this age are more mature than we give them credit for being. They marry, raise families, command other men in military service, and are the very age of the physicians-in-training sick people now turn to in hospital emergency rooms and clinics because they cannot find G.P.'s.

This primary physician would be young enough to bring vitality and eagerness to his job. He would not be jaded by years of specialized education in subjects he would never use in family practice. He would not yet be encumbered with a growing family or a heavily indebtedness from prolonged schooling. He would be trained expertly and specifically to be an excellent family doctor, a general practitioner who knows his own skills in relationship to those of specialists—and where to draw the line. He could handle 90 percent of the public's common illnesses, for only 10 percent of sick people need the services of a specialist.

A NEW DEGREE FOR A NEW STATUS

Having field-tested the feasibility of the new-type education in the high schools mentioned and in the special medical school converted from centers like the Albert Einstein Medical Center, the next step would be to field-test the new physician among the medical profession and the public. What degree could we give him to indicate his special niche in our society?

When we consider his degree, we should think of it as a truly *undergraduate degree,* in contradistinction to the current M.D., which is actually a graduate degree comparable to a Ph. D. in other fields, for the possessor usually already holds a baccalaureate degree from his premedical college.

Of at least a dozen possibilities, for the purposes of this discourse let us call him a D.C.M., for "Doctor of Comprehensive Medicine," which is precisely what he would be. He would not treat an ear, an eye, a heart, or a vascular system, but the "whole man," the comprehensive patient. The D.C.M. could take a good history (an art in itself); make a thorough physical examination; prescribe for and otherwise supervise the majority of ills; maintain rapport with patients by telephone; make house calls; refer to specialists those patients whose ills he feels unqualified to handle himself; and take care of his own patients in the hospital, should hospitalization be indicated.

For this last step, we must restore an old tradition: We must open the hospital doors to the general practitioner. This move would benefit the D.C.M., the public, and the profession at large.

OPEN HOSPITAL DOORS TO FAMILY DOCTORS

If we are going to produce a good family doctor who will remain content to *be* a family doctor, we cannot make him endure the ignominy of following a patient's case meticulously up to the point of requiring hospital care, then shut the hospital doors in his face. We must give him hospital privileges so that he can have parity of status with his peers and be back in the mainstream of medicine, rather than inferior to it or on the periphery. One of the seldom-admitted reasons medical graduates today do not enter general practice is that hospital privileges are denied them and that their status, overall, is considered "second-rate."

The D.C.M. would not teach in the hospital. He would not engage in research. He would, instead, investigate his patient's problems in the broader hospital setting with its expanded resources. He would understand that his work would always be under the review of the hospital-based consultant specialist in charge of the department. But it would not be difficult for the D.C.M. to accept these concessions for the privilege of caring for his own patients in the hospital setting, knowing the handsome dividends it would pay: (1) his patients would remain, basically, his patients, even though specialists would temporarily supervise their regimen; (2) he, himself, would constantly be receiving graduate education as he watched how specialists handle patients whose needs exceed the skills the D.C.M. can provide; (3) he would keep abreast of the giant steps medicine takes every day by being in the hospital atmosphere where they occur, and the absorption of this knowledge would be a vital backdrop to his major function of being an aware, broadly-informed family doctor.

THE PRESCRIPTION CONTAINS "SAFEGUARDS"

We have prepared our new-type primary physician superbly in high school and later in the new-type medical school. Chronologically, he is ready to begin serving the public at 22 years of age. But, some may ask, is he ready to practice at that age? Has he learned enough to blithely hang out his shingle and supervise all the help from social agencies, as well as to handle the ill patients who would soon find their way to his door? Wouldn't we all be uneasy about the qualifications of so young a physician—unless he had passed some decisive examinations? For these reasons, certain safeguards are built into the prescription.

The young man would not be permitted to practice by himself as soon as he graduates. He would be required to practice at least a year under the watchful aegis of superiors—a group of G.P.s would be ideal. In this setting he would build his confidence, add to his maturity, sharpen his judgment, and steadily increase his knowledge. As a final test of readiness to practice alone, *his competence would have to be certified by the same state and national boards of medical examiners that accredit traditionally-trained M.D.s.* If he failed to pass at first try, he would be required to extend his preceptorship as long as was necessary. But at no time would he practice alone *without* certification. With such safeguards, neither the medical profession nor the public need to have any qualms about the competence of the D.C.M., despite his obvious youth.

ONCE A D.C.M., ALWAYS A D.C.M.?

Not necessarily. It is possible that the person who decided to be a primary physician in his youth and enjoyed its pursuit for most of his life may wish to alter his status in later years. His family has grown and assumed its own responsibilities. He himself is older and less elastic. The demands of a general practice can begin to be wearing when one has passed the zenith of youth. We all know dedicated general practitioners who enter specialties in their later years.

The D.C.M. status need not be considered permanent, a trap without an exit. At any time this doctor decides to pursue some special facet of medicine that has intrigued him, the sturdy basic education he has received makes specialization possible. He need only take the courses necessary to qualify him for the field of his choice. He may well appreciate the shorter hours and circumscription of problems afforded by a specialty when his steps begin to flag. Even though he then becomes a specialist, however, for many years he has served the public as a "personal physician"—the capacity it so badly needs.

AFTER LOCAL FIELD-TESTING—WHAT?

After the plan has been field-tested locally and its merits proven, it could then be implemented in the more than 50 centers like the Albert Einstein Medical

Center across the country. If each one produced but 100 D.C.M.'s a year, it would mean a pool of 5,000 family doctors on which the public could draw for care and advice in ills that now distress them. (Russia at present turns out some 27,000 doctors a year in contrast to our 8,900!) Specialists would be reserved for the problems they are trained to handle best, as well as for teaching and for engaging in research activities. The prescription represents a logical, step-wise plan to rebalance the law of supply and demand throughout the profession.

The major gain, perhaps, is that a bountiful supply of physicians would again engender competition, something that has long been lacking but which is an integral part of any free enterprise system such as ours. Competition tends to upgrade the quality of services and weed out the indifferent, the improperly motivated, and the inefficient. The patient who receives short shrift at the hands of one D.C.M. will not be in a bind because he has nowhere to turn; he can select another from a good supply, one who will meet his physical, financial, and emotional needs. Competition is a powerful force for innovation and improved technology. It helps to improve the quantity and the quality of all products—including medical care for the public.

SUMMARY

The Problem

Unmistakable symptoms indicate that American medicine is suffering the illness of an acute physician shortage. This is particularly evident in the area of general practitioners or primary physicians. The chief cause for the situation is our failure to meet the dictates of the law of supply and demand, a natural law that cannot be flouted without incurring grave consequences.

The Prescription

We must produce, quickly, a large number of primary physicians to fill this important void and rebalance supply and demand. These men would be trained *from high school through medical school to be superb general practitioners.* They would not be second-rate physicians, supernurses, or physicians' assistants. They would be *doctors*, with their status certified by the same state and national boards of examiners that qualify current M.D.'s. They would differ from traditional physicians only in attaining their premedical education in high school and in continuing their medical training in schools whose curricula eliminate esoteric subjects G.P.'s never use.

The education of this primary physician would be logical and progressive. (1) He would start his training in high schools which offer special medically-oriented basic science courses; (2) He would matriculate upon graduation into a new-mold medical school specially structured to receive him, by-passing the four-year premedical college course; (3) He would be taught in these special schools by faculty knowledgable in the needs and problems of general practice and general practitioners; (4) He would concentrate on those subjects essential to his practice, learning only sufficiently about those not germane to his training; (5) He would be apprenticed at graduation for at least one year to a conventionally-trained M.D. or a group of G.P.'s in order to gain practical experience and maturity; (6) He would be assigned a special degree, possibly a D.C.M., to indicate to the public and his peers the special training he has received for service to the community; (7) He would be certified as ready for solo practice only after passing rigid examinations as current M.D.'s need to do; (8) He would be permitted to care for his patients in the hospital, ensuring for the patient continuity of care and for the D.C.M. continuation education while he watches specialists at work; (9) He would be prepared to enter public service while he is young, vital, relatively unencumbered by debts or a growing family; (10) He would be able, should he so desire later, to enter the ranks of specialists.

The Anticipated Results

The ingredients of the prescription would satisfy the dictates of the implacable law of supply and demand. In a very short time after it had been made universal, the G.P.-to-specialist ratio would become more realistic. Healthy competition, long absent, would again prevail, leading to upgraded services and better all-around medical care. The public would be far happier knowing it had numbers of interested family doctors in its midst. The medical profession as a whole would be less likely to come under the mandates of government in order to resolve the current physician crisis. Medicare and its offshoots are portents of things to come.

Let us exert our initiative while there is still time. Let us act with speed and specificity. Let us act *Now!*

TABLE 1.—*Suggested curriculum for premedical high school students*

	Periods per week
Freshman year:	
Biology, with laboratory (major)	8
Algebra (major)	5
English (major)	5
World history (major)	5
Latin and/or Greek (mandatory), (major) [1]	5
Elements of chemistry (minor)	2
Total periods per week	30
Sophomore year:	
Chemistry, with laboratory (major)	10
Algebra, with geometry (major)	5
English (major)	5
World history (major)	5
Latin and/or Greek (mandatory), (major)	5
Total periods per week	30
Junior year:	
Organic chemistry, with laboratory (major)	8
Analytic geometry, trigonometry, algebra (major)	5
English (major)	5
World history (major)	5
Biology, human anatomy (minor)	3
Physics (minor)	2
Physiology (minor)	2
Total periods per week	30
Senior year:	
Physics, with laboratory (major)	8
Calculus (major)	5
English (major)	5
Introduction to social sciences (anthropology, psychology, sociology) (major)	5
Microbiology, biochemistry (major)	5
Topics in biological and physical chemistry of biological interest (minor)	2
Total periods per week	30

[1] A second language, such as French or German, would be retroplaced into the junior high school curriculum.

TABLE 2.—*Suggested "core curriculum" for new-mold medical school*

	Periods per week, rough estimate
Freshman year:	
Anatomy	3
Neurology (1 each of neurobiology, neuroanatomy, and neurosurgery)	3
Radiology	3
Physiology	6
Pharmacology	6
Pathology	2
Epidemiology and medical sociology	5
Medicine	3
Physical diagnosis	3
Psychiatry	4
Medical outpatient clinics	41
Total	
Sophomore year:	
Pathology	5
Microbiology	5
Physiology	2
Pharmacology	2
Medicine	14
Clinical neurology	2
Pediatrics	2
Psychiatry	2
Epidemiology and medical sociology	2
Elementary physical diagnosis	3
Total	39

Junior and Senior Years

All of the student's time in the *junior year* would be spent in learning practical family medicine. There would be short, explicit courses in family, community, social, political, economic, and historical aspects of medical service. Hospital integration would be minor, consisting merely of brief periods which would serve to acquaint the student with the acute, chronic, emergency, and rehabilitative phases of medicine.

In the *senior year*, during the first 6 months the student should be assigned as an intern in the hospital, getting experience in minor surgery and obstetrics. In the last 6 months of this year, he should be placed as a preceptee to a qualified teacher of general practice or to a group of physicians practicing together.

In both the *junior* and *senior* years, he would be spending a major portion of his time in out-patient work, learning to integrate all the clinical aspects of medicine with his practical and textbook knowledge.

The "Fifth Year" (Mandatory)

The traditional internship would be dispensed with. Instead, the young physician, now appropriately titled, would continue to practice as a preceptee to a solo physician or to a group. During this year of experience, he would continue to enlarge his knowledge and skills, and would learn first-hand about such things as medical economics and his own unique role in the complex community set-up for providing medical services to the public. During this period, his reading material should consist of medical history and two or three scientific journals slanted specifically to the problems of general practice.

He would attend his patient in the hospital, in collaboration with specialists. This arrangement would afford him a working knowledge of how his handling of patients comes under the specialists' surveillance. In turn, it will be the responsibility of the specialists to continue to educate the general practitioner.

Mr. ROGERS. Our next witness is Dr. Samuel P. Martin, who is provost of the Medical Center at the University of Florida. It is my personal pleasure to greet Dr. Martin. I have known him and know of the very excellent work he does and I think he can probably help us and

guide us here because he can give us some answers to some of these questions we have been asking. And, I know of no one who is better qualified to help the committee in this area.

It is a pleasure to have you.

STATEMENT OF DR. SAMUEL P. MARTIN, PROVOST OF THE UNIVERSITY OF FLORIDA; ACCOMPANIED BY DR. ROBERT C. BERSON, EXECUTIVE DIRECTOR, ASSOCIATION OF AMERICAN MEDICAL COLLEGES

Dr. MARTIN. Thank you, Mr. Rogers. You have given me more than an adequate introduction.

I am a physician, provost at the University of Florida. I would first like to introduce Dr. Robert Berson, who is the executive director of the Association of American Medical Colleges, who is with me here today.

Mr. ROGERS. We are delighted to have you here, too, Doctor.

Dr. MARTIN. I am appearing on behalf of the Association of American Medical Colleges which represents all of the schools of medicine in the United States and 340 of the major teaching hospitals. We appreciate very much your courtesy in providing time for us to testify in favor of a bill which, if enacted, will be a great forward step in the history of the health professions in this country.

Mr. Chairman, our association has presented a statement to the other body which explains the role of the medical schools in the health manpower picture and sets forth in detail our reasons for supporting each of those portions of the bill which will be directly affecting our institutions. I would like to offer that statement for your consideration and for inclusion in the record of this hearing.

Mr. ROGERS. That statement and your prepared statement will follow your oral presentation.

You remember the comments on the growth of medical school budgets and faculty and the limited increase in students. I think these are very excellent questions and they are very important questions in relation to our problem.

I placed before you three tables and I would like to comment a bit on those three tables.

Table 1 shows a breakdown of the expenditures. It is obvious that the expenditure of medical colleges rose from $319 million to $882 million over the period of time that Congressman Rogers and Chairman Jarman noted. Sponsored research, however, in that time rose from $144 million to $514 million, an increase of 256 percent.

(Table 1 referred to follows:)

TABLE 1.—MEDICAL SCHOOLS—RELATION OF TOTAL EXPENDITURES TO EXPENDITURES FOR SPONSORED PROGRAMS,[1] 1958–59 AND 1965–66

	1958–59	1965–66	Percent increase
Total expenditures	$319,028,651	$882,184,162	176
Sponsored programs	144,237,916	514,206,314	256
Regular operating programs	174,790,735	367,977,548	111

[1] Sponsored programs are those undertaken by medical schools at the behest of the Federal Government or private agencies to achieve particular results which are not directly related to the teaching of medical students.

Note: Prepared by the Association of American Medical Colleges.

Dr. MARTIN. The regular operating budget rose from $174 million to $367 million, a rise of 111 percent, and as one remembers the comment made by Mr. Nelsen during that time the dollar changed from its buying index of 1 to 1.24, so that part of that is involved as an inflationary figure. And another part of it, that is a significant part that is there because of our past legislation, is the requirement for cost sharing because as a grant comes in, one has to produce out of one's institutional support things to cost share with the Government on its granting, so that a part of that rise from $174 million to $367 million is cost sharing by the Government.

Now, what have the schools done during this period of time? If you look at table 2 you can see something of the productivity. I do not have the same years that you have on the fact sheet but you will see that the rise in medical-school enrollment was 14 percent. Now, during this period of time, however, if you look at the next figures, you begin to see that the character of the academic medical center is changing. We not only produce physicians but we must produce a number of other people and that is shown very clearly below.

(Table 2 referred to follows:)

TABLE 2.—MEDICAL SCHOOL PRODUCTIVITY, 1950–66

	1950–51	1955–56	1960–61	1965–66
Medical student enrollment	26,186	28,748	30,093	32,835
M.S. or Ph. D. candidates	4,281	2,387	3,304	7,056
Postdoctoral students or fellows	1,238	2,000	4,317	5,014
Interns	1,786	2,094	3,727	3,963
Residents	4,259	6,192	13,273	15,987
Other full-time equivalents	3,000	5,000	8,743	11,315
Ph. D. degrees awarded	225	282	339	606
M.D. degrees awarded	6,135	6,845	6,994	7,574
U.S. population in thousands	151,683	165,069	179,992	194,572
M.D. graduates per 100,000 population	4.04	4.15	3.89	3.89
Full-time faculty	3,933	6,719	11,111	17,149

Note: Prepared by the Association of American Medical Colleges.

Dr. MARTIN. The M.S. and Ph. D. candidates have increased from, in 1955, 2,300 to 7,000. We had a 190 percent increase. These people are not only researchers but these people are teachers. Twenty-five to 30 percent of the faculties of medical schools come from this particular group, the M.S., Ph. D. men. From 2,000 to 5,000 in our post doctoral students and fellows, an increase of 150 percent. Our increase for interns was from 2,000 to 3,963. An intern requires a great deal of time on the part of faculty for instruction so that again, faculty members are involved in interns.

The residents increased from 6,000 to 15,000, in increase of 158 percent, and other full-time equivalents increased from 5,000 to 11,000, or about 126 percent.

You can see here that our load of teaching is far more than just medical students.

Now, as regards other full-time equivalent students, we have the time that the medical school faculty spends in teaching the nonmedical graduate, but other health professions.

Now, if you look down below on the Ph. D.'s awarded, you see that it went from 282 to 606 and the M.D.'s, the rise is there. And then you see the full-time faculty that Congressman Rogers commented on.

Now, in addition to the productivity of scholars, we are perforce, and we are glad to this, involved in productivity of service to people.

Table 3 is to give you some index of the changing nature of the service to people. This service to people is a very vital part of our education because you cannot educate a physician in a classroom, he has to get his feet wet. He has to get his feet wet under close supervision of another physician in a 1 to 1 ratio, so that it is very time consuming. To illustrate our productivity in service, I picked here a series of hospitals for you so that you could see that the number of patients seen in medical center hospitals have increased from the numbers outlined here, from as much as 10 percent to a high of 87 percent increase in the number of patients that we have seen.

(Table 3 referred to follows:)

TABLE 3.—MEDICAL SCHOOL PRODUCTIVITY OF SERVICE, 1955–67

	Admissions	
	1955	1967
Grace New Haven Hospital (Yale Medical School)	19,162	25,139
University of Michigan	18,766	20,070
Barnes Hospital (Washington University School of Medicine)	23,948	30,741
New York Hospital (Cornell Medical School)	24,464	29,931
Duke University	10,124	19,309
Vanderbilt University	11,051	16,603
University of California at San Francisco	8,913	16,730

Note: Prepared by the Association of American Medical Colleges.

Dr. MARTIN. Now for the productivity in research, this has been commented on by a number of people and I am sure that you recognize this, and it has, I think, saved the lives of many people.

One of the problems about research, however, that I think there may be some misunderstanding about, is that generally, research does not make life easier. It generally makes life harder for the physician because whereas, before, a little bit of opium might be all that we had to administer, now you have to be pretty wise and you have to know a lot more about drugs than we ever knew before because our goal in therapy is more than relief of pain. Our goal is the elimination of disease and keeping people going.

A number of people have commented on this. I felt very much here like I did as a young man once when I got up in an elocution contest. The fellow before me got up and gave the message to Garcia. The message to Garcia happened to be my message, too, and I felt very whacked. I think a great many people here have delivered parts of my message, so I will just go through two or three things that I think are important in this legislation and allow the testimony that is written out here to stand.

In section 101 on page 2 of the bill, it provides a single authorization for construction funds to go to all of the schools. We believe it obvious that the cost of the facilities essential for the training of physicians and dentists involve a range of capital expenditures that is different than that involved with the other professions, and we believe that when the appropriations are written, these categories should be separated out rather than use just one single formula for all of them.

Our second suggestion involves the same concept in the institutional grants provided in section 707 on page 6 of the bill. Here again, we

propose a simple amendment separating into two items for purposes of authorization and appropriation the two groupings of the health professional schools which are characterized by their markedly different costs. We have appended to our statement two suggested amendments which would deal with these.

(The documents referred to follow:)

AMENDMENTS TO H.R. 15757 PROPOSED BY THE ASSOCIATION OF AMERICAN MEDICAL COLLEGES

DRAFT AMENDMENT NUMBER ONE

On page 2, strike lines 7 through 10 and insert, in lieu thereof the following new sentences:

"For grants to assist in the construction of new teaching facilities or to assist in the replacement or rehabilitation of existing teaching facilities for the training of physicians or dentists there are also authorized to be appropriated such sums as may be necessary for the fiscal year ending June 30, 1970, and each of the next three fiscal years. For grants to assist in the construction of new teaching facilities or to assist in the replacement or rehabilitation of existing teaching facilities for the training of optometrists, pharmacists, podiatrists, veterinarians, or professional public health personnel there are also authorized to be appropriated such sums as may be necessary for the fiscal year ending June 30, 1970, and each of the next three fiscal years."

DRAFT AMENDMENT NUMBER TWO

On page 6, line 10, after the word "grants" insert the following: "to be made to schools of medicine, dentistry, and osteopathy" and, on page 6, line 11, after the period, insert the sentence: "There are also authorized to be appropriated for the fiscal year ending June 30, 1970, and each of the next three fiscal years such sums as may be necessary for institutional grants to be made to schools providing training in optometry or podiatry under section 771 and special project grants under section 772."

Dr. MARTIN. Our third suggested amendment deals with the application for construction. Part A, sections 103, 104, and 105 of the bill, which appear on pages 3, 4, and 5. It is, I think, a great step forward to allow the institution to prepare one application rather than many and not have to worry about dividing a room down the center with only certain students on each side of the room.

We feel this is so obviously worthwhile that we urge the committee to make this part immediately effective rather than waiting until after the fiscal year 1969.

