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REPORT TO THE CONGRESS



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Progress And Problems In Training And Use Of Assistants To Primary Care Physicians

Department of Health, Education, and Welfare

*BY THE COMPTROLLER GENERAL
OF THE UNITED STATES*

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ABBREVIATIONS

AMA	American Medical Association
ANA	American Nursing Association
GAO	General Accounting Office
HEW	Department of Health, Education, and Welfare
HRA	Health Resources Administration
IHS	Indian Health Service
SMSA	standard metropolitan statistical area
SSA	Social Security Administration

COMPTROLLER GENERAL'S
REPORT TO THE CONGRESS

PROGRESS AND PROBLEMS IN
TRAINING AND USE OF ASSISTANTS
TO PRIMARY CARE PHYSICIANS
Department of Health, Education,
and Welfare

D I G E S T

WHY THE REVIEW WAS MADE

During the past decade, a new profession has been introduced into the health care system--the assistant to the primary care physician, commonly referred to as the physician extender. Physician extenders are trained to do tasks that must otherwise be done by physicians.

In providing assistance for training physician extenders, the Congress intended to improve the health care delivery system and the distribution, supply, quality, use, and efficiency of health personnel.

Because of the impact this new professional could have on the health care system, GAO reviewed 19 physician extender programs in 13 States to determine whether their objectives and congressional expectations were being achieved.

FINDINGS AND CONCLUSIONS

From 1969 to 1974, the Department of Health, Education, and Welfare (HEW) has funded about 100 training programs for physician extenders through grants to

universities and other nonprofit organizations. HEW support during this period totaled about \$34 million.

About 900 students graduated between 1965, when the first programs were initiated without Federal support, and June 30, 1973. According to HEW officials, an estimated 1,000 students graduated during fiscal year 1974.

Physician extenders are being used to help solve a number of important health care delivery problems. They can

--be trained in a relatively short time (usually 2 years or less), thereby quickly increasing the availability of health manpower services;

--perform many medical tasks previously performed by physicians but not requiring their extensive knowledge and skill, thus enabling physicians to expand the scope of their activities and concentrate on more difficult cases; and

--be placed in geographical areas where health manpower is scarce.

A number of problems, however, need to be worked out before

the potential of this new health care professional can be fully realized.

Training

HEW has essentially left physician extender training to individual program sponsors. As a result, program concepts and training methods varied considerably.

Some programs emphasized training for performing specific tasks; others emphasized a broader understanding of theoretical and scientific medical concepts.

The length of training provided by the 19 programs reviewed ranged from 4 months to 4 years. Backgrounds and prior health care experience of students varied considerably.

Despite these differences, HEW has made little effort to determine which training approach or approaches produce the best qualified graduates in the most efficient and economical manner. (See p. 4.)

Legal and professional recognition

The legal status of physician extenders is confused and varies considerably from State to State.

HEW, the States, and the medical profession need to determine the best process to officially recognize this new type of health care worker. (See p. 13.)

Some State medical examiner boards have not issued regulations defining how physician extenders may practice or the duties or tasks they may perform. Some State legislatures have not clearly defined the role of physician extenders or provided specific sanction for the expanded duties they are trained to perform.

At least one State board of medical examiners has developed strict regulations that appear to be inhibiting development of physician extenders. (See p. 14.)

Deployment

Seven of the 19 programs sought to alleviate problems caused by uneven geographical distribution of health manpower by developing systems for deploying graduates to areas with health manpower shortages.

The other 12 programs, however, had no such deployment system and, as a result, were not intentionally placing graduates in areas having the greatest need.

Different State educational requirements may affect mobility of physician extenders and preclude them from practicing in areas of greatest need. (See p. 24.)

Impact

In those medical practices reviewed that employed physician extenders:

--The number of patients seen has increased, while the

physicians' total time spent on the job has remained the same or decreased.

- The cost of malpractice insurance and the potential threat of malpractice suits have not deterred the hiring of physician extenders.
- Some physicians have spent a greater percentage of their time on more complex cases. (See p. 33.)

Reimbursement

The Health Resources Administration and the Indian Health Services are funding the training of physician extenders to provide certain services traditionally performed by physicians. However, the Social Security Administration does not allow reimbursement under part B of the Medicare program for services performed by physician extenders.

According to the Social Security Administration, part B of Medicare does not allow payment for services traditionally performed by physicians unless they are the kinds commonly furnished as a necessary adjunct to the physician's personal in-office services. (See p. 33.)

A Social Security Administration official advised GAO that, because insufficient

audit capability exists to review every bill submitted by a physician employing a physician extender, the Administration is probably unknowingly reimbursing physicians for services rendered by physician extenders under part B of Medicare. (See p. 36.)

The Social Security Amendments of 1972 required HEW to make a study to determine the

- circumstances under which payments for services provided by physician extenders would be appropriate;
- most appropriate, equitable, and noninflationary payment methods; and
- amounts that should be paid for medical services covered by the Social Security Act.