Our fourth suggestion deals with matching funds. Many medical schools, and generally it is the one that needs the help the most, are not ideally suited or are unable to provide matching funds, yet they are capable of meeting a very great national need. It would be our feeling that rather than 66⅔, in the case of great need, the Secretary might be able to use regional and national interests to provide 100 percent grants to institutions in that category.

Our fifth concern deals with section 706 on page 16 of the bill, which authorizes the transfer of not more than 20 percent of the loan funds to scholarships. We thoroughly approve of this provision. However, we feel some indication should be made in the bill that the money transferred from loans to scholarships does not have to be made up by the school.

These conclude our suggestions for amendments and clarification of the bill. We have one final point to make and we consider this one a very important one. It is the one that we urgently request you to give

full consideration to. It involves the questions of authorizations set forth in the act. The bill before you provides for such sums as may be necessary. We sincerely hope that this committee will see fit to retain this language. We know the situation with respect to medical manpower. We know the need to expand this. We also know that this will require funding at a far higher level than we could have hoped to achieve in this fiscal year or perhaps even in the year 1970, although we hope that that might change.

Neither the committee nor we in the American Association of Medical Colleges know the amount of matching funds that will be available. We know that there are many grants that are approved but not funded. So that it is our belief that this should be left open so as we go into the next 2 or 3 years, the wisdom of this committee together with that of the Appropriations Committee, can respond as the financial pressures are alleviated to some degree.

In reference to one part of my presentation, too, I would like to say that it has been the policy of the American Association of Medical Colleges and is their continuing policy that all qualified students should be given an opportunity for a medical education. I put that in as an aside because I left that out but you will find that in my testimony. We would then suggest, Mr. Chairman, that if your committee believes it must write a fiscal ceiling into this bill, that it request of the administration that it provide you with figures which relate to the quantity of students that could be produced by those figures and then you make your judgment on the quantity you want rather than on some figure that might be pulled out of the air.

I think this is all I have to say at this time, Mr. Jarman. Dr. Berson and I would be very glad to answer any questions that you might ask us.

Thank you.

(The prepared statements referred to earlier follow:)

STATEMENT OF THE ASSOCIATION OF AMERICAN MEDICAL COLLEGES, BY DR. SAMUEL P. MARTIN, PROVOST OF THE UNIVERSITY OF FLORIDA

Mr. Chairman, members of the committee: I am Dr. Samuel P. Martin, Provost of the University of Florida. I am here on behalf of the Association of American Medical Colleges which represents all of the schools of medicine in the United States and 340 of our major teaching hospitals. We appreciate your courtesy in providing time for us to testify in favor of a bill which, if enacted, will be a great forward step in the history of the health professions in this country.

Mr. Chairman, our Association has presented a statement to the other body which explains the role of the medical schools in the health manpower picture and sets forth in detail our reasons for supporting each of those portions of the bill which would directly affect our institutions. In order to conserve the Committee's time, I would like to offer that statement for your consideration and for inclusion in the record of this hearing.

I shall not burden you with the statistics concerning the grave shortages of health personnel in our country. The fact is self-evident and figures have been presented by Administration witnesses.

I would like to make just three brief observations on concomitants of the physician shortage which may not be obvious but which should be of importance to the Congress. Then I will comment on specific points in the bill which we believe call for amendment or clarification.

The first aspect of the physician shortage I would comment on is its relationship to the soaring costs of medical care. Our system of medical care is and must be a closed system. We will not submit ourselves, our families, or our people to the ministrations of physicians or surgeons who have not been properly trained. The number of practitioners is and will be limited by the number of our schools and the size of their faculties. While the number of physicians is thus

limited, the effective demand for their services is open-ended. That demand has skyrocketed in recent years and, as always in circumstances where the supply is limited and the demand increasing, the result is higher prices. Thus far, this is probably not a major factor in the rising costs of medical care but it is certainly one factor which may become more important and it is one that can only be taken out of the equation by the passage and full funding of legislation such as you are now considering.

The second aspect of our grave physician shortage which I would call to your attention is the fact that it is real even though hundreds of young Americans who would like to become doctors and who are well qualified to become doctors do not become doctors simply because we—our society—has not given them the opportunity to do so.

I would like to impress on this Committee the fact that in the United States, it is only in medicine and dentistry, so far as we know, that a qualified man or woman cannot find academic opportunity. In every other field, from astronomy, astronautics, and biology through mathematics and physics to zoology, if a young man or woman has what it takes he can find an approved school to admit him. This is not so in medicine and dentistry. Yet our Association of American Medical Colleges is firmly on the record as believing that every qualified young American who wants to be a doctor should have that opportunity. Our colleagues in dentistry agree. We simply do not have enough schools or big enough schools or enough faculty manpower to do the job. If the Congress will give us the tools by passing and fully funding this legislation, we will do the job. We so pledge.

Now, Mr. Chairman, my third point on the doctor shortage: the opposite side of the coin I have just shown you. Inasmuch as we have been unable to train enough of our own people in medicine, we have become woefully and alarmingly dependent on the importation of non-American foreign trained doctors badly needed in their own countries and some of whom are not as competent to treat our people as would be those we could train ourselves. Some 40,000 graduates of foreign medical schools now practice in the United States. Twenty-five percent of the interns and 33 percent of the residents in your hospitals (80% of the staff in some hospitals) are foreign trained. Without them scores of hospitals might have to close their doors. Foreign trained physicians arrive here at the rate of some 8,000 a year and some 2,000 obtain licenses to practice here permanently. We would be delighted to have them do so if it were to secure that sort of advanced training prior to returning to serve their own people that our own doctors at the turn of the century sought when they went abroad to study in Edinburgh, London, Vienna or Germany. But that is not the case. They come, for the most part, and they stay because we have become dependent on the importation of these 2,000 a year while, at the same time, the nation refuses some 2,000 qualified young Americans a chance to study medicine. This, too, is in the power of the Congress to correct.

Now, Mr. Chairman, I would like to offer for consideration of the Committee, some specific suggestions regarding amendments to or clarification of the bill. We would have it understood that we think it an excellent bill and we strongly support its passage. The five suggestions we make are intended merely to reinforce what we believe to be its intent on points which might later be misconstrued or lead to administration problems. Our suggestions follow.

One: Section 101 on page two of the bill provides a single authorization for construction funds to go to schools of medicine, dentistry, osteopathy, professional public health personnel, veterinarians, optometrists, pharmacists, and podiatrists. We believe it obvious that the costs of facilities essential to the training of physicians and dentists involves a range of capital expenditures, operating expenses and program complexity of a different order of magnitude than that characterizing the facilities essential to the training of other categories of equally essential health personnel. To avoid the possibility of an interpretation of the Act leading to the belief that a simple formula distribution of the total funds appropriated for construction should be made among all those schools of the health professions involved, we believe the Committee may find it desirable to provide for two authorizations, thus assuring separate consideration of the amounts to be appropriated for facilities used in the training of doctors of medicine, dentistry, and osteopathy on the one hand and those for the training of the other categories of health personnel on the other.

Such an amendment would not, of course, call for any additional expenditures.

We have attached to this statement the draft of such an amendment in the hope that it might prove helpful to your legislative draftsmen should the Committee favor our proposal.

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Our second suggestion involves exactly the same concept and would make it applicable to the institutional grants provided for in Section 770(a) on page six of the bill. Here, again, we would propose a simple amendment separating into two items, for purposes of authorizations and appropriations, the two groupings of health professional schools which are characterized by markedly different cost factors. This amendment, too, would cost no additional funds.

We have appended to our statement a draft, "Amendment Number Two", which perhaps might accomplish this.

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Our third suggested amendment has to do with the provisions of Part A, Sections 103, 104, and 105 of the bill which appear on pages 3, 4, and 5. These are eminently worthwhile and can provide considerable savings of money, time, and effort to both the government and to our institutions by making it possible to combine into a single application requests for funds for a multi-purpose building which might combine such things from differing financial resources as educational, laboratory and library facilities.

This is so obviously worthwhile a proposal that we urge the Committee to make it immediately effective rather than for "fiscal years ending after June 30, 1969" (Page 5, line 3).

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Lines 11 to 16 on page 39 of the bill permit federal grants up to 66⅔ percentum of costs in the case of projects which "The Secretary determines have such special national or regional significance as to warrant a larger grant than is permitted under paragraph (1)" (i.e., 50 percentum).

We submit that many medical schools which might be ideally suited and willing to undertake special projects of great national or regional significance do not have the matching funds for such undertakings. Moreover, they cannot justify to their local constituents the raising of funds to be used for purposes of no special relevancy to the people of that locality no matter how beneficial the project might be to the nation as a whole or to a particular broad region. We would also point out that the sheer impossibility of raising matching funds in some areas makes impossible the optimum geographic distribution of federal funds which members of this Committee and the Congress in general have long urged upon the Administration.

We would urge, therefore, as our fourth suggestion, that this Committee strike "66⅔" from line 11 of page 39 of the bill and substitute "100%" therefor. Since the funds for any such grant would have to come from the total appropriated for the overall purpose, this would not result in additonal expenditures. Since the Secretary would have to determine the existence of an overriding regional or national interest before making any such 100% grant—and we can assure you that any such would be matters of keen interest to other applicants—we have no fear that such an authorization would be used without serious consideration and full justification.

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Our last two suggestions have to do with matter sof clarification of intent which might, perhaps, be as well expressed in the Committee's report as amendments to the bill. We believe their objectives are within the intent of the bill but hope that such intent will be made crystal clear.

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Our fifth concern is with Section 746 on page 16 of the bill which authorizes the transfer of not more than 20% of loan funds to scholarships. We thoroughly approve the provision. It can be most helpful in allowing schools to cope with such changes in circumstances as may occur between the time funds are applied for and individual student needs become realities.

However, we are not sure that the bill makes it clear that an institution trnasferring loan funds to scholarships in accordance with that provision will automatically be relieved of any responsibility it may have incurred for the return of those loan funds. We hope that this, too, will be spelled out in the bill or in the Committee's report.

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That, Mr. Chairman, concludes our suggestions for amendment or clarification of the bill.

We have but one final point to make. It is one we consider all important. It is one to which we urgently request you give full consideration. It involves the question of authorizations to be set forth in the Act.

The bill before you provides for "such sums as may be necessary"— for an open-ended authorization.

We sincerely hope that this Committee and the Congress will see fit to retain that language.

We know and we believe that this Committee knows how very great an increase in medical manpower this nation needs.

We know and you know that to meet that need will require funding at a far higher level than we can hope to achieve for fiscal 1969 and, perhaps, for fiscal 1970 as well—though we hope not.

Neither we nor the Committee knows what amouts of matching funds states, local, communities, foundations, or individual philanthropists may be willing to contribute to start new schools of medicine or to expand existing schools over the next several years.

But the Congress will know what the nation can afford and we will know what matching funds might be raised in each of those years.

This bill provides the mechanism through which we can begin a process that will lead to the solution of our critical health manpower problem. The "Health Manpower Act of 1968" can become an historical document with which each of us can be proud to have been associated.

But the promise which this bill holds out can be negated if funding limits are imposed which have no relation to the realities confronting us. The promise can become a mockery.

We can well understand the insistence on the part of many members of the Congress that most such bills as this contain reasoned figures as to probable costs. We hope they will not insist on applying that principle to this measure. Our real concern, however, is not with the principle or its possible applicability to this bill but rather with the estimates of costs that might be imposed upon it.

We have seen the figures given Senator Hill's commitee by the Administration. We can only say that if any such figures are adopted by the Congress and written into this legislation, we will have been served notice that for the life of this measure we cannot even hope to begin to meet your needs for a meaningful increase in medical manpower.

We assume that those figures must have been based not on any estimate as to what it will cost to produce the number of doctors the nation will need and our schools might produce but rather on what the Bureau of the Budget thought it could approve in the light of this year's budgetary crisis.

We would suggest, Mr. Chairman, that, if your Committee believes it must write fiscal ceilings into this bill, it request the Administration to provide figures which relate the quantity of the various types of health manpower needed to the probable costs of producing that manpower. Those are the only sort of figures which should appear in this legislation: figures based on costs of production to output desired. The decision as to what extent the possibility thus created can be realized in a particular year will then quite properly be a function of the Congress acting through the appropriations process in that particular year. We ask only that this measure, when it is enacted, present our people with a balanced picture of both the means and the cost of meeting America's demand for the health manpower it so badly needs.

STATEMENT OF WILLIAM N. HUBBARD, JR., ON BEHALF OF THE ASSOCIATION OF AMERICAN MEDICAL COLLEGES, BEFORE THE SENATE COMMITTEE ON LABOR AND PUBLIC WELFARE, MARCH 20, 1968

INTRODUCTION

S. 3095 is a bill that will find a place with other historic legislation that has carried us so far toward our goal of health for the people of the United States.

The American people are deeply concerned about health. Responding to this concern from 1946 to 1963 the Federal Government, largely through the Department of Health, Education and Welfare, joined state and local governments, health and educational institutions, voluntary health agencies, private philanthropy and industry in meeting two especially-critical needs in the attack on disease: the construction of hospital and other facilities for the care of patients (Hill-Burton program), and the support of medical research (National Institutes of Health).

Continuing expenditures by the Government in support of these two programs still represent investments in the health of the nation which pay rich dividends,

as has been amply documented. It is imperative that these programs be continued and devoloped further.

Health service facilities and medical research have made possible dramatic progress in the prevention and treatment of disease. By 1961, a block to the effective use of new knowledge and to the pursuit of further knowledge was the increasing shortgae of personnel in the health professions, particularly doctors. This block can be removed only by the improvement and expansion of the nation's system of medical and other health professional education.

The Health Professions Educational Assistance Act of 1963, the Nurses Training Act of 1964, the Allied Heatlh Professions Personnel Training Act of 1966, as well as the Health Research Facilities Act and the acts supporting public Health professional education have made important contributions toward removing that block. The concept of an omnibus bill as S. 3095 is most suitable in dealing with these multiple acts because each of the separate titles supports interdependent efforts that have a common purpose—the achievement of health for the people. This interdependency and common purpose will require ever closer cooperation in planning education and in practice by the many branches of the health professions and allied health personnel. Epitomizing this cooperation and interdependence is the modern medical center.

In considering needs of medical and other health professional education, it is important to understand the variety, complexity and interrelationships of activities involved in the training of such personnel. This is especially true in relation to the three components of medical education: teaching, research and service. The inseparable nature of these three functions has led to the "medical center" concept as a more realistic characterization of medial education than the too frequently held concept of the medical school, the teaching hospital, the research program, and community health services as activities independent of each other. However, two separate federal support programs—for medical facilities and for medical research—while understandably directed toward sepcific restricted objectives have complicated the conduct of medical education by failing to recognize that research and service are integral functions with teaching. Thus, the need for service facilities and the need for research facilities in a medical education environment have been considered independently by the government, and provision has also been separate for teaching facilities, although teaching is basic to both service and research.

The first hard fact to be faced is that there is not enough health manpower to meet the needs of the American people. There are not enough doctors and not enough supporting people. The shortage of physicians is beyond a question the most critical single element in manpower for health service. Although medical schools have increased their capacity to educate physicians and new schools have been created, the increase in the supply is not keeping up with the need. In light of the growing demands for physicians' services despite the hopeful offsetting factors of increasing his productivity by training as yet undefined categories of assistants, it is clear that more physicians of high quality must be trained as quickly as possible and that the resulting increase in number of physicians will be healthy not only for the nation but for the profession itself. Between now and the middle seventies, we will have approximately 100 medical schools in the United States which can produce the physicians we need. The adequate support of the faculties that are responsible for this medical education is a prime need for the future health of the nation. These 100 institutions must not have their potential limited by an artificial shortage of funds. Artificial because the investment necessary for them to optimise their output is miniscule in comparison to our country's wealth and in comparison to the enormous benefit such an expenditure would bring to the health of people.

In order to enable the nation's medical schools both to meet today's crisis and to attain the longer-range goal of unrestricted educational opportunity, those responsible for allocation of resources must recognize the magnitude of these tasks.

There are both immediate and long-range steps which should be taken. The immediate steps are:

1. To increase the enrollment of existing medical schools. Considering the time required to create new schools and to provide a student with a medical education, there is no alternative to this step in meeting our present emergency.

2. To foster curricular innovations and other changes in the educational programs which could shorten the time required for a complete medical educa-

tion. The process of educating a physician embraces the entire educational experience from high school through residency training. In view of the increasing quality of pre-professional education, the growing competence of entering medical students, and the increasing amount of clinical experience provided medical students, the duration of internship and residency training should be reassessed. It should be possible to reduce the total length of medical education without sacrificing quality.

3. To meet the need for innovation in educational programs and to encourage diversity in the character and objectives of medical schools. The development of schools of quality where a primary mission is the preparation of able physicians for clinical practice as economically and rapidly as possible is to be encouraged. Such schools may have less emphasis upon fundamental biologic research than is appropriate for a number of other schools.

A longer-range approach to the need for physicians is the development of new medical schools. This approach will not solve our immediate, urgent need for more physicians but it is essential for meeting the national needs of 1980 and beyond. The contribution of such schools to the total capacity of the medical education system is important. The advantages of the organization of as many such centers of medical education and development through the country as consistent with strong programs should be kept in mind.

To implement the measures enumerated above will require adequate financial support from governmental and various private sources for:

1. Construction of facilities to expand enrollment of existing schools and to create new schools.
2. Support of the operational costs of medical schools.
3. Stimulation and incentive for educational innovation and improvement.

The university is today the typical institutional setting of the interdependent programs of professional education, patient service, and research that form an Academic Medical Center, recognizing that an analogous setting independent of a parent university exists as well.

The core of the Academic Medical Center is the faculty and facilities necessary for the education of the M.D. candidate. But other essential roles are simultaneously served. Basic medical scientists are responsible also for the graduate degree programs and the research training which are the source of tomorrow's teachers and investigators in these basic health sciences. The research efforts of the basic science faculty create the scholarly environment needed for the kind of education that prepares the student to understand and utilize the scientific advances that will occur during his professional lifetime. These same research efforts produce the knowledge necessary to improved definition and solution of problems vital to human health.

The clinical faculty in medicine adds the responsibility for patient care to its obligations for teaching and research. Both the medical school and the hospital phases of the physician's education are shared by the clinical faculty, while they are increasingly sought after for the postgraduate education of the practicing physician. Research and research training programs, both basic and applied, are necessary for these "teacher-physician-scientists" to translate laboratory findings into improved patient care and more effective teaching. Commonly, this same medical faculty shares responsibility for teaching students of dentistry, nursing and pharmacy and allied health workers.

The Academic Medical Centers vary widely in their organization for patient service, but all have the obligation to provide exemplary patient care under faculty responsibility. This high level of patient service is necessary to medical education and medical research, but is also an important community resource.

Every Academic Medical Center in the United States is in trouble financially and some are in desperate straits. Improved support is needed to sustain the quality of their existing programs, to permit them to enlarge their output of essential medical manpower, and to provide for new programs to enhance the delivery of health services.

Basic Institutional Support Grants for Academic Medical Centers

As federal health programs have evolved over the past 20 years, they have dealt separately with education, research and medical care. The institutional integrity of the Academic Medical Center is essential to the attainment of the separate and collective missions of these programs and so it is necessary that these missions preserve the inseparable interdependence of teaching, research, and patient care within the Academic Medical Center.

1. Basic institutional support grants should be increased and extended to support the full range of educational programs of the Academic Medical Center.

2. Project grants for education or research should allow for overlapping use of these resources within the Academic Medical Center, to the extent that the fulfillment of the primary purpose allows.

3. Academic Medical Center construction grants should not be restricted to the exclusive use of only one part of the triad of training, research, and service. Common use of an area is inevitable if research and service are part of the teaching environment.

4. A system of accountability which accepts the full range of health-related efforts in the Academic Medical Center should be developed. An accounting concept which requires complete separation of teaching, research and clinical service is not in the best national interest because it decreases the advantages of interaction among these interdependent activities.

The medical schools of the Unietd States and their associated Academic Medical Centers require improved support from the Federal Government in order to meet their obligations to the health of the people. The expectations of the people will only be fulfilled through increased output of physicians along with other professional and supporting health workers, through continued support of both basic and applied research, and through enhanced delivery of health care in the community. In each of these functions the medical schools and their associated Academic Medical Centers are an essential national resource.

SUMMARY

We are told that, after agriculture and manufacturing, health is the largest industry in the nation. The quality of this great system of health care can be no better than the knowledge and skill that serves it. A physician remains at the apex of the team of professional and allied health workers who translate this knowledge and skill into service. It is from the medical schools of the United States and their reltaed Academic Medical Center programs that the knowledge, skill and physician manpower essential to this health-care team will come. By providing these 100 Academic Medical Centers with the resources they need to meet their obligations, the quality and effectiveness of the entire system of health care will be enhanced. Although the total number of dollars involved appears large when isolated, it is very small indeed in comparson with the magnitude of the expenditures for health throughout the nation. It is from a very deep and urgent sense of obligation to meet the health-manpower needs and the needs for improved knowledge and skill that we appear before the Committee to describe the resources that are necessary to meet these public purposes.

The real need of hte Academic Medical Centers of the United States actually far exceeds the recommendation in the Administration's health budget. Every university medical center in the United States, both state and private, is in trouble financially and some are in desperate straits. In order to meet their expanded obligations, all must have the space and the stable program support that is essential for their contributions in education, research, and patient service. The Academic Medical Centers of the United Ctates are a vital resource for the health care of the people of the nation and are an important part of the total assets of the nation. State and private agencies do not provide the funds required by all of the programs of the Academic Medical Centers since they have national as well as local purposes. Unless adequate funds from federal sources continue, we cannot fulfill the obligations to the health care of the people that they have evrey right to expect from us. We therefore urge the committee most strongly that every effort be made to assure that the funds appropriated to health-related educaion, research and service are adequate to meet the needs and expectations of our people.

Comments on S. 3095

The Association of American Medical Colleges strongly supports the Health Manpower Act of 1968 (S. 3095). It will extend and significantly improve the Health Professions Educational Assistance Act of 1963, as amended, the Nurses Training Act of 1964, as amended, the Allied Health Professions Personnel Training Act of 1966, project grants for graduate training in public health (Sec. 309 of the Public Health Service Act) and traineeships for professional public health personnel (Sec. 306 of the Public Health Service Act). Each of these have proven to be sound programs. Much has been accomplished toward the production of additional trained health manpower and the provision of additional educational opportunities in the health fields. But the demands and expectations of society continue to increase, much more needs to be done, and this omnibus blil

contains significant improvements and establishes a pattern which we believe to be sound. When these programs can be supported by adequate appropriations, we can make rapid progress toward the provision of educational opportunities for all qualified young Americans in the health fields and an adequate supply of well-trained medical manpower.

Health services are delivered to individuals and society by a vast array of trained people and we would emphasize the desirability of supporting all the schools of the health professions. In this broader context, an adequate number of properly qualified physicians is of central importance and we should not lose sight of the level of responsibility each of the types of schools carry for the public welfare.

We think it is very wise to authorize "such sums as may be necessary" for each title of the Act and for Congress each year to decide how much of the available federal resources to allocate to these purposes. We recognize the fact that other national needs restrain the amount than can be invested in these programs at the present time.

The Congress and the public undoubtedly realize that the Academic Medical Centers can increase their output of physicians, trained specialists, trained investigators, allied health professionals trained in medical centers, research and service to patients and communities only to the extent they are provided financial support.

Construction Grants

We think it is wise to extend the programs for four years because of the length of time it takes for institutions to develop optimal plans for these complex facilities and to arrange for local matching funds.

The provision authorizing a school to make all applications to the Health Professions Education Act construction program for the construction of facilities which are to a substantial extent for teaching purposes but are also for health research purposes or medical library purposes is, in our opinion, sound, indeed almost necessary. Health professional schools typically design and use facilities for these interrelated purposes and, from time to time, reassign rooms or whole sections of buildings among these purposes. We assume that it is intended that clinical facilities justified as essential to the eligible educational programs will continue to be eligible as they have been in the Health Professions Educational Act and consider this very important.

We also think it highly desirable that, as provided in this legislation, the facilities be available for graduate, continuation, and other advanced training activities as well as that attributable specifically to the training of persons in the first professional degree programs. The restrictions which have excluded these necessary functions have constituted undesirable and artificial barriers.

We hope Congress will make these amendments effective beginning in Fiscal Year 1969, because they will make it possible to use the funds to be appropriated more effectively.

Institutional Grants (Formula)

We believe the formula proposed in the legislation is an appropriate one. It gives credit for all full-time students with twice as much credit for each student in the increase in enrollment as for other full-time students and includes a factor for the number of graduates. These represent desirable improvements, but it seems important to emphasize that even with an approved formula, what can be accomplished will be limited by the amount of funds actually made available. Unfortunately, the funds appropriate for the present legislation have not been sufficient to pay the full amount authorized by the present legislation. The medical schools of this country have responded to the existing legislation and have expanded their enrollments of entering students and have been severely disappointed that the Congress did not appropriate as much as its own legislation authorized.

The Association of American Medical Colleges has somewhat mixed feelings about the expansion of enrollment as a condition for receiving a formula grant. On the one hand, expansion of enrollment is so clearly desirable that steps in that direction are in the public interest. Relating expansion to the *average* first-year enrollment for a five-year period is more desirable than relating it to the *highest* enrollment in a five-year period, as the present legislation requires. We consider it desirable that the Secretary, after consultation with the Advisory Council, have the authority to grant a waiver for this requirement, if that waiver is in the public interest and consistent with the purposes of this part of the legislation.

On the other hand, the ability of medical schools and other schools in the health professions to respond to the clear intent of Congress and the needs of society by expanding enrollment has been severely restricted by the limitation on funds for this purpose. This legislation authorizes the appropriation of "such sums as may be necessary". For our joint efforts to meet the needs of the public to be successful, we are convinced that these institutional grants must come to cover a reasonable portion of the educational costs of the institutions. The basic improvement grants of the present legislation would cover approximately 10-percent of the educational cost of medical schools if they had been fully funded. Medical schools do not have the resources with which to meet a large percent of the costs of much larger enrollments.

Special Project Grants

We believe the proposals in this section of the legislation are entirely sound in concept. The authority to support planning special projects to accomplish the important purposes of this section is especially important. The eligible schools will be far better able to meet the future needs of society if they can develop competence for orderly and continuing analysis and planning of programs. They will need special funds to initiate and probably to continue this activity.

The sound way to achieve expansion of enrollment without sacrifice of quality is for institutions to develop plans, receive support that is tailored to their own needs and have the time to carry out those plans.

We also hope Congress will make this section effective in Fiscal Year 1969, because it will make possible more effective use of the funds available.

Health Professions Student Loans

We believe it is desirable to postpone the mandatory repayment of these loans for up to three years service of VISTA volunteers and up to five years for advanced professional training including residencies, and we think that the authority for the institution to transfer to its scholarship fund up to 20-percent of the total funds paid to it for its loan fund is highly desirable. We believe the need for scholarships is relatively greater than that for loan funds, partly because many medical students are already in debt for their college education by the time they enter medical schools and too large a debt burden limits the opportunity a young physician has to enter public srevice or to serve economically disadvantaged members of society.

Health Professions Student Scholarships

We believe the added flexibility of authorizing the school to transfer up to 20-percent of the amount paid to it for scholarships to its student loan fund is desirable, although we do not believe this authority will be extensively used because in most institutions the need for scholarships far exceeds the supply. We consider the clarifying amendments as quite helpful.

We strongly support the purposes of Title II—Nurse Training and Title III—Allied Health Professions and Public Health Training—and would emphasize the very great importance of an adequate supply of well-trained people in these fields and stable and productive educational programs to that end. Colleagues in those professions are more competent to speak to the details of these Titles.

Title IV—Health Research Facilities

We believe it is desirable to extend this program for four years because of the length of time it takes an institution to plan these facilities and obtain local matching funds. We think it is in the public interest to authorize a federal share of up to 66⅔-percent of the projects falling within the class or classes determined by the Secretary to have special national or regional significance, but we also approve of the safeguard of providing that no more than 25-percent of the funds appropriated for a fiscal year for this program be available for those projects.

In conclusion, the Association of American Medical Colleges fully supports the Health Manpower Act of 1968 (S. 3095) as providing a sound pattern for the support of an expanded educational capacity which can, eventually, provide an educational opportunity for all qualified young Americans in the health fields and an adequate supply of trained health manpower to meet the health needs of society. We urge Congress to act favorably on this legislation and to make the provisions for construction, special project grants, student scholarships and loans of Title I and all of Title IV—Health Research Facilities—effective beginning in Fiscal Year 1969.

Mr. JARMAN. Thank you very much, Dr. Martin. We will read your full statement with real interest, and we appreciate the advice and counsel you have given the committee on this important bill.

Mr. Rogers?

Mr. ROGERS. Thank you. I appreciate your statement and the testimony, Dr. Martin.

Do you use any consultants in the university hospitals or any consultants in teaching or part-time instructors?

Dr. MARTIN. We use a limited number. This varies from location to location. We are, as you know, in a small area in contrast to a metropolitan area, so we use a rather small number. We do use physicians in town; yes, sir.

Mr. ROGERS. What about, say, a large city medical college? Would they use a good number of part-time instructors? Would they use a good number of local physicians in the university hospital or what?

Dr. MARTIN. This varies from institution to institution. It varies on the availability of physicians. It varies on the time. There is a trend in medical education toward the use of the full-time instructor. This is because of this complicated one-to-one relationship. It is complicated material that we present, and the need is for a person to give his full time, his full mental effort to the process of education.

Mr. ROGERS. In other words, when you have a student with you in the hospital, the one doctor that goes through treating patients cannot take more than one man with him? He does not——

Dr. MARTIN. He rarely takes——

Mr. ROGERS. Does not take three or four?

Dr. MARTIN. He rarely takes more than three or four and he has to deal with one at a time. This is the real problem with medical education.

Mr. ROGERS. There is no way to let, say, even five or six observe him as he treats a patient?

Dr. MARTIN. You know, there is no way of learning like having responsibility, and one cannot give responsibility when human life is involved without adequate supervision. And this has us over the barrel in a method of teaching, and I know of no shorter method. I know ways of altering the curriculum and your provisions here, I think, are going to have a very profound influence on making us look at curriculum, look at ways of approaching, ways of doing things better, but still there is going to be that period of one-to-one relationship.

Mr. ROGERS. Now, when does this come in? Does it come in at the internship?

Dr. MARTIN. Sir, this starts at the first time he sees a patient and the first time he interacts with the patient, which is very——

Mr. ROGERS. When is this?

Dr. MARTIN. That is in the first year of medical school in many schools. It is in the second year of medical schools at practically all of the schools.

Mr. ROGERS. So, second year medical. This is after he has had his undergraduate, he is now in medical school and the first year—how much time is devoted to the individual in medical school in actually doing the patient work?

Dr. MARTIN. The individual student?

Mr. ROGERS. Yes.

Dr. MARTIN. This increases each year from part time in the first year dealing with patients, more in the second.

Mr. ROGERS. How much time would you think?

Dr. MARTIN. Probably no more than 10 percent of the first year and then it will run 25 percent of the second year and the third and fourth year it is a 100 percent. They are dealing with patients most of the time.

Mr. ROGERS. And then, they are closely supervised——

Dr. MARTIN. They are closely supervised.

Mr. ROGERS. In this area?

Dr. MARTIN. Now, the intern then takes one step to being unsupervised for periods and his supervision is periodic. As a resident, his supervision is less periodic until finally then he is on his own.

Mr. ROGERS. Do you see any possibility of working out a 4-year course, say, where you could qualify them to treat in basic diseases and ability to recognize major problems?

Dr. MARTIN. I think that to change the character is a dangerous phenomenon because when you as a patient come to see the physician, he does not know whether that cold is a cold or the beginning of some rapidly fatal and fulminating disease. So at that initial contact is when we need our most competent man because——

Mr. ROGERS. But, he does not go to the specialist necessarily, does he?

Dr. MARTIN. No. He does not, but I say we need at that initial contact of his, our most competent man. Now, I think one of the things that is misleading in many of the things that are presented, when one says 69 percent are specialists, a significant number of those specialists are going to be pediatricians and internists and pediatricians and internists really are a new kind of general practitioner. They limit their practice to an age group but an internist will generally see practically any part of medicine when he sees you the first time. Now, if it is a heart condition, he may also refer you on. I think that in addition to worrying about this whole area, I think that you people should look seriously also at the system of medical care because I thought, as some conversation went on before, if we were building automobiles by the use of a village blacksmith or a cottage industry, we would have serious problems in giving everybody that wants a car a car.

Therefore, I think we have to look in addition to the kind of people, to ways of organizing the system. There are all kinds of data on how much we could use ancillary or auxiliary or medical health-related personnel, and I think that is going to be a fruitful area.

Mr. ROGERS. Let me ask you this. Some of the foreign schools, are they not just 4-year schools?

Dr. MARTIN. Some of the foreign schools are 4-year schools; yes, sir.

Mr. ROGERS. And yet, they come and practice in this country without, I understand, supposedly not without supervision.

Dr. MARTIN. I think one has to look at the foreign system of education, too, because many of the men finishing a foreign high school are further along toward their basic training in biology than they are in our high school before they transfer.

Mr. ROGERS. Would this be true in Latin America?

Dr. MARTIN. No. I think this is an area that you are going to have to suffer with seriously and I think that the answer is not to train a less well trained physician, but train more helping hands for that physician so he can be more effective.

Mr. ROGERS. How many new colleges does he need; does your association project to fill the gap?

Dr. MARTIN. Dr. Berson?

Dr. BERSON. Mr. Rogers, we do not have a formal projection on that because certainly it is a much larger number than we see an early possibility for getting. Beginning with 10 or 12 years ago, my predecessor in this position, Dr. Ward Darley, and Dr. Wiggins from the AMA called on the presidents of a number of leading universities in this country that did not have medical schools to try to encourage their interest in developing them. I am sorry to say that very few of those particular institutions have done so. We feel that, I might add also, that at about the same time Dr. Vernon Lippard, who was then president of this organization, was interviewed by one of the national magazines and stated his opinion that we needed 25 more new medical schools at that time which was 12 or 13 years ago.

Mr. ROGERS. Would you let us have some projections of this?

Dr. BERSON. Yes, but it cannot be that quantitive because in my own opinion, it is of the order of a dozen and a half or 2 dozen even as quickly as we can get them and I am not at all sure where we can find suitable educational bases and the kind of local responsibility and interest that has led to the development of medical schools so far. But, we will be glad to provide you with some views on that point.

(The following information was subsequently submitted:)

ASSOCIATION OF AMERICAN MEDICAL COLLEGES,
Washington, D.C., June 24, 1968.

HON. JOHN JARMAN,
Chairman, Subcommittee on Public Health and Welfare,
Committee on Interstate and Foreign Commerce,
House of Representatives, Washington, D.C.

DEAR MR. JARMAN: At the hearings before your subcommittee on the Health Manpower Act of 1968, one of the members of the committee asked me to submit for the record some views about the number of new medical schools that will be needed in the United States. I hope we made it clear to the committee that, while we are happy to share such knowledge and opinions as we have, the Association of American Medical Colleges is not prepared at this time to be entirely quantitative about the number of new medical schools in the United States that should or will be developed within the next decade and a half.

It is my personal opinion that it will be in the public interest if 20 to 25 new medical schools are developed between now and 1980, but I do not think those numbers should be considered as anything more than an educated guess.

It is the view of this Association that the development of new medical schools is highly desirable, provided such new institutions can be strong enough to offer their students educational opportunities in medicine of acceptable quality. We believe that new medical schools can be seen as an answer to 1980's needs for increased educational opportunities for young Americans and for increased numbers of physicians educated in U.S. schools. However, expansion of enrollment in established medical schools offers the only reasonable way to meet the need for more educational opportunity and for more physicians in the fairly early future. As you know, a small number of medical schools are in such desperate financial straits that their very survival is threatened. Providing the financial support those schools need to survive is of great importance and will prevent the loss of educational capacity. All the other medical schools have financial problems and face many demands, but they do have strengths and the potential ability to expand enrollments if they can obtain the additional facilities and financial support they need to do so.

It is our opinion that the Institutional and Special Project Grants provided in the Health Manpower Act of 1968 provide excellent mechanisms for providing the funds the schools will need if the Act is passed and adequate appropriations are made.

The experience of the past decade and a half has demonstrated that after a firm commitment is made by a responsible institution that it will develop a new medical school, a number of years pass before the first student is admitted. This is so because of the time it takes to recruit appropriate leadership, acquire a site, develop plans for facilities, obtain funds from non-federal and federal sources for the construction of the facilities and for the process of construction itself. It usually takes a student four years to earn an M.D. degree. All young physicians are obligated for two-years of military service and all young physicians now spend two to five years as interns or residents in hospitals. For these reasons the development of new medical schools should be seen as a means of providing increased educational opportunities for students now in high school or grade school but not as contributing to the supply of young, fully-trained physicians in the next decade.

Another general factor of very great importance in the development of new medical schools is that of local initiative. The ability or willingness of educational institutions to grow and provide the academic support that a modern medical school needs is extremely important. The ability and willingness of local groups, communities, and states to provide the financial support a modern medical school requires are vital. And both of these factors are extremely difficult to predict in advance and from a distance. For example, how could anyone have predicted that the Hershey Foundation would have provided the financial support for the development of a medical school in that small community; that the State of Ohio would have reached a decision to develop a medical school in Toledo, or that Mount Sinai Hospital in New York would have undertaken the development of a medical school and formed an affiliation with the City University of New York for that purpose?

We greatly appreciated the opportunity to present our views to your committee.

Sincerely yours,

ROBERT C. BERSON, M.D.,
Executive Director.

Mr. ROGERS. I think it would be helpful. You know, project grants, no telling what could be done with those the way it is proposed under the bill.

Dr. BERSON. We think that the project grants could be tremendously helpful because medical schools that have faced the question of how can we expand enrollment by 25 percent or 50 percent, have come up with descriptions of what the institutions would need to do it. It almost always involves some facilities and it always involves some other things which can only be described for that institution. They need two men in this department; they need nobody in this department; they need a particular mosaic of resources, both physical and operational. Now, we think that institutions could come forward with proposals for project grants that would accomplish a great deal for the amount of money invested. To get on a continuing basis, they would have to look forward to the institutional grants and their own resources.

Mr. ROGERS. What about requiring them to have more students, produce more students? Do you not think that is a good idea?

Dr. BERSON. I think the incentive is more likely to be effective than the requirement. One thing that bothers me about the requirement in the present legislation is that it was arbitrary and small. Most of the medical schools that have seriously looked at this need and have felt strong enough to plan to meet it, do not want to plan to expand by five students or some such—and that was the requirement, but by a considerably larger increment.

Mr. ROGERS. This was a minimum. Five was the minimum.
Dr. BERSON. Yes, that was the minimum.
Mr. ROGERS. You wanted more but I think——
Dr. BERSON. I think the incentive is more likely to be helpful. If I may add two things, Mr. Chairman.
Mr. JARMAN. May I suggest this? The House is in session and we are in the midst of a quorum call in the House. We have asked permission—we are asking permission to sit this afternoon during the session of the House, and so our objective will be to recess at this time and continue the hearings at 2 o'clock.
This committee will now stand in recess.
(Whereupon, at 12:15 p.m., the hearing was recessed, to reconvene at 2 p.m. the same day.)

AFTER RECESS

(The committee reconvened at 2:25 p.m., Hon. Paul G. Rogers presiding.)
Mr. ROGERS. The committee will come to order. We will proceed with the questioning of Dr. Martin.

STATEMENT OF DR. SAMUEL P. MARTIN, ACCOMPANIED BY DR. ROBERT C. BERSON—Resumed

Mr. ROGERS. It is my understanding that Dr. Blasingame, whom you may know, made a statement some weeks or months ago saying that it might be possible to double the number of graduates if, for instance, we changed procedure on the use of equipment, using laboratories twice a day or maybe three times a day, rather than maybe just once.
What would be your reaction to this?
Dr. MARTIN. Chairman Rogers, this is one of the interesting problems. I know that the capital expenditure looks terrible to you, but capital expenditure, while it is absolutely necessary, is not the biggest cost of running an institution. Say a medical institution, a medical school, would cost $25 million. You generally find that it costs $12.5 million a year to operate a $25 million facility. So, one-half of the capital expenditure is involved in a year's operation. And all through education we are stuck on the capital expenditure.
The first thing you would find, I suspect, although this has never been investigated, is that, yes, you could buy a 24-hour-a-day operation, but the first thing you would find is that it wouldn't be $12.5 million, it would be $25 million a year to operate, and I think we have to look at the most effective use of the facility, not the absolute capital expenditure. Yes, I think this is true.
I think that in many areas by enlarging the basic science facility alone one could make progress in increasing the class, because the clinical—the bottleneck in education is the basic science facility. This is the greatest bottleneck.
Mr. ROGERS. Is this where the greatest difficulty is?
Dr. MARTIN. Yes. This is the bottleneck.
Mr. ROGERS. This comes in the early years?

Dr. MARTIN. This is in the early years. There is one place in the laboratory for a student and when that student occupies that place, it is really pretty much a full-time occupancy because he comes back at night. You would be surprised at the amount of hours a medical student in the basic science part of his training spends in that facility. We find they are open really 24 hours a day now. He has to go back for special work. And this is the bottleneck far more than is the clinical operation.

Mr. ROGERS. Well, I think this would be helpful to us in knowing where to put some emphasis because I think what the committee is going to be interested in trying to do in fashioning this law is to try to point up those areas where we can get some results, and if you could give us some ideas, or your organization could project for us some areas that you think it would be well to try to project use of funds in these areas where there is a clogging, to try to unclog it, in order to speed up some graduates and results here to try to get people out, I think this would be helpful to us.

Dr. MARTIN. As you know, in Florida we are planning to increase our class and as you look at the expenditure, most of the expenditure to increase the class will go into basic science facilities because we can operate within our clinical facility fairly well.

Mr. ROGERS. Yes, because it may be that we will want to—we may have to do something along this line if it would work and put some direction in the language of the bill so that some of these moneys would be used, and then, too, perhaps lay a foundation after we try it and see so that additional funds can be directed to help in this area.

Dr. MARTIN. I think the greatest help would be additional funds built on the expansion of the class and if you adequately finance this, you will get results.

Mr. ROGERS. If you could let us——

Dr. MARTIN. I was just getting ready to say before when we were talking that I have a sense that there is a misunderstanding basically between research and education. Money spent for research does very little to educate a medical student.

Now, in most industries, like General Motors, the research is done within the plant in General Motors. Where is health research done? There is only one place. Outside of one or two institutes, the health research is done in the medical-academic center, and you have asked us for research. I think we have produced a fabulous amount of this. I think that probably one-third of this room here would be dead today if we had not produced that. So I think we have done that.

Now, I think all you have to do is ask for students and support it as you have research and you will get students. You will get physicians.

Mr. ROGERS. Yes.

Well, this is what I think we need to point up, and bring about, because obviously the need is to do something on physicians, nurses, manpower.

Dr. MARTIN. Across the board.

Mr. ROGERS. That is right. And where so much money has gone to research, perhaps that can be moderated some.

Dr. MARTIN. Well, I hope we wouldn't diminish it because I think the forward progress, the things that we face in heart disease, cancer, and stroke are so terrifying. When you look at the fact that in this room

here there is probably at least one, and maybe two, chronic diseases per person. We have got to do something about that and your problem is that somebody has to see them to detect these diseases to do something. But many of those diseases we still don't have the answer to.