A contract for the design phase of this study was let in February 1974. The study itself began in December 1974. (See p. 36.)

Information obtained from medical practices employing physician extenders indicated that fees charged for services provided by physician extenders are the same as fees charged by physicians for the same services.

RECOMMENDATIONS

To insure that physician extenders are trained in the most efficient and economical manner, that they are granted appropriate and essential professional and legal recognition, and that

their employers are reimbursed equitably for services provided by the extenders, the Secretary of HEW should:

- Study various physician extender training programs to determine the best ways to train the best qualified extenders. (See p. 11.)
- Work with the States to develop legislation clearly defining the role of extenders and providing the necessary legal framework for them to carry out duties for which they have been trained. (See p. 22.)
- Work closely with professional organizations and State licensure boards to determine the most appropriate manner of granting official recognition to extenders. (See p. 22.)
- Conduct expeditiously the study required by the Social Security Amendments of 1972 to determine the most appropriate and equitable level of reimbursement for extenders and use the study results as they become available to resolve problems surrounding the reimbursement for services provided by extenders under the Social Security Act. (See p. 37.)

To insure that physician extender training programs help alleviate the Nation's health manpower maldistribution problems and provide extenders with the mobility

to locate in health manpower shortage areas, the Secretary of HEW should:

- Require as a condition of Federal financial support that extender training programs include a method to place graduates in areas where health manpower is scarce.
- Work closely with the States in developing criteria specifying training and experience qualifications acceptable to all States. (See p. 30.)

AGENCY ACTIONS AND UNRESOLVED ISSUES

HEW generally agrees with the findings and intent of the recommendations in the report.

According to HEW, the report represents a diligent effort to obtain and analyze information from a variety of physician extender programs and the information it contains will help HEW in implementing more plans for systematic support mechanisms related to this new group of health professionals. As discussed in HEW's comments (see app. I), a number of efforts have already been undertaken; others will be initiated.

As indicated in chapters 2, 3, and 4, however, GAO believes that HEW needs to give further consideration to the recommendations dealing with training, recognition, and deployment of physician extenders.

Officials of the 19 physician extender training programs reviewed were given an opportunity to comment on GAO's findings. Their comments have been considered in this report.

MATTERS FOR CONSIDERATION
BY THE CONGRESS

This report will give the Congress some insight into

the physician extender concept and problems that must be overcome to achieve maximum results from this new health care professional.

It should also assist the Congress in considering proposed legislation to extend and modify legislative authority for health manpower programs.



CHAPTER 1

INTRODUCTION

For the past 10 years Federal health manpower policy has been designed to increase the number of graduates from health professions schools. To implement this policy, the Federal Government increased its assistance to both institutions and students from \$142 million in 1964 to about \$686 million in 1974. During that period Government assistance totaled about \$4 billion.

In recent years a new health profession has been developed to increase physician productivity and help relieve problems of geographical and specialty maldistribution of health care personnel. Assistants to the primary care physician--physician extenders--can perform many medical tasks that do not require the extensive knowledge and skill of a physician, freeing physicians for more complex cases and increased patient loads.

Graduates of the training programs supported by the Department of Health, Education, and Welfare (HEW) are referred to by a variety of names, including physician assistants, physician associates, community health medics, medex, family nurse practitioners, child health associates, and pediatric nurse practitioners. In this report we have used these terms when referring to graduates of specific programs and the term physician extender to refer generally to graduates of all the programs reviewed.

Some universities initiated programs to train physician extenders as early as 1965. Direct HEW support for developing physician extenders as defined in this report began with the funding in 1969, by the National Center for Health Services Research and Development, of a demonstration project to train former military corpsmen for this role.

The National Center was established in HEW in 1968, under authority of the Partnership for Health Amendments of 1967, to serve as the Federal focal point for developing and implementing new ideas and methods for providing health services. Subsequently, the Comprehensive Health Manpower Training Act of 1971 and the Nurse Training Act of 1971 also provided authority for physician extender programs. Such programs were to improve the health services delivery system and the distribution, supply, quality, use, and efficiency of health personnel.

In a special message to the Congress, the President stated on February 18, 1971:

"One of the most promising ways to expand the supply of medical care and to reduce its cost is through a greater use of allied health personnel, especially those who work as physicians' and dentists' assistants, nurse pediatric practitioners, and nurse midwives. Such persons are trained to perform tasks which must otherwise be performed by doctors themselves, even though they do not require the skills of a doctor. Such assistance frees a physician to focus his skills where they are most needed and often allow him to treat many additional patients."