Mr. ROGERS. No. I am sure of that. But, too, I have gone through NIH pretty carefully. We did a study of about a year and a half on it and many projects are good basic science and good basic research, but I am not sure that they are directed to the goal of the result to cure hearts, cancer, stroke, for instance.

Dr. MARTIN. Let me tell you a story that I can't resist telling you though you know it from Florida. You know the screw-worm was one of our worst enemies. The screw-worm was eliminated in Florida because a man found that this fly mated once. Now, he didn't care about screw-worm at all. He found that that fly mated once, but that information was sufficient in the hands of the applied scientists to eliminate it.

When Dr. Fleming saw penicillin on a plate, his actually looking at it, and Selma Waksman on Soil Actinomyces, none of these things had a feedback but they were a body of knowledge of which we applied scientists could say, ah, and then it opened a great vista.

Mr. ROGERS. I am not deprecating basic research. Really it is essential. But what I am saying is we could be giving more guidance——

Dr. MARTIN. You put your money where you want an answer, that is right.

Mr. ROGERS. And which we don't do.

Dr. MARTIN. That is right.

Dr. ROGERS. And we could reduce some funds in that area, still do the basic research in the areas where we need it, and perhaps do something to produce manpower.

Mr. Skubitz?

Mr. SKUBITZ. Thank you, Mr. Chairman.

I am daydreaming over some of the statistics in your statement, Doctor. I notice on page 3 of your statement you state that 40,000 foreign doctors in this country are practicing medicine today.

Dr. MARTIN. That is right.

Mr. SKUBITZ. And are they graduates of the better schools in Europe or not?

Dr. BERSON. No, sir. May I respond to this? We have not included here or brought with us the detailed breakdown that a very small percent of the foreign medical graduates coming to this country in each of the last several years have come from Western Europe at all. The big percent have come from the Philippines, from India, Pakistan, Greece, Latin America.

Mr. SKUBITZ. What are the requirements of a doctor in those countries? How many years of training and how many years of internship?

Dr. BERSON. They vary a little bit but typically there is no level of education comparable to college in our country. Typically, they think, they like to think that their high schools take the individual a little longer, a little farther along than our high schools, then they enter the university where the program is from 5 to 7 years in duration, but it is mostly lectures and memory work.

Mr. SKUBITZ. You heard Congressman Cahill's suggestion this morning.

Dr. BERSON. Yes.

Mr. SKUBITZ. 308,000 doctors in this country today and 13 percent of them from foreign countries.

Dr. BERSON. That is correct.

Mr. SKUBITZ. We have about 8,000 students enrolling in the first year of medical schools yet we are admitting 8,000 doctors a year from Europe, which indicates that about half of our doctors today that are treating the public are coming from schools that are inferior to our own.

Dr. BERSON. That is correct.

Now, this takes a little modification. Typically this figure of 8,000 is from a very recent year. It has been rising each year. Typically those individuals do not stay here very long. They come on an exchange, student visa or some other arrangement which commits them to return home after a period of time which is 3 or 5 years.

Now, some of them come on permanent visas and plan to stay and a few others change their status and do stay and become citizens.

Mr. SKUBITZ. I've got news for you, Doctor. Those who come on permanent status stay and the rest of them write their Congressmen and ask the Congressman to help to get a bill through for them.

That is all, Mr. Chairman.

Dr. BERSON. Mr. Chairman, some of the questions that have gone on in the last 2 days remind me that maybe it would be useful to repeat the chronology of some of these developments. As I view the situation, there was very broad agreement reached in this country many decades ago that it was good to have a number of physicians highly trained in certain fields, and some internships and residencies were developed and have now grown to a very active endeavor.

There was also pretty broad agreement about the end of World War II that the support of medical research was a rational way to find the answers to problems of diseases that were determined to be of national importance and that the Federal Government should develop mechanisms and put funds into supporting this, and this was done with very excellent results.

There was not agreement, not broad agreement, until very recently that we really had a shortage of doctors and nurses, and so on. Now, some people thought we did, as I mentioned earlier, and many medical schools thought so, but not everybody. A lot of people didn't agree, and I recall testimony that was presented to the committees of Congress for many years urging action but not enough people agreed for Congress to take action.

It was in 1963 that the construction program was authorized and it was funded in 1964 and that is not very long ago. It was in 1965 that the present legislation calling for basic and special improvement grants was enacted; but it is only this year that the appropriations permit payment of the full amount of the basic improvement grants.

So we have a national problem that now a great many people agree is very real and very important, but it is not surprising that we haven't yet gotten many results in its solution. I think we will. I think this bill and its full implementation with funds will be tremendously helpful but I don't think that we should be surprised that a building toward which a construction grant became available 4 years ago hasn't yet produced any physicians because the chances are that they have

just admitted expanded classes into the first of those buildings rather than already having turned people out of the long pipeline.

Mr. ROGERS. Yes. I was not so much concerned on the construction as I was with the facts that showed from 1957 to 1967 in effect an increase in permanent teaching staff of some 7,000, 8,000 or 9,000, and yet only an increase of about a thousand in medical graduates.

This is what made me wonder if we need to look at our whole process of education in the medical field, how we are utilizing the talents that we have, whether we are adequately utilizing them now, because, of course, you brought out that there are Ph. D.'s, and so forth, but still the mass—the problem exists in the first 2 years, 2 to 4 years. So this still is a concern to me on that.

Now, let me ask you this, Dr. Martin.

What would it take you at your school to increase—how many are we graduating from Florida?

Dr. MARTIN. We are graduating 64 and we are asking to go to 100.

Mr. ROGERS. Wonderful.

Now, suppose we were to—what would it take you to get that up to 200 and how long would it take you, do you think, assuming you have all the money you need?

Mr. MARTIN. Let me say this. I would probably, if I had my "druthers" and somebody asked me that question, I would say let's build another medical school in the State of Florida and we now in Florida have three medical schools, two in operation and one in the mill, and my feeling is, and my public statements are, that Florida should be planning another medical school right now——

Mr. ROGERS. Yes.

Dr. MARTIN (continuing). That in Florida we rank 37th in the Nation in the number of entering students per 100,000 population, which is a very bad position to be in, and when next year, or in 1971, as soon as we can get it, if we had 300 entering students per year in Florida, we would still be behind. And so we will have to build another medical school. And if you asked me, I would say don't put 200 students in Gainesville. Build another medical school.

Mr. ROGERS. This is what I am wondering. Is it easier to expand on present facilities——

Dr. MARTIN. It is easier to expand within limits but there probably is an optimum——

Mr. ROGERS. What would you think——

Mr. MARTIN (continuing). Optimum top figure, and I don't know what that is. I think it depends a lot—we have many good reports on new ways of doing this. There was the report in Indiana that said maybe the best thing to do is build one collosal medical center with three medical schools and then use the specialty hospitals to increase their efficiency. If we could do that in Florida and have two on the campus in Gainesville, fine. I think the point made here when you look over the statistics, is that 100 is not too many, and it is far easier to get up to 100.

Mr. ROGERS. Any other questions?

Mr. SKUBITZ. Only one thing. Suppose you increase the student body to 200. If we take Mr. Cahill's figure this morning, we are only going to get 15 general practitioners out of the group. We are not solving our problem at all. It is like our police force here in Washing-

ton. We get 1,000 additional policemen but that only puts 200 on the beat. We want them out on the street.

Mr. MARTIN. I think the point I brought up earlier, and it may have been in your absence, is that we really are going to have to look at the system of care because I disagree that even money will get many men in the area that you and I want men in. We have to provide some kind of an organized system. We as physicians have to organize this so everybody gets coverage. I think that, for example, there is good evidence, and this is not a problem before your committee, but it is a problem that you face, the studies done on the practice of pediatrics show that 85 percent of the work that a pediatrician does in a day could be done by a well-trained assistant.

Now, if we had four assistants who could immediately then take care of that one pediatrician—that one pediatrician could take care of five times as many people. We have seen this with dental assistants. Yet the one thing that I think you want when your family is ill, is to have the bright, alert, perceptive man who knows when to smell trouble and point the patient in the right way, supervising this group. And I think that anything we do to put out inadequately trained independent operators is a sad mistake because you may fall into the hands of that inadequately trained, independent operator. Once the initial decision is made, then I don't care. Yes, nurses, orderlies, many people can give me the care that I want, but when I fall into that chute, I want to be sure I am going down the right chute and the initial switch was the right switch, and I think this is where it is not as simple as in many other things.

You want the best brain to make the initial decision and then the future care can go in many directions, and I think that the suggestion that many people have made of a second-rate or lower trained physician at the interface was the decision that Russia made. Russia went that way. They are doing away with it and they are pulling the feldshers back and they are saying, we want adequately trained people at the front line so that we will have to prepare this whole corps of people and then we have got to devise a system to see that in the wilds of Idaho, if you get sick, that either wheels or something gets you to that adequately trained man because whether you live or die very frequently is determined in the first 5 minutes, 10 minutes, that you come into the system.

Now, anybody can give you the tender, loving care and the administration that goes along with that, but that initial contact is important, and I want the very best to see me for the first minute.

Mr. SKUBITZ. Would you agree, Doctor, that 90 percent of the people get well if they didn't see a doctor?

Dr. MARTIN. That is right.

Mr. SKUBITZ. We are only talking about 10 percent, then.

Dr. MARTIN. That is like statistics. If you are in that 5 percent, it is mighty fatal, and I don't want to be in that 5 percent.

Mr. SKUBITZ. If you are in an area where you had the choice of no doctor or maybe a second-rate doctor, which would you prefer then?

Dr. MARTIN. I am not sure but what I wouldn't take no doctor and kind loving care because I have seen the second-rate doctors send many people who were not quite ill down a path that made them much more ill.

Mr. NELSEN. Get a good veterinarian.

Dr. MARTIN. That is right. [Laughter.]

No, I think we have got to spend more effort on the system and shore up the doctor, because I am sure that the history in dentistry shows that very clearly. If you have the experts follow us, it would show you the role of the well-trained person as an assistant to the physician. In pediatrics we are already accumulating all over the country good evidence.

This is also being accumulated in obstetrics, good evidence that if the person is working under the brains, that keeps them out of trouble. Then they can do fine but when they start operating independently, I don't want that kind of care.

Mr. SKUBITZ. You may get it under any condition.

Mr. NELSEN. Is there any possibility that too much Federal money is going into research and not enough into the general parctitioner approach? Is it possible that in view of the financial needs of many of the students in the medical schools that there should be more aid funneled into the program in which there is the greatest lack of personnel? It is apparent the greatest lack is general practitioners. Should we do more in that area and less in some other area?

Dr. MARTIN. One of the interesting things, although people point to us in medicine and say we follow the dollar in our practice, is that this is not true. The most popular specialties in medicine are not the specialties that pay the largest amount of money. Doctors follow the intellectual challenge. Internal medicine and general practice are the intellectual challenges I think in medicine. At least these are still the very popular fields—particularly internal medicine. While radiology is not a popular field, yet there is more money in radiology than there is in internal medicine. So I don't think you can get it by hanging a dollar in front of them necessarily. I think you have to again deal with the system.

I think that your committee could do medical care a fabulous amount of good by being willing to spend some money on care, experiments in the system of care, spend money to find out how can we get somebody a system of care that will take care of the person in the hills of Tennessee, or in Idaho, or in the swamps of Florida, and spend money in that kind of research. That is the kind of research that would pay off. It is the kind of research that paid off in industry and we are an industry any way you slice it. We are a cottage industry at the moment. I think we will be another kind of industry sooner or later that is a far more organized industry.

Mr. NELSEN. No more questions.

Mr. ROGERS. Actually, of course, we did write in the provisions, I am sure you know, for research in this particular field——

Dr. MARTIN. That is right.

Mr. ROGERS. On delivery of new methods.

Dr. MARTIN. Right.

Mr. ROGERS. I have had it brought to my attention in the hospitals often, in the emergency rooms, talking about care now, they run a roster of doctors to take their turns, et cetera, and often the very busy doctor pays a doctor who is not quite so busy to take his place.

Dr. MARTIN. That is right.

Mr. ROGERS. So the kind of person comes in there, as you say, who

needs the best care, the most critical time, he often doesn't get it in the community. So we still have this problem, I think.

Dr. MARTIN. This is an organizational problem and we must, on our side as practicing physicians, meet this, to organize ourselves.

Mr. ROGERS. Yes. And I don't know anybody who is really doing anything about it.

Dr. MARTIN. There is research going on in this.

Mr. ROGERS. I don't think we have taken any steps.

Dr. MARTIN. I think your action in setting aside money for experiments in care have changed the face of medical schools. It will get interest in this and get the fellow who is giving good care to go out and begin to try to find out how do we all do this.

Mr. ROGERS. Now, in getting back to, let us say, a 4-year doctor, which I think we may want to consider, our other programs should tend to buoy up this man. For instance, the heart, cancer, stroke regional medical center. Wouldn't this tend to make him put the facilities of the experts right at his fingertip in his office?

Dr. MARTIN. I think that this would help him but I think that nothing that I know of still will replace at the front echelon the well-trained mind that has the depth of perception that is necessary.

Mr. ROGERS. I would agree with you. I think it is, of course, better if we can get a specialist to see you every time for whatever you may have. This would be the best. But where this is not possible for people, then kind of a feldcher system where the man comes in, can take his cardiogram and then this method that we are trying to work out, regional medical programs which they have set up already in some of the areas, they shoot that into the medical center and it is completely diagnosed by the very top experts, and this man doesn't rely on this man nor is he expected to, and it comes back to him with a suggestion, here is this and here is the treatment this man ought to be having. He takes all of the tests, all of the laboratory tests, and they go in and they are analyzed by the experts and they come back, and this isn't the feldcher doctor that is doing this.

Dr. MARTIN. You are talking about the multiface screening clinic at Kaiser where you can go through the screening process without even having the physician see you until the end, after the data is gathered. But there is never any substitute for that well trained mind sitting down and covering the data.

Mr. ROGERS. Well, but what we are thinking of is trying to get medical assistance to people who need it and then getting the experts pulled in.

Dr. MARTIN. I am with you 100 percent on the medical assistants, but let's don't call him a doctor because maybe he doesn't even have to go 4 years.

Mr. ROGERS. Well, of course, this could be a decision made. Should he? I would think he probably should have a basis of at least four so that he——

Dr. MARTIN. The program at Duke, some of the people, you know, who are being trained as medical assistants at Duke have less than 4 years. Dr. Amos Johnson, if you have heard his story, he has a man who is a high school graduate who is his assistant, gathers this kind of data for him, but there is no substitute in the end for that well trained brain to drop you down the right chute in care, and a computer

can't do it nor can a 4-year trained brain do it. In fact, it is hard at times even for the 12-year trained brain to pick the right chute as you suggested.

Mr. SKUBITZ. Doctor, perhaps the 4-year student could take care of the 90 percent I am talking about. If he gets puzzled, he can call for the brain.

Dr. MARTIN. The big problem is you may be dead or down the wrong chute before that is called on and I still feel very strongly that you must see that talented person first, and I think if we relieve the physician of all of the nonmedical things he does, as I pointed out in pediatrics, he can increase his output five times. The dentists have shown us this very clearly, that a dentist can increase his output three times by putting in his office three well trained assistants, and he increases his productivity, and this is where we should be spending our effort and money, in addition to turning out physicians, is to turn out these people that will be sure that the physician then has his time to make that crucial decision, are you in the five, are you in the 95?

Now, once that decision is made, the process is much simpler because if you are in the 95, a hot water bottle and an aspirin and tender loving care is what you need because you will get well anyway. But if you are——

Mr. SKUBITZ. You should have been an insurance salesman.

Dr. MARTIN. If you are in that five, what happens to you in the next 2 minutes after you walk in may mean whether you survive or not.

Mr. ROGERS. Of course, what we are looking at now is what is our present system of delivery. When you go into the hospital, in an emergency room, and you don't have the best often, where there are communities where they don't have any.

Dr. MARTIN. Yes.

Mr. ROGERS. Then what is the solution here?

Dr. MARTIN. Well, I think——

Mr. ROGERS. This is what we are trying to get at.

Dr. MARTIN. I think the solution is let's don't go backward. Let's go forward and let's——

Mr. ROGERS. What is this going to take?

This is what we are trying to get at. Is it going to take building 12 new medical schools? Will it mean expanding by 50 percent present medical schools? This is what I wonder.

Dr. MARTIN. Let's don't talk only on medical schools. This is going to mean that you are going to have to support medical schools, yes, but you are going to have to support health profession education even in technical high schools.

Mr. ROGERS. I think we are doing those, aren't we?

Dr. MARTIN. In junior colleges. You have this already, that is right.

Mr. ROGERS. The allied health program was put in for this.

Dr. MARTIN. Junior colleges, technical high schools.

Mr. ROGERS. This is just beginning to start.

Dr. MARTIN. This is right, and you are going to have to support, then, the baccalaureate and masters programs and it is going to have to be across the board.

In the excellent publication on manpower recently it had the health pyramid and if you draw this—I don't have a chart.

Mr. ROGERS. We can see.

Dr. MARTIN. I will draw this, but the health pattern here is—let me draw this 8-year trained person. The total block is that large, 8- to 12-year trained people, and then you go down and under that the 7 years and 6 years and 5 years, and then we come to the 4 year, 3 year, and then—these 8-year trained people are resting on a spindle.

Now, if you look at how industry does this, industry takes their 8-year people that they support but they support them with an ever-increasing base of less well-trained people, and we haven't done this in health. So that I would agree very thoroughly with what the Congressman said, that we need people right out of technical high school trained to do things in the health manpower field.

Mr. ROGERS. Well, is this where we should put the extra emphasis, then, in building—filling out the supporting personnel?

Dr. MARTIN. It isn't either/or. You have got to work at both ends of the spectrum because you have got a fantastic—we have a fantastic problem coming towards us, an anticipated 24 percent increase in demand for services, and the services now that people need are not the old services as I pointed out before, they don't need a drop of opium. They need a heart-lung machine and they need all of these new things in addition to kind, tender, loving care, and what you have to do is to look at the whole manpower spectrum. Yes, I think we should expand the physician, we should expand him markedly, but if you expand the physician without giving him any undergirding, 5 to 10 years from now we are going to be sitting here crying the same song.

Mr. ROGERS. Now, what are we doing, and you should know this picture from the medical standpoint, what are we really doing producing allied health professional people and are they really being used by the doctors?

Dr. MARTIN. Yes. We are doing everything we can to expand it with——

Mr. ROGERS. To what extent? Could you give us some figures on this and how they are being used? I know the dental assistants have come into their own very well but what about a physician? Who does he really use in the system as an assistant?

Dr. MARTIN. He now is using a large number of these people but not nearly to the degree that we would like to see this done.

Mr. ROGERS. Could we get some examples of where they ought to be using them?

Dr. MARTIN. Yes.

Mr. ROGERS. If you could furnish us that, it would be helpful.

Dr. MARTIN. I will be glad to write you a picture of how I think they ought to be used.

(The information requested was not available at time of printing.)

Mr. ROGERS. The committee would like to have this so we can start putting some emphasis on it.

Dr. BERSON. I might add that all of these personnel who are being trained are being used. They are in great demand, and academic——

Mr. ROGERS. To the extent to which they are trained or for lesser——

Dr. BERSON. Efforts are being made to make this optimal and a good bit of progress has been made, I think a good bit more needs to be made, and virtually every academic-medical center as well as many

other institutions is making great efforts to expand and to improve its training of these many categories of workers in the health field. A lot more needs to be done in this whole area and a great many people in the universities, colleges, junior colleges, high schools, are concerned about it and are working on it.

Mr. ROGERS. And I think the junior colleges are trying to work on it. We tried to encourage the junior colleges as well to move into this area.

Dr. MARTIN. Yes.

Mr. ROGERS. Are there any other questions?

Your testimony has been most helpful. We are very grateful for you being here and if you could let us have some of this information, it would be well received.

Thank you very much.

Dr. MARTIN. Thank you.

Mr. ROGERS. There is a quorum call, so, Dr. Ostrander, if you will bear with us, we will answer the quorum call and will be back.

The committee will stand in recess.

(Short recess.)

Mr. ROGERS. The committee will be in order, please. We will proceed.

Our next witness will be Dr. F. Darl Ostrander, the president of the American Dental Association, and Mr. Reginald Sullens, the assistant secretary on educational affairs.

Doctor, it is a pleasure to have you before the committee, and Mr. Sullens, we are pleased to have you accompany him.

STATEMENT OF DR. F. DARL OSTRANDER, PRESIDENT, AMERICAN DENTAL ASSOCIATION; ACCOMPANIED BY REGINALD SULLENS, ASSISTANT SECRETARY FOR EDUCATIONAL AFFAIRS

Dr. OSTRANDER. Thank you, Mr. Chairman, and members of the committee.

I am Dr. F. Darl Ostrander of Ann Arbor, Mich. In addition to being a professor of dentistry at the University of Michigan, I have the privilege of serving this year as president of the American Dental Association. With me is Mr. Reginald H. Sullens, assistant secretary of the American Dental Association for educational matters. We are appearing on behalf of both the American Dental Association and the American Association of Dental Schools.

We are pleased to have this opportunity to testify in support of H.R. 15757, the Health Manpower Act of 1968.

The dental profession has been deeply concerned for many years about the problem of providing a supply of well-trained professional and auxiliary dental personnel that would be adequate to the needs of our people. The organized dental profession was one of the earliest supporters of the Health Professions Educational Assistance Act of 1963. We have supported, as well, the additional programs that are now brought together in the four titles of H.R. 15757.

There is no question in our mind that each of these programs was necessary at the time of its passage and remains necessary today. We are convinced that they are central to our national effort to extend and improve the health care available to our fellow citizens. We believe

that the support furnished by these measures will continue to be required for some years ahead, especially in view of the considerable number of laws passed by Congress in recent years establishing new and widely broadened health care benefits to various groups of people such as the elderly, the categorically needy, the medically indigent and young children from impoverished families.

Our paramount purpose, then, in appearing before you today is to make clear our support for H.R. 15757 and to urge favorable consideration of it by this committee. In this brief oral statement, we would like to outline the progress that has been made in recent years, the continuing need for this legislation and, finally, our view of some of the changes the measures you are considering would make in the existing programs.

Construction

Since the inception of the Health Professions Educational Assistance Act of 1963, a total of 33 applications involving construction, renovation, or rehabilitation have been received from 29 dental schools. These applications include plans for new dental schools as well as additions to or replacement of existing facilities.

As a result of only those construction grants that have been funded, it is our understanding that places for 718 additional first-year students will be created. An additional 195 places will come into being as a result of applications that have been approved but are not yet funded. There are four applications awaiting approval which, if approved and funded, will add 91 more places. And finally, 12 schools have given notice of intention to apply for grants by submitting plans that, in total, would provide 427 new first-year places. If all goes well, we can project a 1973 freshman enrollment of some 5,455 as compared with the current figures, 4,198.

It is important to note that these accomplishments and projections are being carried out on the basis of a genuine partnership with the Federal Government. The 33 applications that have been received involve a total estimated cost of $216 million, of which some $98 million would come from non-Federal sources.

In order to fulfill these projections fully, however, H.R. 15757 must be approved. The sums authorized under the existing law are not sufficient. As of February 21, 1968, approximately $77 million had been distributed by the Federal Government for dental-school construction. Applications that are approved but unfunded, deferred or pending will require an additional $50 million, and anticipated applications will call for $83 million more. As of June 10, only some $1 million was available but not obligated. Considering solely those applications that are approved but unfunded, this constitutes a deficit of nearly $28 million. If all applications now pending or anticipated are approved, the deficit would be at least $133 million. Extension of the law is, then, mandatory in our opinion.

Extrapolation of figures submitted by the administration indicates that it contemplates allocating about $170 million to dental-school construction over the 4-year life of the bill. Measured against need, we consider this to be a conservative figure.

Title I of H.R. 15757, which relates to construction, would not only extend existing law but would also amend some aspects of it. The bill would, for example, eliminate the provision that prevents the use

of Federal funds for construction of teaching facilities for continuing or advanced education.

Of even greater importance is the provision that would permit a single application for construction of facilities that, though substantially for teaching purposes, also would include research and library facilities. Certainly, this would eliminate a great deal of administrative confusion and red tape.

Indeed, these changes, and perhaps some others in the bill, are of such manifest value that we are sorry to see they will not take effect until the end of fiscal 1969. The committee might wish to consider moving the effective date forward one year.

A substantive improvement also would be made by the provision that will permit up to 66⅔ percent Federal support for renovation or rehabilitation if, in the Secretary's judgment, unusual circumstances exist. In previous years, when testifying on these matters before this committee, we have voiced concern over the possibility that some dental schools might find it necessary to close their doors unless substantial assistance could be obtained. This concern, we are sorry to say, has now become a reality in the case of St. Louis University that has felt compelled, solely for financial reasons, to discontinue its dental school. Had broader financial support been available, the university might have felt able to continue. We are presently aware of four to six additional existing schools that are actively considering the termination of their dental educational programs. One has requested the American Dental Association to form a task force to study the feasibility of continuance. It is self-evident that the retention of an existing school, its faculty and structure and student body, is at least as important to the future as is the funding of a completely new school that will require 8 or 10 years before graduating its first practitioner. The closing of any existing school would be a crippling blow to our hopes for progress.

Institutional grants

Viewed as incentive programs for the improvement of dental education, the basic and special improvement grants of the past 2 years have been remarkably successful. In 1964–65, the operating dental schools spent approximately $51 million on their teaching programs. In 1967–68, that total had mounted to $77 million, demonstrating clearly that non-Federal expenditures have risen at a rate considerably higher than the amounts distributed by the Federal Government. In fact, current non-Federal expenditures are some $14 million more than they were in 1964–65, while Federal funds have been increased some $12 million.

With the funds available as institutional grants, combined with the non-Federal effort, 45 dental schools have added new courses to the undergraduate curriculum in 28 subject areas, pertinent courses that will significantly improve the services the new dentist can offer his patients. Additionally, 28 schools have reported expenditures of significant amounts for such purposes as new educational equipment and new clinical teaching aids.

With the funds available from the improvement grants, the Nation's dental schools have been able to recruit 173 full-time equivalent faculty personnel, thus enabling them to meet the needs of a student enrollment that has increased 10 percent since 1961.

These are only beginnings, however, and much more must be done. Statistics relative to teaching personnel strikingly document this fact. In the previous academic year, there were 148 full-time positions vacant. Within the next 5 years, new construction and expansion will create 280 new full-time positions, Within this same 5-year period, some 175 full-time teachers will retire. We are thus facing today, a deficit, in terms of full-time faculty, of more than 600 teachers.

The need for extension and expansion of the institutional grant mechanism, then, lies at the heart of any plan for expanding manpower in dentistry and we support its continued existence.

The associations believe that the new formula for allocating the grants is, in general, well-conceived. Because special circumstances in a few institutions, we regard the waiver provision respecting increased enrollment as essential.

Special project grants

Much of the preceding comment regarding institutional grants applies with equal force to the special project grants authorized in the bill. The particular value of the special project grants in regard to dental education is that they can be used to meet exceptional problems. We have in mind their use as "rescue grants" to save established institutions. We are pleased, accordingly, that there is explicit authority to assist schools that are in "serious financial straits," a description that currently fits several dental schools. Again, we would call to the attention of the committee the fact that the continuation of an existing dental school is as important to public welfare as is the construction of a new school.

Scholarship and loan funds

We have always shared with this committee the conviction that the opportunity for professional health education should be available to any young man or woman with the talent to pursue it. A lack of personal financial resources should not be a determining factor. The loan and scholarship funds available in the past few years have moved us closer to realization of this goal. The need for these provisions is, if anything, greater than it has been. The cost of dental education to the student has increased as a result of higher tuition fees and living costs. The average tuition cost per year for private schools, in 1963, for example, was $1,100 and today it is $1,476. The average total expense for the 4-year dental education program, exclusive of living costs, was $7,000 in 1963 and is $9,300 today. In individual instances, this total can be as high as $15,000.

The schools have had no difficulty in identifying students needing the scholarship and loan support being offered. In 1967 Annual Survey of Dental Education Institutions shows that 94 percent of the loan and scholarship funds available, both Federal and non-Federal, were awarded. The small amount not awarded was due, almost entirely, to the existence of a few private scholarships or loans that have highly restrictive eligibility requirements.

The provision in H.R. 15757 that would permit schools to transfer up to 20 percent of either the loan or scholarship fund from one to the other is, in our view, desirable. The flexibility will permit the individual school to be that much more responsive to the particular needs of its student body.

Allied health professions

Both associations fully supported passage of the Allied Health Professions Personnel Training Act of 1966. The program it authorized is barely underway, the value of it and the need for it are abundantly clear and we strongly favor continuation along the lines contemplated by H.R. 15757.

Health research facilities

The activities authorized under the Health Research Facilities Act are directly and essentially related to the continued expansion of our supply of health practitioners and continued improvement in the education of health students. The final goal, in all instances, is to make the finest possible care readily available to our fellow citizens. If properly funded, the health research facilities law will make an essential contribution and we urge its continuance.

In conclusion, we believe that the degree to which dental schools are a matter of national concern can hardly be overstressed. There are, at present, 50 dental schools located in 27 States, the District of Columbia, and Puerto Rico. This means that 23 States have no dental school and must depend wholly upon outside resources for the education of practitioners.

The 23 States that have no dental school have a cumulative total population (1965 estimate) of nearly 31 million people. There are approximately 14,750 practitioners presently serving that population. As those practitioners retire from practice, their places must be taken by new men supplied from outside their States. And of course, if we are going to improve the dentist-patient ratio, the new supply must exceed the rate of retirement from practice.

At the present time, these 23 States have some 2,168 of their young citizens enrolled in dental schools throughout the Nation. Since State-supported schools must, understandably and of necessity, give priority to their own residents, students from States not having a dental school are accommodated, in 53 percent of the cases, by private schools. And it is these privately supported schools that seem to be suffering most heavily in the current financial crisis. As pressure increases, moreover, it is likely that States will limit further the acceptance of out-of-State students.

At present, dental schools that have no State affiliation enroll nearly 50 percent of the some 14,950 students currently studying for dental degrees.

Appended to our statement is a detailed recounting of the situation with regard to those States that have no dental school.

(The material referred to follows:)

STATES WITHOUT A DENTAL SCHOOL

State	Dentists	Population (thousands)	Students	Private	Public
Alaska	70	274	5	4	31
Arizona	664	1.611	100	66	64
Arkansas	632	1.833	87	19	58
Colorado	1,157	1.985	149	97	64
Connecticut	1,895	2.785	190	129	21
Delaware	212	501	38	17	201
Florida	2,899	5.872	437	233	24
Hawaii	469	731	62	40	32
Idaho	341	697	69	38	141
Kansas	1,039	2.269	171	24	7
Maine	453	993	35	28	47
Mississippi	643	2.211	62	13	29
Montana	378	718	51	26	15
Nevada	185	400	47	35	2
New Hampshire	309	637	27	22	35
New Mexico	322	1.037	81	48	13
North Dakota	285	640	30	15	115
Oklahoma	994	2.411	206	95	1
Rhode Island	500	905	39	27	12
South Dakota	300	707	35	18	17
Utah	625	998	203	128	75
Vermont	194	396	11	6	5
Wyoming	154	351	33	22	11
Total	14,740	30.962	2,168	1,150	1,018
Percent				53	47

Dr. OSTRANDER. This concludes our testimony, Mr. Chairman. We are grateful for this opportunity to appear in support of H.R. 15757. We would be glad now to try and answer any questions.

Mr. ROGERS. Thank you very much, Dr. Ostrander, for your statement. It will be most helpful to the committee.

What is the estimated shortage of dentists in this Nation?

Dr. OSTRANDER. It is a very difficult thing to arrive at because of a number of imponderables: For example, the degree to which preventive measures that are now known or now being developed will be applied, and I am thinking of fluoridation of public water supplies and other measures that are under research at the present time that give us quite considerable promise for better control of dental caries and periodontal disease. Our present ratio in the population is approximately one to 2,100 people.

Mr. ROGERS. One to——

Dr. OSTRANDER. One dentist to 2,100 people. I am not sure that we have, like the others who testified today, come to a numerical figure that would actually represent the ideal number of dentists. We are quite sure that there is no likelihood of reaching the level that we would consider ideal in the foreseeable future.

Do you have anything to add to that, Mr. Sullens?

Mr. SULLENS. We could supply for the record, Mr. Chairman, figures on what it would require to maintain the current ratio and I think this is roughly the best estimate that we could have at the present time.

If I recall correctly, I think the estimates that we have made suggest that we will need something in the neighborhood of 5,400 first-year students by 1975 in order to maintain this ratio. We can supply this information for the record if you would like to have it.

(Information requested follows:)

AMERICAN DENTAL ASSOCIATION STATEMENT ON NUMBER OF DENTISTS NEEDED THROUGH 1975

In order to maintain the present dentist-to-population ratio through 1975, we will need to have in that year some 111,000 professionally active dentists.

Mr. ROGERS. That would be helpful if you would.

Did you say about 15,000 practicing dentists now, or are these students? How many practicing——

Dr. OSTRANDER. Students. Enrolled in the dental schools.

Mr. ROGERS. How many practicing dentists are there?

Dr. OSTRANDER. Roughly 90,000.

Mr. SULLENS. There are about 97,500 professionally active dentists. Of these, about 7,000 are in Federal Government service, about 1,000 are engaged full time in teaching, and about 500 are employed in state and local public health programs.

Mr. ROGERS. What about the building of new dental schools? What is your feeling on the need there?

Dr. OSTRANDER. Well, I am sure that we feel that the—the association feels strongly, denistry feels strongly, that we do need more schools. I don't think there is any question about that. We have a number of them that are about to begin operation, a number of them that are on the drawing board, so to speak. And we certainly think we need them all.

Mr. ROGERS. Do you think there should be some limit on the project grants? The present limit is $400,000.

Dr. OSTRANDER. We would hate to see an arbitrary limit, I think, because of the difference in situations in different schools. Some of the schools, of course, are in dire straits, as we have already stated, and I think there should be considerable leeway in the amount of money that can be made available to them under those conditions.

Mr. ROGERS. As I understand it, you feel it is a good idea to interchange these funds in institutional grants, in the projects?

Dr. OSTRANDER. Yes.

Mr. ROGERS. Do you think it is a proper ratio? I understand they plan to devote about 40 percent of those funds to institutional grants and about 60 percent of whatever funds the Congress may authorize to project grants.

Would this be reasonable to you or not?

Dr. OSTRANDER. In my opinion it is a reasonable approach. Would you agree, Mr. Sullens?

Mr. SULLENS. I think it would be difficult to determine that without a little further study. Certainly some reasonable allocation of the special project grants and institutional grants will have to be made by Congress when the appropriations are made. To get back to your earlier question, Mr. Chairman, on the maximum authorization under special project grants we would prefer not to see such a restriction for the reasons Dr. Ostrander indicated. Applications will be considered by the advisory committee which will make decisions on the amounts of the grants in accordance with the regulations, under the law. I can understand the concern about this but there are some very special problems such as the dental schools we mentioned which are on the brink of discontinuing. These schools might well be saved by the absence of hard and fast restrictions. If there could be some excep-

tions made in these cases, I think it would certainly benefit dental education and dental schools.

Mr. ROGERS. Why is it the schools are going under? Do you think—aren't there enough students to——

Dr. OSTRANDER. It is not a question of students. There are plenty of students available but, of course, dental education is a very expensive form of education and the Universities have to subsidize the dental schools. By no means does the student fee pay the cost of dental education and, of course, these are private universities, privately funded universities which do not have access to State funds. And they are finding it increasingly difficult to support the dental schools.

Mr. ROGERS. I notice you think that rehabilitation and renovation is a proper area for expenditure.

Dr. OSTRANDER. Well, we feel, of course, if a school is already in existence and has faculty and a student body and the facilities, even though they may not be ideal facilities, that it is too bad to disband that school and then expend a considerably greater sum to establish a new school.

Mr. ROGERS. Yes.

Now, I am not sure that I understand your figures on page 4. It says if all applications now pending or anticipated or approved, the deficit would be at least $133 million. Then you say that it indicates, the figures submitted by the administration, that it contemplates allocating about $170 million to dental school construction over the 4-year life of the bill. You say measured against need we consider this to be a conservative figure.

I am not sure I understand that. It seems that $133 million is somewhat less than $170 million. Maybe——

Dr. OSTRANDER. I think Mr. Sullens has those figures.

Mr. SULLENS. I will attempt to clarify this. The $133 million figure is based upon applications which are on file with the Public Health Service or indications of intent to file applications. We have every reason to believe that there will be additional applications from institutions both for rehabilitation and for the construction of new institutions that will go far beyond this.

In addition, under the provisions of the bill which you are considering, there will be additional construction elements involved, such as the construction of continuing education facilities, libraries, and things of this kind which will increase even the current application backlog or intended backlog of $133 million well beyond, in my judgment at least, well beyond the $170 million figure.

Actually the extrapolations that we have made suggest that we are talking about something in the neighborhood of $190 million. And this figure refers to additional applications which we anticipate from universities which have indicated an interest in dental schools but which have not yet been counted.

Mr. ROGERS. I thought the $133 million included that. It said if all applications now pending or anticipated are approved.

Mr. SULLENS. I think the anticipated——

Mr. ROGERS. The deficit would be $133 million.

Mr. SULLENS. I think the anticipated here refers to formal letters of intent, either formal applications or written formal letters of intent. The anticipated schools that I am talking about are places such

as Oklahoma, for example, which is seriously considering the establishment of a dental school but has not yet filed either a letter of intent or an application for construction assistance.

Mr. ROGERS. But even still that would be some almost $40 million over your anticipated, the $170 million.

Mr. SULLENS. Over the period of 4 years; yes, sir. It could well be beyond that in my opinion.

Mr. ROGERS. It just seems to me that is a rather generous figure according to what was anticipated.

Now, on page 6 you say current non-Federal expenditures are some $14 million more than they were in 1964, while Federal funds have increased some $12 million. So there is a deficit there of $2 million.

Is that what you are telling us? Page 6.

Dr. OSTRANDER. Essentially what we are saying is that there is good non-Federal support of dental education as indicated by the fact that there is $2 million more in this category than in the Federal funds of $12 million.

Mr. SULLENS. According to the surveys we have made, Mr. Chairman, the increase in operating support of the dental schools from 1964 to 1967 was roughly $26 million, of which $14 million came from non-Federal sources and $12 million from Federal sources. I think this is the intent of that, to indicate that there is better than 50 percent of the increase that has come from non-Federal sources.

Mr. ROGERS. Now, you have had a student enrollment increase of about 10 percent since 1961?

Dr. OSTRANDER. Right.

Mr. ROGERS. Are all of these who are graduating now—could you break down for us, perhaps furnish for the record—I realize you may not have it with you—a breakdown of what happens to the graduates?

In other words, how many go into actual—the practice of dentistry and how many into research, and so forth, specialties.

Dr. OSTRANDER. I am sure that we have that data but I don't know that we have it with us.

Mr. ROGERS. I understand.

Dr. OSTRANDER. We can provide it, I am sure.

Mr. SULLENS. Roughly 10 percent of the graduates go into specialty practice, 10 or 11 percent, about 4 or 5 percent into teaching and research, but we can provide the precise figures.

(The information requested is as follows:)

AMERICAN DENTAL ASSOCIATION STATEMENT ON CAREER PLANS OF SENIOR DENTAL STUDENTS

Following are the results of a 1963 survey of the career plans of senior dental students:

[In percent]

	All seniors
Career plans:	
General practice	75.2
Specialty practice	15.5
Administration	.2
Teaching	1.9
Research	1.2
State or local health department	.4
Army, Navy, Air Force	4.8
Public Health Service or other Federal agency	.8
Total	100

Mr. ROGERS. So the vast majority actually go into active practice.

Mr. SULLENS. Yes; after military service.

Mr. ROGERS. And I would like to know if you could project for us—you may have these figures—that you could supply this for the record, what you think we need to do to keep up with the demand and to supply dental service for the American people, how many new schools, how many graduates we should be turning out, and your projection of how much could be absorbed into the existing schools and what might have to be done in building new schols, if you could let us have something like that for the record.

(The information requested follows:)

AMERICAN DENTAL ASSOCIATION STATEMENT ON PROJECTED NEEDS FOR NEW DENTAL SCHOOLS

In order to maintain the present dentist-to-population ratio through 1975, we will need to have in that year some 111,000 professionally active dentists.

The expanded rate of dental school production projected from applications in four categories (funded, approved but not funded, awaiting approval and to be submitted) will enable us to reach an approximate total of 104,000. We will thus fall short of the projected need by some 7,000.

Given an average graduating class of 100, considerably larger than is presently typical, ten additional new schools would need to open their doors immediately in order for us to redress that projected shortage of 7,000.

Mr. ROGERS. Now, I notice you say you don't think there should be a requirement for a specific number of new graduates or new students over and above what they have been doing.

Dr. OSTRANDER. I think we were thinking in terms of those schools that are in borderline status financially at the present time when we are speaking of that, and some of them very badly need help just to keep going, and therefore, I would hate to see it arbitrarily tied to an increase in enrollment without some opportunity for the Secretary to use his good judgment on that.

Mr. ROGERS. Well, I would presume that if they have a going institution and they could take additional students, he could still fund what is necessary to keep it going and increase——

Dr. OSTRANDER. Well, of course——

Mr. ROGERS. You see, he has project grants as well as his institutional grants I would think for this purpose.

Mr. SULLENS. Mr. Chairman——

Mr. ROGERS. Do you see any objection to putting it on?

Mr. SULLENS. I think the point we were trying to make here is essentially the same one that the medical representatives made earlier, that we would like to see the bill continue to include the provision for the waiver of this enrollment increase in circumstances which justify such a waiver. I think both the American Dental Association and the American Association of Dental Schools have always supported the desirability of an enrollment increase and in the case of dental schools as well as medical schools, as you heard earlier, this has been far above the minimum requirement. In most instances I think it has run in the neighborhood of 20 to 25 rather than the minimum of five. But we would like to see this provision included where there are circumstances that justify a waiver of this particular requirement, both in terms of construction and in terms of institutional grants.

Mr. ROGERS. Well, how do you tell? How does the Secretary tell? Most of the schools, you say, aren't making money.

Mr. SULLENS. Well, I think in the case, for example, of a private institution where there is a current matching requirement of 1 to 1, and it could be 2 to 1 under the provisions of the new bill, that it might not in some instances be possible for that institution, particularly in the case of the private institution, to be able to raise the matching funds, and if this were the case, it is a question, then, as has happened in the case of one institution, St. Louis University as we mentioned, and as might well happen in the case of two or three others, of losing a dental school, which means we then face the necessity of building a new one at a cost of $10 to $15 million.

Mr. ROGERS. Is there any other school attached to—where is it, St. Louis?

Mr. SULLENS. St. Louis University is the dental school.

Mr. ROGERS. I presume they have other medical—do you have a medical school?

Mr. SULLENS. Yes. Medicine and pharmacy.

Mr. ROGERS. I wonder if their medical school is in the same financial situation. Do you happen to know?

Mr. SULLENS. I don't happen to know, sir.

I know the university, as in the case of many private universities, has some severe financial problems, but I don't know the situation of the medical school.

Mr. ROGERS. So it is a question where they want to put the priority, I presume.

Mr. SULLENS. It is certainly a part of it.

Mr. ROGERS. Thank you very much for your testimony. It has been most helpful and if you could submit for the record those items that we have asked for, the committee would appreciate it.

Dr. OSTRANDER. Thank you very much, Mr. Chairman. We appreciate very much the opportunity of testifying, and I am sure that the data that you wish will be submitted.

Mr. ROGERS. Thank you, Dr. Ostrander and Mr. Sullens.

The committee will stand adjourned until 10 o'clock tomorrow morning.

(Whereupon, at 4 p.m., the committee was adjourned, to reconvene at 10 a.m., Thursday, June 13, 1968.)

HEALTH MANPOWER ACT OF 1968

THURSDAY, JUNE 13, 1968

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 2322, Rayburn House Office Building, Hon. John Jarman (chairman of the subcommittee) presiding.

Mr. JARMAN. The subcommittee will be in order as we continue the public hearings on H.R. 15757, introduced by Chairman Staggers, to amend the Public Health Service Act to extend and improve the programs relating to the training of nursing and other health professions and allied health professions personnel, the programs relating to student aid for such personnel, and the program relating to health research facilities, and for other purposes.

Our first witness this morning is Dr. Evelyn Cohelan, professor of psychiatric nursing and head of the Department of Psychiatric Nursing at the University of Maryland, who is appearing for the American Nurses Association.

Mr. ROGERS. Mr. Chairman, may I say and join with the chairman in welcoming the ladies here and we are delighted to see Dr. Cohelan, the wife of our very distinguished colleague from California. We know very much of your fine work and interest. Of course, Miss Thompson, too, has done such an outstanding job.

Mr. JARMAN. The committee has worked and we individually have worked closely with your distinguished husband on many legislative matters and we are very pleased to have you and your associates here with us this morning. Will you proceed?

STATEMENT OF DR. EVELYN COHELAN, CHAIRMAN, COMMITTEE ON LEGISLATION, AMERICAN NURSES ASSOCIATION; ACCOMPANIED BY JULIA THOMPSON, DIRECTOR, WASHINGTON OFFICE; AND HELEN CONNORS, NEW YORK

Dr. COHELAN. Thank you. I have Miss Julia Thompson of the Washington office of the ANA with me and Helen Connors from the New York office of the ANA.

I am also third vice president and chairman of the Committee on Legislation of the American Nurses Association, which is the professional organization of over 200,000 registered nurses in 55 constituent associations, the District of Columbia, Puerto Rico, the Virgin Islands, and the Canal Zone. We admitted Guam at the last ANA convention in Dallas just last month.

The association's ultimate purpose is to secure for the people of this country the best possible nursing care. One commitment is to elevate the standards of nursing education to insure nursing practice of high quality.

I welcome this opportunity to appear here today on behalf of the American Nurses Association to present its views on H.R. 15757, the Health Manpower Act of 1968. We support assistance to the various schools preparing health personnel in the bill. However, our special concern is with title II, nurse training, which would extend for 4 more years the Nurse Training Act of 1964.

CONSTRUCTION GRANTS

We urge the continuation of the construction grant program for 4 more years. Since the program began in fiscal year 1966, 80 schools have received grants. Much of the construction is in the beginning stage but close to 2,700 new first-year places will result. Many of the grants were awarded for replacement of obsolete facilities and for minor expansion. These have permitted the maintenance of 12,000 student places that otherwise might have been lost.

We are very concerned that although the Congress authorized $25 million for construction of facilities in fiscal year 1969, the administration request is for only $8 million.

The Program Review Committee on the Nurse Training Act noted that many programs are still located in makeshift quarters such as barracks, dormitories, and basement areas that are unsafe and poorly ventilated. For example, one nearby university nursing program has 11 offices available for a faculty of something over 70, and I speak with real feeling about this. This is the University of Maryland, the school from which I come, and we have, counting all of the students in the school, something like 1,100 students. We had the plans and the money for the new school building and then it was caught in this last freeze. We are hoping that it will be unfrozen and we will then have enough offices for everybody. In the meantime, faculty are using the trunks of their cars to carry teaching materials.

Until such facilities are replaced, schools cannot expand enrollments. Students are inclined to select attractive schools and faculty choose schools with modern equipment that permits more effective teaching. It gives us a bit of a start to hire a new faculty member and when she says, "Where is my office," you say, "There is not any."

We support the inclusion in the construction project of space for advanced training activities, such as continuing education, that are not degree oriented. Continuing education is a great imperative in this time of rapid change in medical and nursing practice. There is a heavy burden on the individual practitioner to keep current and on the employers of nurses to develop the most economical and effective means of bringing and keeping nursing service personnel up to date. Improved utilization of scarce health manpower cannot be accomplished without changes in traditional functions and organizational patterns and change will only occur through new learning. This is where we need continuing education. Research and innovation in the delivery of nursing services must be supported and implemented through comprehensive programs of job orientation and inservice education. In addition to increasing the future supply of nurse man-

power, equal attention has to be given to improving the knowledge, skills, and abilities of our present nurse manpower pool.

SPECIAL PROJECT GRANTS

We support the continuation of the special project grants to assist schools to strengthen, improve, and expand nursing education. One hundred and sixteeen grants have been awared to 95 schools with an additional 143 programs sharing in the projects with benefits reaching over 33,000 students.

H.R. 15757 would expand the present program to permit any public or nonprofit private agency, organization, or institution to apply for a grant that would contribute to the strengthening and improvement of nursing education. We urge this committee to approve this expansion of the project grant program.

INSTITUTIONAL GRANTS

The American Nurses Association endorses the principle of basic support grants to schools of nursing. It is increasingly difficult for institutions to meet the costs of education since tuition in many institutions provides only a quarter of the cost of the education.

We wish to point out that the baccalaureate programs have the higher average enrollment since four or five classes of students are using the facilities simultaneously compared to two and three classes in the associate and diploma programs, respectively. We believe, therefore, that additional support should be given to the baccalaureate programs because of the strain put on the faculty and other institutional resources to support these large enrollments. We recommend an institutional grant of $25,000 for these baccalaureate programs.

A major priority relates to program support for graduate education. There is great need for persons perpared at the graduate level in order to teach, to administer nursing care of patients, and to give leadership generally within the field. Graduate education is more expensive than is undergraduate education and certainly far more expensive than diploma and associate degree nursing education. We hope that the Federal legislation will give cognizance to the burdens placed upon institutions of higher learning which are being asked to prepare more and more leadership personnel for the field of nursing. They must have program support if they bear this great responsibility. H.R. 15757 proposes school support in the amount of $15,000. Grants to graduate programs should be markedly improved over that figure. Since there are fewer than 50 schools conducting graduate programs we suggest that each graduate program should have a minimum of $50,000 annually for program support. Again, I can speak with some feeling about the need for additional funds in graduate programs. I am chairman of the graduate program at the University of Maryland and we have approximately 80 full-time graduate students each year in nursing, and then we also cooperate with the Southern Regional Education Board. The need is so acute in the southern region to prepare faculty for junior colleges as well as the other programs, but the junior colleges seem to feel the pinch more than the others because they are expanding so rapidly. We have modified our curriculum and this summer we are offering courses for faculty who are teaching in

junior colleges and the second priority is given to those teaching in baccalaureate programs. The modified curriculum is on a trial basis and we hoped that we might get eight students who would come during the summer. We have 11 now—the course does not open until the 8th of July—and we have many requests from other parts of the country.

The University of Florida has been involved in trying to offer summer courses at the graduate level so that faculty who cannot be released for full-time study during the rest of the year can come during the summer and eventually earn a masters degree.

So I feel very strongly that until we place graduate education at the top of the list, we are not going to be able to supply the needed faculty for the other schools.

TRAINEESHIPS FOR ADVANCED TRAINING OF PROFESSIONAL NURSES

The professional nurse traineeship program was first established under the Health Amendments Act of 1956 and provided financial assistance to nurses preparing for positions in teaching, supervision, and administration. It was extended in 1959 and again in 1964. During the years 1957–66, 16,162 nurses were awarded traineeships. Although this program has increased the number of nurses with graduate degrees, the need is still great. But there really is no substitute for being able to offer a traineeship because the nurse is much more likely then to come back to school.

The responsibilities of those who serve in positions in teaching, supervision, and administration in nursing and as clinical nursing specialists are such as to require advanced preparation at least at the master's level. Sound programs of nursing education cannot be developed without qualified teachers. Quality nursing service cannot be provided for the people of this country unless we have sufficient numbers of well prepared supervisors and administrators.

In all nursing education programs, as in all programs of higher education, the faculty should hold graduate degrees. Therefore, it is startling to consider the preparation of those presently teaching in all types of schools of nursing. Only 42.8 percent of current full-time faculty members in senior and junior colleges, and in hospital schools have graduate degress. Eighty-six percent of the people teaching in 4-year collegiate schools have graduate degrees, 69 percent of them teaching in junior colleges have graduate degress, 18 percent in hospital schools have graduate degrees, and 11 percent in the practical nursing schools.

There are some additional figures that have been supplied for the record in the accompanying table. I will not take the time to read all of them.

(The table referred to follows:)

	Graduate degree	Baccalaureate	No degree
	Percent	Percent	Percent
Collegiate schools	86.8	12.9	0.3
Junior colleges	69.7	28.4	1.9
Hospital schools	18.8	55.6	25.6
Practical nursing schools	11.1	44.3	44.6

Dr. COHELAN. Obviously it is impossible for schools to prepare nurses to give the quality of nursing care society needs and expects today when so many who mold future practitioners have only basic nursing preparation.

In addition to our concerns about the quality of faculty in schools of nursing, we face the acute problem of shortage of personnel to fill these positions. There are 1,744 vacancies in full-time budgeted faculty positions in all schools preparing nurse practitioners. We urge the extension of the traineeship program so that preparation of nurse teachers can continue without interruption.

The quality of nursing practice is improved or deterred by the organizational framework in which the nurse practitioner functions. Effective nursing service administration and supervision fosters a safe, efficient, and therapeutic level of nursing care. Such administration and supervision is dependent upon familiarity with a body of knowledge based on sound principles that can be applied in nursing service situations. To be expert requires the thorough study that is possible only at the graduate level. Basic programs prepare practitioners for beginning positions in nursing and not for administration. At this time, the educational attainment of persons holding positions as supervisors and administrators in nursing services has by no means reached the level the profession deems desirable as will be seen from the following data collected for all hospitals and related institutions. There are only 11.9 percent of the directors and assistant directors who hold graduate degrees and 2.6 percent of the supervisors who hold graduate degrees.

(The table referred to follows:)

	Graduate degree	Baccalaureate	No degree
	Percent	Percent	Percent
Directors and assistant directors	11.9	30.4	57.7
Supervisors	2.6	18.7	78.7

Dr. COHELAN. If we are to raise the level of education of nurses functioning in the critical areas of supervision and administration and fill the vacancies which still persist, it is imperatve that the Congress continue the professional nurse traineeship program it initiated in 1956. As far as the problem of having adequately prepared nurses in nursing service situations, not only is it a problem for the patient if these people are not adequately prepared, but it creates a real problem as we are trying to educate the practitioner, because we would hope that she would see the best kind of nursing care; and when there is not a role model available to the person learning to be a nurse, it present a real problem. A number of faculties across the country are concerned with how we can more effectively work with people in nursing service to improve the quality of care.

In 1964, when the traineeship program was extended, it provided for expansion to include financial grants for assistance to nurses seeking preparation as clinical specialists. The nurse clinician is a master practitioner. She may, for example, be a nurse midwife, a psychiatric nurse, the expert in cardiopulmonary nursing, or in the care of the chronically ill. To become such a practitioner in so broad a field as

nursing requires concentrated study at the graduate level in the selected area. Once prepared, this nurse uses her specialist's competence in providing direct care to patients needing expert nursing. She collaborates with the physician in planning and providing patient care, and works with, and teaches, other nursing personnel during the provision of nursing care and treatment. She may teach in schools of nursing and in programs of continuous education. She conducts and participates in clinical research. Highly qualified expert nurses to practice in specialized areas of nursing are essential to improvement in the quality of care.

To pursue a doctoral program in nursing requires a large expenditure of money for tuition, books, and supplies, and maintenance over at least a 3-year period. Nurses engaged in doctoral work have been previously employed, hence have loss of income during the 3 years of study. As a typical example: Tuition for 2 academic years is likely to be $3,800; books and supplies for 3 years, $600; living expenses for 3 years—2 academic years and 1 year of work on dissertation—$9,000; total, $13,400. Loss income for 3 years when the nurse is not gainfully employed, is likely to be $26,000, so it is really is a high-cost operation.

We support the recommendation of the Program Review Committee of the Nurse Training Act that administrative policy regarding duration of support under the traineeship program be changed to permit completion of program requirements.

We would also like to call your attention to the fact that over 8,000 registered nurses, graduates of associate degree and diploma programs, are studying for a baccalaureate degree. In 1966, 4,009 were enrolled on a part-time basis. Part-time study is uneconomical in terms of time, money, and effort but this practice persists because on their salaries, nurses cannot save enough to undertake full-time study and there is very little financial assistance available to them. Before they earn their baccalaureate degree, many will have spent 6 or 7 years in part-time study. The American Nurses Association agrees with the recommendation of the Program Review Committee that traineeships for graduates of diploma and associate degree programs be provided for up to 2 years of full-time study toward a baccalaureate degree. This would help registered nurses secure more rapidly the level of education their positions call for today and enhance the quality of patient care. I cannot cite figures across the country, but again, in our own graduate program roughly half of the full-time students have come from diploma and associate degree programs, and the other half have come from baccalaureate programs. This means, then, that for those who have come from diploma and junior college programs, they have had for the most part, to spend several years earning a baccalaureate degree. The primary problem is that they have had to go to school part time, and this is long, slow way of doing it and we would get them through the master's program much faster if we could speed them in.

STUDENTS LOANS

We support the extension of the student loan program. H.R. 15757 would increase the maximum amount a student may borrow to $1,500 in any academic year. Because the cost of nursing education in senior colleges and universities is, for the most part, higher than in junior

colleges and hospital schools, we recommend that students who are candidates for baccalaureate or higher degrees be permitted to borrow up to $2,500 in any academic year.

H.R. 15757 continues the foregiveness provision in the present Nurse Training Act and adds a total forgiveness provision at the rate of 15 percent per year for the nurse who is employed in a public hospital in an area with substantial population and a substantial shortage of nurses in such hospitals. Public hospitals in large municipalities have experienced great difficulty in filling budgeted positions. This forgiveness provision is one means to assist them in recruitment and rentention of staff.

SCHOLARSHIP GRANT TO SCHOOLS OF NURSING

We urge approval of the provision which would authorize a new 4-year program of scholarship aid to students of nursing. Members of this committee approved, in 1966, an amendment to the Nurse Training Act to provide the nursing educational opportunity grants and for this we have been most appreciative.

As you know, very little public or private financial assistance has been available to nursing students in basic programs. We believe a special effort is required to attract talented high school graduates into baccalaureate programs in nursing. Advances in medicine and in technology, the explosion of knowledge in related fields, dictates that nurses master an increasing body of knowledge and also develop the intellectual ability to make the necessary application in nursing care.

Families are often unable to meet the full cost of collegiate nursing education. Repeatedly we hear from deans of collegiate schools and from nursing students of the need for scholarship assistance.

From a school located in one of the largest of our cities we have this 5-year example of the need its students have had for financial assistance in order to complete their education. In the 1963 class, eight students out of 24 worked full time; 1964, 11 out of 45; 1965, 11 of 29; 1966, 15 of 28; 1967, 16 of 32. A nursing program is difficult. Add to this full-time work and you must be impressed with the commitment of these students to a career in nursing.

DEFINITION OF ACCREDITATION

Section 231 of H.R. 15757 proposes a change in the definition of accreditation. The authority of the Commissioner of Education to directly accredit programs of nursing education is deleted, which we approve. However, a State agency would be specifically named as a body of the Commissioner could approve for purposes of accrediting nursing programs. We have grave concern about this proposal. We ask these questions: What State agency? Will a State agency accept federally established criteria?

The American Nurses Association believes that certain safeguards are essential to insure the best use of the Federal funds that H.R. 15757 would make available. It is most important that only nursing programs accredited by—or having reasonable accurance of accreditation by recognized national accrediting body be eligible to apply for funds under the act.

All schools of nursing must have State approval. In the vast majority of States, it is the State board of nursing which is charged with this legal responsibility. These boards of nursing have supported the development of a strong national voluntary accrediting program because attainment of such accreditation indicates a program has achieved more than the minimum standards established by State law.

Potential students and faculty are attracted to schools which achieve national accreditation because they believe higher standards will produce more competent practitioners to serve the people of this country.

As of October 1967, 75 percent of students were enrolled in nationally accredited programs. These then are the programs in the best position to ease the shortage of registered nurses.

Of the 25 percent of students in nonaccredited programs, many are in the associate degree programs conducted in junior or community colleges. These have not sought national accreditation to the same extent as the other nursing programs. However, 42 are now fully accredited as compared with six in 1965. Of the remaining 239 programs, 94 are eligible to apply for Federal funds, having achieved reasonable assurance of acreditation or its equivalent.

We are confident that directors, faculty, and students in several associate degree programs look forward to full accreditation.

One community college program could not apply for accreditation because of an administrative edict, that was based on philosophical opposition to specialized accreditation and to its cost. The students in this program prepared a brief and appeared before the board of education to argue for accreditation. In addition, they raised the money to pay for accreditation. Their activities convinced the board of education and accreditation of this program is now underway.

Had nurses been satisfied that legal standards were sufficient to insure not only a safe practitioner but a highly competent one, there would have been no movement toward national voluntary accreditation. But the need for standards above and beyond those required by law was recognized by the profession itself.

The ANA urges, therefore, that you not add the clause "or by a State agency" to the language of the act.

I thank the committee for this opportunity to appear and present the views of the American Nurses Association.

Mr. JARMAN. Dr. Cohelan, we appreciate receiving this comprehensive statement and commentary on various provisions of that part of this bill.

What is the shortage of nurses at the present time? Can you estimate?

Dr. COHELAN. When you start playing the numbers game, it gets to be a little difficult. I think maybe Miss Thompson has some figures.

Miss THOMPSON. The estimated number of nurses according to the formula that is used at the present time, 300 nurses per 100,000 population, would indicate that by 1970 we should have 850,000 nurses in actual practice. We have at the present time approximately 613,000 employed actively. About a fourth of these are in part-time work.

We have approximately 910,000 registered nurses who hold current licenses, who are eligible to practice, and many of these come in and out of the work force—I mean participate in active work.

We have had almost 7,000 nurses return to work under the cooperative program we have had with the manpower development and training program and the Bureau of Health manpower, DHEW through the refresher courses conducted within the last 2 years.

Mr. JARMAN. Is there anything additional to the formal testimony this morning that you can suggest as to how we can meet that shortage in the country?

Dr. COHELAN. Well, I was going to add that the way I measure the shortage in nursing is by the number of requests we get for graduates of our masters program and I have an enormous bulletin board outside my office in the hall and we post all of these heartrending pleas for nurses with a master's degree. There must be at least 25 or 30 requests for every student that we graduate. So that we are painfully aware of a terrific shortage at that level. And when it comes to shortages at the bedside, we all know wings of hospitals that are prepared and then not opened because of the shortage.

Mr. JARMAN. Thank you.

Mr. Rogers?

Mr. ROGERS. Thank you.

Mrs. Cohelan, your statement I thought was excellent and gave us some very helpful information. In carrying out a medicare program and taking care of senior citizens—where we are going to have to move very heavily, I think, in the nursing homes—is it necessary, do you feel, to have baccalaureate degree nurses there, staffed throughout, or what?

Dr. COHELAN. The baccalaureate prepared nurse should be in a position to make judgments about——

Mr. ROGERS. Supervising.

Dr. COHELAN. Who can best care for the patients in those areas and I do not think that we have to have every bedside nurse prepared at the baccalaureate level.

Mr. ROGERS. That is what I meant.

Dr. COHELAN. But my concern is that there be enough people adequately prepared to make decisions about who can best provide the care for these people.

Mr. ROGERS. Yes. I would share that feeling, too. I think what we have got to do is try to see what can be done to close this gap as quickly as possible because I think we are going to find the gap is going to increase.

Dr. COHELAN. Yes.

Mr. ROGERS. Rather than decrease. Now, what happens to your graduates or the graduates throughout the schools of nursing? Do we know—do most of them practice? Do some of them—how many teach? What percentage? Has any study been done on this?

Dr. COHELAN. Yes. As far as our own institution is concerned, I do not have those figures. A few of them, being women, will drop out for pregnancy and family responsibilities; but most of them who are prepared either at—well, primarily at the master's level, are likely to return. Many of the people coming into our masters program come in with three or four children. I got all of my advanced preparation when

the four children were small. I had the benefit of Federal funds for this preparation. But there were no Federal funds available for doctoral study; so that when I was studying for the doctorate, I was on private funds made available through the National League for Nursing. These funds account for some of the pioneers in the field, but this is just a drop in the bucket, and it is obvious that private funds cannot do all that is needed. So that we do need Federal funds so that there will be many more people studying at the doctoral level. As a matter of fact, at this moment and for the past year we have been looking for somebody to take half of my assignment. I will give up either one of them, head of the department or chairman of the graduate program—but we have looked high and low and there are not people with this kind of preparation; so that I am carrying on with both of these assignments. So, I have a very personal vested interest in seeing that more money is made available so that more people are prepared at this level.

Mr. ROGERS. Now, what percentage actually practice, would you say? Have any studies been made? Perhaps Miss Thompson may have a figure.

Miss THOMPSON. I have some figures here that would indicate the variable employment practices of nurses because the median age of employed nurses is 39.6. Many of the young women leave and have their families and then return to nursing. In a study that was done several years ago in 13 States, it was shown that the persons with the highest amount or the greatest amount of education have the greatest commitment and were more apt to return to active practice than those who had lesser preparation.

Mr. ROGERS. Now, should we require each of the schools of nursing to produce more students, accept more students if they receive Federal funds? What would be your feeling on that?

Dr. COHELAN. Well, if we are going to prepare more nurses, it seems to me we need to do two things. We need to encourage the development of new schools, if they can get the faculty and will be a strong school; and then we also need to increase the enrollment in the existing schools.

Mr. ROGERS. So, you would favor some provision that would encourage or perhaps require an increase, if they receive Federal supporting funds?

Dr. COHELAN. I would think so; yes.

Mr. ROGERS. I would agree with that.

Now, could you let us know, perhaps the organization could let us know, some figure that you think would be reasonable to require schools to increase their student bodies by; and also if you could let us have your thinking on how many new schools of nursing we really need to help close this gap. And, if it can be done, how many in the associate degree, the diploma, as well as the baccalaureate.

(The information requested follows:)

AMERICAN NURSES' ASSOCIATION, INC.,
New York, N.Y., June 19, 1968.

Representative JOHN JARMAN,
Chairman, Subcommittee on Public Health and Welfare,
Interstate and Foreign Commerce Committee,
Rayburn House Office Building, Washington, D.C.

DEAR MR. JARMAN: On June 13, during the hearings on H.R. 15757, Representative Paul Rogers requested that the American Nurses' Association submit

for the record projections for 1975 for the number of nurses needed and the number and kinds of programs needed to prepare the estimated number of nurses.

The data on projections of need for nurses are:

	Master's degree or higher	Baccalaureate degree	Diploma and associate degree	Total
1967 supply	16,000	67,600	556,400	640,000
1970 need	100,000	200,000	550,000	850,000
1975 need	120,000	280,000	600,000	1,000,000

Note: These estimates are based on an average figure of 300 nurses per 100,000 population.

Because of varying class sizes and the length of time it takes to complete the different programs which prepare students to be registered nurses, it is difficult to translate needs for additional nurse manpower into needs for additional nursing education programs.

It has been estimated, however, that approximately 49,000 new places for first-year students will be needed to meet the goal of 81,000 graduates in 1974. Increases in first-year places can be accomplished, at least partly, through enlarging existing schools. This course would appear to take best advantage of the employed faculty, library and health care services, for example, which already exist in those institutions.

The above data was obtained from the *Nurse Training Act of 1964, Program Review Report*, PHS Publication #1740, December 1967, pp. 13, 14, 33. Should you wish any further information we will be pleased to secure it for you.

Sincerely yours,

JULIA C. THOMPSON,
Director, Washington Office.

Miss THOMPSON. I would like to add here that within the last year we have increased the number of schools by 72; 70 of these are associate degree programs which, I think, is a remarkable number for this short period of time.

Mr. ROGERS. In Florida I know they have done very well. They have done well on their exams. They rate very well.

Miss THOMPSON. May I also add that about 38 of the State nurses associations, through some cooperative effort, are conducting resource studies and plans for meeting the nursing education needs of the State, to produce the nurses needed in their State. They have decided how many nurses they need in their area, what kind of educational facilities they need to prepare the kinds of nurses that they need and how many with certain levels of skills. Some of these States are much farther ahead than others in their plans.

Mr. ROGERS. Yes. Have diploma schools been decreasing or increasing?

Miss THOMPSON. They have been decreasing, but they have been phasing into other programs, generally.

Mr. ROGERS. Working into associate degree programs?

Miss THOMPSON. Or baccalaureate degree programs.

Mr. ROGERS. Or a combination.

What about in the armed services? Do you know if there is a shortage in the armed services of nurses or do they draft them so that—is there any call on your organization to supply nurses?

Miss THOMPSON. There is no selection service for female nurses but men nurses are subject to the draft under the Selective Service System for the Medical Service Corps. The American Nurses Association has gone on record since the convention in Dallas saying that they would

be interested in studying laws for selective service for nurses if such an occasion should arise. At the present time, there is a shortage but we have in our active nurse supply only about 26 percent who are single and the armed services generally require mobile single people, so it does limit the number from whom they can recruit.

Mr. ROGERS. Now, as I understand it, too, they do not commission in anything except the baccalaureate nurse group, do they?

Miss THOMPSON. At the present time, they are still commissioning persons from the diploma program which have the same number of years as a 4-year baccalaureate. I mean, they equate calendar year with academic year in order to secure a sufficient number of nurses.

Mr. ROGERS. In other words, they would have to have a 3-year basic curriculum?

Miss THOMPSON. Yes.

Mr. ROGERS. Or 4-year baccalaureate.

Miss THOMPSON. Yes.

Mr. ROGERS. Should this policy be reviewed, do you think, now that we are beginning to have the associate degree nurses come out? Is there any reason why they connot perform services?

Miss THOMPSON. This has been considered by the armed services. At one time the Army Nurse Corps did admit the 2-year graduate as a warrant officer. This did not prove to be very popular and there were very few applicants for the warrant officer status.

Mr. ROGERS. Yes, but I was thinking of the commission status as such.

Miss THOMPSON. The laws which provide for commissions in the services requires that a person have a baccalaureate degree and this is one of the reasons why the 2-year graduate cannot be considered for a commission.

Mr. ROGERS. On the 3-year curriculum I think they do that, do they not?

Miss THOMPSON. Yes. One of the reasons why it precludes the 2-year graduate. The Veterans' Administration does use the 2-year graduate.

Mr. ROGERS. I would hope the armed services would review their situation. We may need to have them come in and talk about this because I think they are not being practical. I am sure they could use them in many places, I would think, and they are closing the door on this. I have a case of a young lady that wanted to get in. She cannot. She is qualified, she has passed State boards and everything.

Dr. COHELAN. There is a special program that the Army has put together and the University of Maryland cooperates with them, and we just had commencement and graduated, in effect, an extra 100 nurses who are now going to be commissioned in the Army and the last 2 years they have been taught by faculty under our faculty supervision, but they have had all of their clinical experience at Walter Reed. And it was the feeeling of those in the Army that they needed an increment of at least 100 baccalaureate prepared nurses and their assignments, I am sure, will reflect this kind of preparation. I would think there might be many other ways that nurses could be used.

Mr. ROGERS. Let me ask on your summer courses now, which I think is excellent, where you bring the nurse in to give her increased knowledge. How many summers would it take now, say, to obtain a masters degree?

Dr. COHELAN. Well, this is just, you know, a trial balloon and the only thing I really have control over is psychiatric nursing and there is a terrific shortage there, so we have limited it to psychiatric nursing. We will teach the two clinical courses the first summer, two more clinical courses, working with patients, and so on, the following summer, and then as it stands now, the student would come for two other semesters during the year whenever she can arrange it. If the demand is as great as it appears to be, we may have to modify further and offer the other courses so that all of the work can be completed in the summer.

Mr. ROGERS. Well, I would think this perhaps would be a good approach and maybe we should try to encourage this throughout the nation.

Dr. COHELAN. The University of Florida was very forward looking but one of their problems was that they required the graduate record examination which may in my opinion, test a different kind of ability than a nurse coming into a masters program brings. At Maryland and at many other institutions, we do not have that, so that this may account for some of the problems. You know, it depends on the university graduate school requirements. But they were the first ones who thought of it and I have heard from them recently how many they are getting but we have all been hoping and praying that this, too, would catch on, and if it does, these both will be demonstration projects and I would hope that across the Nation the other 50 graduate programs would do a similar thing. I hope we can expand it into other clinical areas, not just in psychiatry.

Mr. ROGERS. Is there any reason why your association could not advise State agencies on accrediting? In other words, have some representative work out some arrangement were a representative confers with a State agency?

Dr. COHELAN. I would rather not speak to that myself. The National League for Nursing is the accrediting body and they are going to give testimony. Is there anything you want to say, Miss Thompson?

Miss THOMPSON. No.

Mr. ROGERS. Thank you.

Mr. JARMAN. Thank you very much for being with us and helping us make the record.

Dr. COHELAN. Thank you. It has been a real pleasure.

Mr. JARMAN. Our next witness is Mr. Lewis Blair, St. Luke's Methodist Hospital, Cedar Rapids, Iowa, appearing for the American Hospital Association.

STATEMENT OF LEWIS BLAIR, REPRESENTING THE AMERICAN HOSPITAL ASSOCIATION; ACCOMPANIED BY KENNETH WILLIAMSON, ASSOCIATE DIRECTOR

Mr. BLAIR. Mr. Chairman, I am Lewis B. Blair, superintendent of St. Luke's Methodist Hospital, Cedar Rapids, Iowa. I appear in behalf of the American Hospital Association. Accompanying me is Kenneth Williamson, associate director of the association and Director of its Washington Service Bureau.

Mr. ROGERS. Mr. Chairman, may I join with you in saying we are delighted to see you gentlemen here. Certainly, your representative here in Washington does a very excellent job, as I am sure you are aware, for the association in keeping your views before the Congress very effectively.

Mr. WILLIAMSON. Thank you, Mr. Rogers.

Mr. BLAIR. H.R. 15757 is a bill to amend the Public Health Service Act to extend and improve the programs relating to the training of nursing and other health professions and allied health professions personnel, the program relating to health research facilities, and for other purposes.

We strongly support the purposes of this legislation and highly commend the Congress for its recognition of the essentiality of the Federal Government participating substantially in programs to alleviate the severe shortage of health manpower. As the committee is well aware, the Federal Government is sponsoring a number of programs which guarantee health services to various groups of the population. The result is an ever-increasing demand for health trained personnel. The continued advances in medical care and improved procedures within hospitals depend upon increased numbers of highly skilled personnel for their application to the public.

We are particularly pleased that H.R. 15757 proposes bringing together several existing programs. These are programs affecting medical schools, dental schools and others; programs involving schools in training of nurses together with various forms of assistance provided students in all of these schools as well as the assistance provided the various allied health professions. This should result in greater coordination and improved administration overall of the programs.

We cannot stress too strongly the magnitude of the need for greater numbers of highly skilled health personnel and the critical nature of the demand in terms of the overall health of the Nation. We believe the sums proposed for carrying out the programs are modest in relation to the needs and we hope the Congress will recognize this great need and authorize such sums as are found to be necessary to fully fund the programs.

TITLE I—HEALTH PROFESSIONS TRAINING

This section proposes to continue the program providing for the construction of needed teaching facilities and provides various forms of assistance to students in several of the health professions. The bill proposes certain changes which should improve the administration of the program and enhance its potential contribution toward meeting the very pressing need for greatly increased numbers of physicians, dentists and others. We fully support this section of the bill and believe it to be a vitally needed program.

TITLE II—NURSE TRAINING

As the members of the committee are undoubtedly aware, the American Hospital Association and the hospitals of the Nation, have voiced strong support for H.R. 13096, introduced by Congressman Rooney. Fifty-nine additional members either cosponsored Congressman Rooney's bill or introduced similar bills. Many of these Congress-

men are members of this committee. We believe these bills go far in recognizing the essential role of the diploma schools of nursing and the fact that the nursing needs of the Nation will not be met except by the continued operation of these hospital diploma schools of nursing. They further recognize the serious economic situation confronting these schools. The fact that the diploma schools do not have access to the public funds available for both the collegiate and the junior college schools has been a serious handicap and unless the Congress recognizes the special needs of the diploma schools large numbers of them are likely to discontinue operation. We believe that H.R. 15757 goes far toward accomplishing certain of these objectives. However, the bill does not, we feel, provide adequate assurances of financial assistance to hospital schools.

We cannot stress too strongly the significance of this section of H.R. 15757 in relationship to meeting the health needs of the country. The shortage of nurses is acute and will only be met through a very substantial Federal program of assistance. The recently published review of the nursing situation by the Department of Health, Education, and Welfare indicated that by 1975 we will have need for 1 million nurses. This indicates that we will have to increase the supply by approximately 60,000 nurse graduates a year. The criticalness of the situation facing the Nation will be seen when it is realized that during the period 1964–65 there were 34,686 nurse graduates and during the period of 1965–66 there were 35,125 or an increase of less than 500 graduates in nursing. Thus, even with the Nurse Training Act of 1964 in effect we have continued to fall very substantially short of meeting the need.

Just what does this shortage mean? The needs of the military have grown and these needs can only be met from the existing pool of civilian nurses. These needs of the military as well as the needs of the Veterans' Administration will be met in large part by graduates from hospital schools of nursing. An example of the kind of solicitation of nurses may be seen in the attached recruitment material directed to the homes of registered nurses.

(The document referred to follows:)

DEPARTMENT OF THE ARMY,
U.S. Army Recruiting Main Station,
Montgomery, Ala.

DEAR REGISTERED NURSE: Did you know that the Army Nurse Corps is no longer what it used to be? Pay increases have recently been received and promotion requirements have been revised. It now takes only twelve months to be promoted to First Lieutenant and only twenty-four months of active duty in the Army Nurse Corps qualifies you for the rank of Captain.

Registered nurses who are interested in joining may receive a guaranteed assignment to the geographical area of her choice and if qualified may choose to attend one of the advanced nursing courses. Whatever your nursing specialty or interests, the Army Nurse Corps has it for you.

Chances are you chose a nursing career because you wanted a rewarding and challenging job; you wanted to feel useful, appreciated and needed. All this is offered you as a member of the Army Medical Team.

The Army wants nurses who like to do *real* nursing. If you would like more information or a personal interview, please indicate this on the enclosed card. I will be looking forward to your reply.

Sincerely,

LINDA E. MOODY,
Captain, Army Nurse Counselor.

A COMPARATIVE ANALYSIS

	As civilian nurse	Army Nurse Corps
Vacation	2 weeks a year	30 days a year.
Medical care	Possible professional discount	Furnished.
Sick leave	Limited	Unlimited.
Dental care	At own expense	Furnished.
Vacation travel	do	Free on space available basis
Social life	do	Officers' clubs, swimming pools, golf courses, bowling, etc., at greatly reduced rates. Large number of people of similar age and educational background as associates.
Education	do	Worldwide campus: AFIT, USAFI, Bootstrap, ECI. Some programs free others 75 percent tuition paid.
Retirement	Social security age 62	20-year retirement (50 percent of base pay) plus social security at age 65.
Advancement	As determined by civilian institution.	1st lieutenant in 12 months, captain in 24 months of date of enlistment. Automatic longevity raises every 2 years, regular promotions.
Shopping	Civilian stores	Base exchange, commissary prices, profit limited by regulation.
Travel allowance	Normally at own expense	$16 daily plus travel expenses.

Can You Answer Yes To These Questions?

1. Does your employer guarantee a periodic pay raise?
2. Does he give you tax free allowances for quarters?
3. Does he furnish you three meals a day, or give you tax free allowance for food?
4. Does he give you clothes that you can wear while on and off duty, or money to buy them?
5. Does he give you eight white hospital uniforms and furnish you laundry service as long as you work for him?
6. Does he give you a 30-day paid vacation each year?
7. Does he furnish full health and accident insurance, regardless of the length of time you have been able to work, and regardless of the length of illness? Does his insurance provide for annual physical examinations and other measures to prevent illness? Does his company plan a pension for life in case you are disabled?
8. Does the job offer opportunity for world travel?
9. Does he furnish free passage (in most instances) during off-duty travel?
10. When you change jobs, does he pay your travel pay, and move your belongings?
11. Does he have a company grocery store, drug store, or department store where you can buy merchandise at cut rates?
12. Can you retire at half your pay at the end of 20 years and 75% pay at end of 30 years without contributing to any kind of retirement fund?
13. Does your employer go out of his way to furnish you low-cost entertainment, like movies at 35 cents, bowling at 35 cents, tennis, golf, swimming free, and low-cost membership in a club for people of your own income group and interests?
14. Does your employer give you $300.00 initial Clothing Allowance?

An Army nurse *can* answer *yes* to each of these questions.

How many nurses do you know who—

Make $8,084.16 (Plus) a year with three years experience ($1,715.16 of this being tax free)? (CPT with three years service.)

Are working in hospitals which have the latest equipment and supplies that money can buy?

Have as many helpers as they need to get the job done?

I know a lot of them—they are all in the Army Nurse Corps.

PAY FOR ARMY NURSES

	2d lieutenant	1st lieutenant	Captain
2 years or less of service:			
Base pay	$321.00	$373.50	$466.20
Quarters allowance	85.00	95.00	105.00
Subsistence	47.88	47.88	47.88
Total	453.88	516.38	619.08
Annual taxable pay	3,852.00	4,482.00	5,594.40
Total annual pay	5,446.56	6,196.56	7,428.96
Over 2 years of service:			
Base pay		443.70	520.80
Quarters allowance		95.00	105.00
Subsistence		47.88	47.88
Total		586.58	673.68
Annual taxable pay		5,324.40	6,249.60
Total annual pay		7,038.96	8,084.16
Over 4 years of service:			
Base pay			615.90
Quarters allowance			105.00
Subsistence			47.88
Total			768.78
Annual taxable pay			7,389.80
Total annual pay			9,225.36

NEW PROMOTION REVISIONS

(1) Only 12 months of active duty qualifies you to be promoted to the rank of first lieutenant.
(2) Only 24 months of active duty and you can be promoted to captain.

Mr. BLAIR. The 1967 published figures indicate that the Federal Government employed 32,793 nurses. The medicare and medicaid programs will increase substantially the health care being provided and various studies reveal that the nursing requirements of aged patients are very much greater than those for younger patients. The Government has assured the 19 million aged of the country the right of access to care not only in hospitals, but in extended-care facilities and home health services. We are far from meeting the needs for these services and they cannot possibly be provided without key staffing by registered nurses. The Government is commendably raising the quality of care to be provided in nursing homes throughout the Nation and stipulating the basic need for registered nurses in order to qualify these institutions to provide care under the medicaid program. A great many hospitals report serious shortages affecting their ability to provide care. In some instances, whole sections of floors of hospitals are closed because they cannot be staffed. Some institutions are being forced out of the medicare program because they cannot provide the required nursing supervision. The Federal Government is investing large sums of money in medical research which, when translated into the care of patients, inevitably means additional essential nursing care.

Though the Congress is to be commended for passing the Nurse Training Act of 1964, it is obvious that the very critical nature of the nurse deficit has not yet been fully appreciated. Notwithstanding the benefits of the act, we are not moving forward in any near relationship to the need. The Nurse Training Act and the administration of that act has lent encouragement primarily to baccalaureate and associate degree programs. Unfortunately, there is no possibility whatever of these schools meeting the national shortage of nurses in the foreseeable future. This was recognized by the Surgeon General's consul-

tant group on nursing as long as 5 years ago. In their report of February 1963, that group projected the 1970 needs of professional nurses and foresaw the fulfillment of those needs primarily from hospital schools of nursing. They found the following:

(The data referred to follows:)

	1961 graduates	*1970 goals*	*Total increase*
Baccalaureate	4,039	8,000	3,961
Associate degree	917	5,000	4,083
Diploma	25,311	40,000	14,689

Mr. BLAIR. The increase in the diploma programs amounted to twice that of the other two combined.

While the situation continues to become more critical hospital schools which are the major producer of the nurses needed by the Nation (78 percent of the total last year), are closing. There has been an average of 10 schools closing each year for the past 5 years and at the present time 74 hospital schools are making plans to cease operations. Hospitals operating schools of nursing cannot continue to pass on to their patients the ever-increasing financial deficits incurred from the operation of these schools. The criticism of rising hospital costs is such that the boards of trustees of greater and greater numbers of hospitals operating schools of nursing feel compelled to close their schools. It makes very little sense to us to see hospital schools close where they have faculty, buildings and equipment available to produce the needed nurses; and at the same time to see new campus facilities being constructed with an enormous economic waste. Certainly, immediate action on this section of the bill and making it effective July 1, 1968, instead of July 1, 1969, as proposed, might go far toward forestalling the closing of many of the schools.

Though title II provides the vehicle for the much-needed assistance to diploma schools of nursing as well as to the collegiate and junior college programs, we believe the funds provided for in the bill are inadequate to meet the need.

Following are comments on specific sections of title II.

Part A—Construction grants

Section 201 amends the present act and gives equal recognition to all schools of nursing. This association strongly endorses each of the three types of schools of nursing and recognizes fully their respective roles. We approve, therefore, the construction assistance which would be provided to all three types of schools.

Section 205 makes collegiate schools eligible for construction grants for advanced training facilities. Inasmuch as advanced training is in no wise limited to collegiate schools, we recommend this amendment provide for facility construction assistance to all schools participating in advanced training. This could be accomplished by a similar amendment to section 483(d) and (e).

Under the bill the benefits of this section will not become effective until after June 30, 1969. Although we realize there are serious budgetary problems, we recommend that if at all possible because of the seriousness of the situation, the effective date be June 30, 1968.

Part B—Special projects and institutional grants to schools of nursing

Section 211 amends section 805 of the act. We believe this is an important section of the bill. The provisions have been broadened so as

to authorize grants for a wide variety of programs and to include grants to any public and nonprofit private agency which can contribute toward improvements in nursing programs and which can encourage the coordination of efforts between programs.

Section 806 would also be amended to provide direct assistance to all schools of nursing. Each school would receive a lump sum annual payment of $15,000 and in addition would receive an annual payment based on the relative enrollment of students and graduates. This assistance, however, is uncertain as to amount and related to unspecified amounts to be appropriated. We believe that particularly in respect to the diploma schools of nursing it is most essential that they be assured a minimum amount per student. Such a need was recognized in Congressman Rooney's bill, H.R. 13096. As previously pointed out the collegiate and associate degree programs are in the main tied to the public educational system and, therefore, have financial assurances which are not available to the diploma schools. Without such specific assurances we greatly fear we will continue to see a closing of these diploma schools.

Therefore, we would urge that this section of the bill be amended so that in addition to the $15,000 lump sum payment to all schools, a per student annual payment of a minimum of $500 be specified for diploma schools of nursing.

Part C—Student aid

Section 823(b)(3) would increase the rate of forgiveness from 10 percent to 15 percent a year where a nurse following graduation works in prescribed circumstances. However, we believe the language of the bill inadvertently limits the eligible services to a "public" hospital, whereas the basic provision includes public and privately owned nonprofit hospitals.

We recommend that the language of the bill be amended to include private nonprofit as well as public hospitals.

This section of the bill should serve as a strong incentive to students; and in relationship to the likely income to be paid a student following graduation, we believe the forgiveness is fully justified.

Section 222(e) of the bill would amend section 825 of the Public Health Service Act to provide for the allocation of appropriations among the schools rather than among the States. Further, it provides that the allocations shall be on the basis of the full-time enrollment in the school of nursing rather than on the basis of the number of high school graduates. The amendment provides a much more realistic method for the allocation of funds.

Section 222(h) of the bill would add a new section 829 to the bill and would permit the transfer of up to 20 percent of funds from the loan program to the scholarship programs. A later provision of the bill also provides for a similar transfer of funds from the scholarship program to the loan program. We believe these provsions will permit desirable flexibility in the program.

Part D—Scholarship grants to schools of nursing

Section 223(a) amends part D of the Public Health Service Act to provide for scholarship grants to schools of nursing. We note that the provisions have been amended so as to pattern the program after the scholarship provisions of the health professions section of the bill. The

scholarship program is essential in making possible the enrollment of students who are confronted with exceptional financial problems and should prove to offer needed encouragement for such students to enter the nursing profession. We wholeheartedly endorse this section of the bill. We believe the bill provides substantial improvements over the authorization for scholarships in the original act.

Section 231 pertains to the definition of accreditation. We believe the language of the bill is ambiguous and we are uncertain as to how the language would apply to each of the three types of schools of nursing.

We strongly recommend that the language of this section provide that the Commissioner of Education shall be required to recognize approval by the appropriate State authority as meeting the requirements of accreditation under the act or accreditation by regional authority or by national accrediting bodies.

TITLE III—ALLIED HEALTH PROFESSIONS AND PUBLIC HEALTH TRAINING

This part of the bill pertains to a variety of paramedical groups which are highly essential to providing high quality health care in the most effective and efficient manner. The provision includes areas of training pertaining to skills which represent the great advances in hospital care. We believe this is a very important part of the bill and we fully endorse this title.

Section 301(a)(4) amends section 794 of the Public Health Service Act to eliminate the phrase "training centers for allied health professions" and substitutes in lieu thereof the words, "agencies, institutions and organizations." We believe that this is a considerable improvement over the original act and, further, that this language will permit teaching hospitals to participate directly in the program.

However, this amendment only pertains to the development of new methods. Section 795 of the Public Health Service Act continues to define training centers as a junior college, college, or university. In order that teaching hospitals, which are engaged in the education of large numbers of paramedical health personnel, may be assisted to the extent that they provide training in the programs covered under this title, we recommended that the definition in section 795 be amended, so as to read, "in a teaching hospital, junior college, college, or university." This amendment is urged for the reason that the needs of the Nation are so great it is incumbent upon us to utilize fully all available qualified educational programs. In terms of the criticalness of the need it makes very little sense to provide assistance only to certain of these education programs as the act does at present.

Section 302 extends the program of traineeships for graduates of specialized training in public health. Graduate degree—masters degree—programs in a number of universities prepare profesionally trained hospital and medical care administrators. The Congress recently amended the medicare law to require licensing of administrators of nursing homes which gives recognition to the need for professionally qualifying administrators of such institutions.

At the present time it is clear that this assistance may be granted to students in courses preparing them for administration of health care institutions if the trainee is enrolled in a school of public health.

However, it is far from clear that students taking the same curriculum but who are enrolled in other schools of the university such as business administration, are entitled to such assistance. At the present time, ther are 16 accredited programs in schools of hospital administration in universities in the United States. Seven of these are in schools of public health. The other nine are in other schools. We strongly recommend that this section be revised to amend section 306(a) of the Public Health Service Act to provide for assistance to eligible students enrolled in all university programs for the preparation of hospital and health facility administrators.

This section also includes project grants for graduate training in public health. As the hospital has developed as the recognized center of community health affairs the administrator of such institutions requires specialized graduate training in community health affairs. Such advanced training is made available through the 16 university graduate degree programs. All of these programs should be fully eligible to receive project grants. Their eligibility should not be dependent upon whether the program happens to be within a school of public health. We understand at the present time the grants program is being so administered that certain of these university programs are denied assistance. We recommend, therefore, that section 302 of this bill be revised to amend section 309(a) of the Public Health Service Act to include institutions providing graduate or specialized training in programs of "hospital and health facility administration."

TITLE IV—HEALTH RESEARCH FACILITIES

This title of the bill extends the construction authority for health research facilities.

We recommend approval of this part and urge the committee to authorize adequate funds for carrying out its important purposes.

The bill before the committee does not specify the funds which would be authorized to carry out the purposes of the legislation. However, we are aware of the amounts which the administration has submitted to the Senate on S. 3095, the companion bill. We assume that similar amounts have been or will be recommended to this committee. So far as title II of the bill is concerned, dealing with nurse training, the funds proposed are totally inadequate in the light of the acute shortage which we have discussed with you.

In 1966 there were 1,241 schools of nursing in operation. To provide $15,000 for each of these schools as the bill proposes, would require some $18 million. Added to this would be the amounts authorized to be paid to each school on a per student basis. The total number of students in all schools for 1966 was 139,070. To authorize funds for this number of students at $500 per student would require an additional $69 million, for a total authorization requirement of approximately $87 million annually. This is in sharp contrast with the $30 million proposed by the administration for the fiscal year 1970 and with the amounts for future years.

Mr. Chairman, we greatly appreciate the opportunity of appearing before the committee and presenting to you the views of the hospitals of the country on these matters which are of critical importance to the operation of hospitals and all health care institutions, thus, to the

provision of health services. In closing, may I reiterate our great concern over the shortage of health care personnel. While we recognize the serious fiscal problems facing the country and this Congress, nevertheless, we feel required to urge the committee to authorize sufficient funds to provide the needed health personnel.

Mr. JARMAN. Thank you, Mr. Blair. I think it is a very effective statement. Let me ask you with respect to your own St. Luke's Methodist Hospital in Cedar Rapids, how many students do you have in your school?

Mr. BLAIR. About 200.

Mr. JARMAN. What did it cost you to operate your school in the 1966–67 period?

Mr. BLAIR. Our fiscal year for the school ends on September 30th and for the fiscal year then which ended September 30, 1967, the total costs were $569,910.

Mr. JARMAN. And how was that financed?

Mr. BLAIR. $181,000—well, $168,041 were paid by tuition. There were gifts of some $13,454, so there were total cash receipts of $181,495. This offset that portion and left the remainder of $388,415.

In our conduct of the school, we put emphasis not only on the academic content, the didactic content, but also on the clinical education and in the process of the students learning how to care for patients, they obviously provide care for patients.

In the process of these students providing this care, we make careful estimates as to what we feel it would cost if this same amount of care were provided by other paid personnel. On the basis of these calculations, which I think may be a little on the generous side, but during the same fiscal year the value of these services was estimated to amount to $332,833. Applying this also, then, as a credit against the cost, this still left a deficit operation of $56,782.

Mr. JARMAN. What has been the experience of your students in passing the State board examination for nurses?

Mr. BLAIR. We are very happy that our program has seemed to be effective. Iowa, which has the lowest illiteracy rate in the United States, we feel that at the other end it has a very high educational level, has also demonstrated a level among the 50 jurisdictions. It normally ranks in the top 10 or 15 of the 50 jurisdictions in State board results. The school sponsored by the hospital with which I am associated, has characteristically been in the top group of our Iowa schools, of which there are 22. This also places the school at a high level nationally as well. This last year our graduates placed our school first among these 22 schools, including the university schools. We had no failures at all. Ours was one of the three of the 22 schools which had no State board failures at all.

Mr. JARMAN. Mr. Rogers?

Mr. ROGERS. Thank you, Mr. Chairman.

Mr. Blair, I thought your statement was excellent. I think many of the suggestions you have made have a great deal of merit and I am sure this committee will consider them very seriously.

Mr. BLAIR. Thank you.

Mr. ROGERS. Is it necessary, do you feel, to give money to every diploma school?

Mr. BLAIR. I feel so. The record shows that our schools are closing. I made reference to the recommendation, the evaluation of the Surgeon General's committee back several years ago and they are depending, they are looking forward to the diploma programs providing some 15,000 of the approximately 25,000 increase that was recommended. We simply cannot afford to pass up the opportunity that these schools provide.

Mr. ROGERS (presiding). I would agree with you. I think it is very essential to do something for the diploma schools. I was just wondering, for instance, in all of the various programs, if it is necessary to give money to every school. There may be some that are adequately funded. In other words, should there be a showing of need, some criteria set forth, before qualifying for Federal aid?

Mr. BLAIR. I think that the only criteria should be that of accreditation by the State agency, and alternately, the other accrediting agencies that may apply to the associate degree programs of baccalaureate programs where they are approved by the regional association.

Mr. ROGERS. Well, now, suppose you have a school that is not presently accredited and the reason is it has not got enough funds to do what it necessary to become accredited. Does not that school need the money more to bring it up than the one that is already accredited?

Mr. BLAIR. That certainly may be one of the factors. Now, of course, all of the schools are accredited by the State agency and all of the graduates of these schools that take State board examinations take one examination, the one and only examination, and this is an examination as developed under the auspices of the American Nurses Association and it is taken by the graduates of associate degree programs, diploma programs, whether they are 2-year, 3-year programs, or by the baccalaureate programs.

The financial need of the school is eloquently evident as one considers the effects of the accreditation programs, their efforts to increase. The natural effect of this has been to create a gap at one time, and now and then we hear tired references to exploitation of students. This certainly is long gone. There is no student that I am aware of that is exploited. They are substantially financed. Unfortunately, it is by the financially pressured patient who is underwriting this cost in our hospital schools.

Mr. ROGERS. Now, you, I believe, furnished figures saying in 1961 the diploma schools graduated a little over 25,000. Will you reach the 1970 goal, do you think, of 40,000?

Mr. BLAIR. No. We are having a miserable time with this and there has been very little increase over that which the Surgeon General's consultant group measured back then. The problem in part is that because of a variety of problems, many schools have just thrown in the towel and have closed.

Mr. ROGERS. Now, could you let us have, and I know you have given us some background, but specifics as to the number of students, increased number of students, that could be taken in and individually graduated from the diploma schools or hospital schools? What would have to be done? How many would we have to be sure we reached goals that have beeen set and what financial support would be anticipated? I realize you may not have this now.

Mr. BLAIR. Well, in round figures——

Mr. ROGERS. You could submit it for the record.

Mr. BLAIR. We are graduating from the hospital diploma programs about 25,000 graduates per year. The Surgeon General's recommendation was that this be increased to 40,000. The only estimate I have heard other than this, is to increase it further. One estimate referred to was 60,000 graduates per year.

In our school—now, of course, there may be some institutions that have closed that might be encouraged to reopen, assuming their buildings and facilities were still available.

Mr. ROGERS. We had one that closed in my area, for instance, just recently.

Mr. BLAIR. But against this, I think this might give us some perspective. In my particular school, the educational plant cost, value, divided by the 200 students, indicates a plant cost of about $40,000 per graduate. Now, if we want 15,000 more graduates per year, ignore some unused facilities, 15,000 graduates times $40,000 comes up to about $800 million.

Now, assuming that the sponsors can put up some of this money, say 50 percent of it, here is $400 million of additional facilities that conceivably might be federally financed. No one has any illusion that this can be done instantly but if, for example, we were to undertake a 5-year program, this would mean $80 million a year just for construction of facilities for diploma programs aside from those that are needed by the collegiate or associate degree programs.

Mr. ROGERS. Well, now, I wonder if a number of hospitals, if they got support, would not have the physical facilities pretty much. You might have to build some but not to the extent that you have just projected. For instance, in my area they conducted a school. They are no longer doing it. There is no reason why they could not open that up again with proper support, without going into large construction programs. I think a survey would have to be done and perhaps your association could be helpful in this in getting your hospitals to let us know, your each State association, which would be very helpful if we could have this information, to know how many could go in, what they do think would be required, and trying to stress that they should keep construction down. I know there would be a tendency for everybody to put on some new buildings. This is always so, understandably so, but honestly to try to meet the problem without incurring any more than a minimum amount of construction cost, and getting to a real training program and putting our money into the training where we will be turning people out rather than doing a large building program if possible.

Mr. BLAIR. I think your suggestion is excellent. I am confident that our association has an intense interest, a tremendous sense of responsibility, and would be glad, out of data perhaps already assembled and perhaps augmented by other information that we would be able to get, to present some information on this.

I am in complete agreement that we ought to start where we are, that we ought to build on existing resources. I do not think it would take a simple mathematic projection of these facilities that I just mentioned in order to reach the goals. We are mindful that all students do not have to live in dormitories. We are mindful that other arrangements can be made so as to maximize our educational facilities.

Mr. ROGERS. Well, I would be very interested in pursuing that be-

cause I think it is essential for us to do something to train more nurses. Otherwise, we are going to be in a very serious condition, even more so than now, and particularly as you brought out in the increased demand for medical services in this country, which is continuing to grow and will with the medicare program.

Mr. WILLIAMSON. We have heard, Mr. Rogers, from a number of hospitals operating schools that are watching this legislation and if they can get some real help from it, their boards of trustees are inclined to remain in business. If they do not, they are going out of business. So, I think the figure we have given of schools that now plan to close is going to be markedly increased.

Mr. ROGERS. I think that was 74, you said.

Mr. WILLIAMSON. Seventy-four, yes, but lacking some real support there will be a good many more that may likely decide to throw in the sponge. The extent of public criticism over growing hospital costs, you are well aware of.

Mr. ROGERS. I share it.

Mr. WILLIAMSON. You share it. I would just as soon not get into that.

Mr. ROGERS. We will do a separate study on that later.

Mr. WILLIAMSON. Yes; I understand. We will have some good information for you at that time.

Mr. ROGERS. I know. It would be helpful. You always are. Thank you.

Mr. WILLIAMSON. There are a number of hospitals that have never been in the nursing school business, but with financial assurances might well get into the business, too.

Mr. ROGERS. Yes. This is what I think we need to encourage and if your organization would undertake for us to make some contact here and let us have some specifics as soon as possible, I think this could be helpful in drafting this legislation and let us start doing something immediately, because I would agree with you, postponing this another year is simply going to compound the problems. If we could use existing facilities, and like you say, these hospitals have in effect, teaching staffs with their doctors there who could be encouraged, and then we have so many junior colleges, perhaps they can work in conjunction with the junior colleges in setting up programs, too, some that have not gotten into this at all, so I think the possibility of outlining a program that could begin to solve this shortage problem is very real if we will proceed. So, if you could give us some of this information, I think it would be helpful.

Mr. BLAIR. We will certainly get that information to you and to the committee.

(The information follows:)

Response to American Hospital Association questionnaire

Schools open, June 24, 1968

Mailed	694
Replies (approximately 66 percent)	457
Schools reported closing	19
Not included in other questionnaire. No indication on any form that additional funds would change future plans to close.	3
Not completed	435
Usable	457
Total	

Question No. 1. Would you accept a Federal subsidy?	
Yes	428
No	7
Total	435

Question No. 2. Would you increase size of classes?	
Yes	356
No	6
Not usable	6
Total	428

How many per class would you increase?	
Less than—	
5	3
5 to 9	51
10 to 14	104
15 to 19	51
20 to 24	43
25 to 29	22
30 to 34	14
35 to 39	4
40 to 44	9
45 to 49	3
50 to 54	7
55 to 59	5
Over 60	[1] 7
No response or not usable	33

[1] 2 schools each said they would increase by 70, 80, and 125 students. 1 school said 66.

Mr. ROGERS. Now, let me just ask this. In the institutional grant, under the legislation, they provide for institutional grants and project grants interchangeably, so that it is left up to the administrators in the department to decide what they will do. Should we set a division there or not? In other words, should we require 40 percent of it to be spent in institutional grants or 60 percent in project grants or vice versa or what, or should we leave it completely to the discretion of the administrator?

Mr. BLAIR. My inclination is that there should be a measure of flexibility. My major concern on these two points is that we do need some construction. I think the most urgent need is the grant to the institution for this to meet the ongoing costs of education.

Mr. ROGERS. The institutional grant?

Mr. BLAIR. Yes. The $15,000 and the $500 per student that I refer to specifically. I think that if this effective date can be moved up, I am confident it would not only deter, it would reverse many institutions that are now planning on closing.

Mr. ROGERS. Also in the bill, on the medical education part, it provides for project grants. We now have a limit on project grants of $400,000. The legislation does not—would remove that. Should we put a limitation somewhere on project grants?

Mr. WILLIAMSON. I think that the legislation proposing to remove it is very desirable, Mr. Rogers, because I think the administrators then are free to discuss with the applicants where they can best spend the money and feel free to best spend the money to accomplish the most in the quickest time.

Mr. ROGERS. Well, except for the fact that you have 50 States and all sorts of organizations in there, and suppose they decide to put all this money in about three or four institutions or 10 or 20 institutions. Is this better to build those 10 or 20 or 30 rather than to help 60 or 80 or more?

Mr. WILLIAMSON. Well, our experience with the administrators is that they have tried to even up the money and avoid—in other words, they have always recognized this problem, in our experience, and they have tried to not give an undue share to any one institution. We have had the reverse experience, Mr. Rogers, where they have not done this and then we have ended up with money at the end of the year that we lost. So that I think that the administrators, if they sense the way the program is moving, if in a given year there are not the number of applications which they can judge timewise, then to use the money that they have with such applications that they do have accomplishes the most good.

Mr. ROGERS. You think the committee ought to try and see how they administer it.

Mr. WILLIAMSON. I do. With real flexibility and see how it works.

Mr. ROGERS. How many students are generally in your diploma schools? Would it run from what number, what range? I just wondered offhand if you can supply a figure for that.

Mr. WILLIAMSON. There are 139,000 students in all schools and 78 percent of those are in hospital schools.

Mr. ROGERS. No. What I mean, like in a hospital school, how many students?

Mr. WILLIAMSON. The average students per school?

Mr. ROGERS. That is right.

Mr. WILLIAMSON. Gee, I do not know. Do you?

Mr. BLAIR. I think——

Mr. WILLIAMSON. There are figures available.

Mr. BLAIR. I think we have some data that we can come up with something pretty fast.

Mr. ROGERS. Would you say it is around 100? Would it average this?

Mr. BLAIR. It would come close to that. The total number of diploma programs are 767 and the total number of enrollments are 84,000. So, there would be a little over 100 per school. I would estimate around 110, 115, something like that.

Mr. ROGERS. This would generally prove out. You have 200, I believe, in your school.

Mr. BLAIR. Yes. The tendency has been for there to be fewer schools and larger schools, and I think there is a good rationale for this.

Mr. ROGERS. Let me ask you this. Do you use the doctors in the hospital as instructors?

Mr. BLAIR. I would say only to a minimum extent. Formerly, the doctor was a very prominent part of the faculty, but over the last 15 years this role has been just about reversed. He provides, normally, lectures on very specific points, but the lectures are overwhelmingly provided by the faculty of the school of nursing or by the faculty members of the college with which the school may have an association for basic science and general education.

Mr. ROGERS. Well, then, your instructors, there, for instance, you have your nurse instructors——

Mr. BLAIR. Yes.

Mr. ROGERS. Would they also do hospital work or would they devote their time exclusively to——

Mr. BLAIR. No. They are fulltime.

Mr. ROGERS. I see. All right. Any questions?

Mr. SKUBITZ. Mr. Blair, insofar as nursing schools are concerned, my education has been sadly neglected. I would like to ask you a few questions about them.

Mr. BLAIR. Please do.

Mr. SKUBITZ. How many years does a student attend nursing school before she can graduate?

Mr. BLAIR. Well, this depends upon the school. At present there are nursing education programs and associate degree programs which involve residence requirement of about 21 months, two academic years and the intervening summer. There are some two-calendar year programs, there are some of these sponsored by hospitals. Hospitals also sponsor—have curricula involving three academic years with the summers off. There are some that have two calendar years and then the third year being an academic year. There are those that have three calendar year programs.

Mr. SKUBITZ. What are the requirements to be a registered nurse?

Mr. BLAIR. The requirement is simply to pass this one State board examination which is the same examination given in all of the 50 jurisdictions.

Mr. SKUBITZ. Does the student usually have to attend school 2 or 3 years in order to——

Mr. BLAIR. This is governed by State law. Formerly, there was a pattern requiring 3-year residence. Now, I think all have probably reduced this to 2 years or graduate from an approved program.

Mr. SKUBITZ. How many hours does a student go into a classroom for instruction each day?

Mr. BLAIR. This will vary quite widely, I believe, also among the schools.

Mr. SKUBITZ. Well, is it a half a day or do they attend classes all day long?

Mr. BLAIR. Some days, yes. In our particular program, I think our faculty has in recent years developed what they call class days and as I understand it, I think all of their classes in a particular specialty, for example, may be given on 1 day and then their supervised clinical experience will occur on certain other days. I think there is a heavy emphasis on the didactic work during the first year, first portion, whatever it may be, and then a—something of a shift to emphasis on the