As a result of National Center support and the implementation of the Comprehensive Health Manpower Act of 1971 and Nurse Training Act of 1971, new programs designed to train and develop physician extenders have proliferated. Through fiscal year 1974, HEW had funded through grants and contracts to universities and other nonprofit organizations about 100 physician extender training programs, about half of which were designed to expand the role of nurses. Information provided by the Bureau of Health Services Research and the Bureau of Health Resources Development (Special Programs Staff and Division of Nursing) of the Health Resources Administration (HRA) and the Indian Health Service (IHS) of the Health Services Administration showed that support for these programs from 1969 through fiscal year 1974 totaled about \$34 million. About 900 students graduated between 1965, when the first programs were initiated without Federal support, and June 30, 1973. According to HEW officials, an estimated 1,000 more students graduated during fiscal year 1974.

SCOPE OF REVIEW

The purpose of our review was to determine whether physician extenders represent a viable means of meeting the objectives of the Comprehensive Health Manpower and Nurse Training Acts of 1971--improving the health services delivery system and the distribution, supply, quality, use, and efficiency of health personnel.

We looked at how the graduates were (1) trained, (2) used, (3) accepted by other health professionals, patients, and health regulatory agencies, (4) deployed to areas where health care personnel were scarce, and (5) affecting medical practices.

We selected 19 programs in 13 States, 18 of which had graduates in practice at the time of our selection. We made our selection in the spring of 1973 and attempted to insure a geographical and program-type variety. The selected programs included four medex programs, six physician assistant programs, three family nurse practitioner programs, five pediatric nurse

practitioner programs, and one child health associate program. A description of each type of program is included in chapter 2 and appendix II.

Our review was limited to the medical functions of physician extenders. Some nurse practitioners, because of the nature of their job settings, also perform nursing functions, but these functions are not discussed in this report.

In addition to interviewing officials and reviewing records of the training programs, HEW, and State boards of medical examiners, we interviewed representatives of the National Board of Medical Examiners, State nursing boards, major medical and professional liability insurance carriers, and professional organizations.

We also sent a questionnaire to 461 persons who had graduated by June 1973 from 16 programs in our review and to 351 of their employers. A total of 358 graduates and 229 employers responded. We did not use our questionnaire in three programs because records and previous studies provided comparable data. We identified the geographical location of 608 and the job settings of 533 of the 805 individuals who had graduated from the 19 programs by June 1973.

CHAPTER 2

TRAINING AND USE OF PHYSICIAN EXTENDERS

HEW has essentially left the training of physician extenders to the initiative and desires of program sponsors and has made little effort to determine which program or programs train the best qualified graduates in the most efficient and economical manner.

The training methods and concepts used by the different programs varied greatly. Some programs emphasized training for the performance of specific tasks; others emphasized a broader understanding of theoretical and scientific medical concepts. The length of the training provided in the programs we reviewed ranged from 4 months to 4 years. Backgrounds of the students admitted into the different programs also varied considerably--from students with no medical training or experience to registered nurses and ex-military corpsmen with years of training and experience. Many of these variations were the result of the innovative nature of the physician extender concept and the conceptual and philosophical differences underlying the programs.

Data provided by our review and studies of various programs show that physician extenders from the 19 programs reviewed were essentially performing the role for which they were trained. They were doing many tasks that do not require the extensive skill and knowledge of a physician but that were previously done only by physicians. Headquarters program officials were unable to give us any specific examples of how graduates from different programs differed with regard to the functions they could or could not perform.

TYPES OF PROGRAMS

We have grouped the 19 ^{1/} programs we reviewed into five categories--medex, physician assistant/associate, family nurse practitioner, child health associate, and pediatric nurse practitioner--on the basis of background, experience, and education required of the trainees and the length and type of training provided. The type of training provided varied considerably among the five categories of programs; however, the programs within each category had few major differences.

^{1/} Tables showing the specific programs included in our review, sponsoring institutions, length of training programs, number of graduates, and amount of funding are included as appendix II.

Officials of HEW's Bureau of Health Resources Development-- both of the Special Programs Staff, which supports medex and physician assistant programs, and the Division of Nursing, which supports nurse practitioner programs--said the graduates of these programs perform basically the same functions. Graduates of all types of programs in our review were giving physical examinations, taking patient histories, and carrying out routine procedures under the supervision of their employing physician.

Medex

Medex programs primarily enroll former military corpsmen and require 3 months of nondegree academic training and 9 to 12 months of on-the-job training under the preceptorship of a physician.

These programs emphasize training for performing tasks in the practice setting and give fundamental consideration to students' previously developed abilities. Medex programs use a short, intensive academic training phase to provide a foundation in the discipline and a longer period of on-the-job training with a physician to provide an opportunity to develop skills. This type of training, according to medex program philosophy, is geared to meet today's identifiable health care needs; preparation for meeting future needs is to be provided by a built-in program of continuing professional development.

Physician assistant/associate

These programs generally enroll trainees with various types of health experience (nurses, former military corpsmen, health technicians) and provide a 2-year training program including classroom, clinical, and on-the-job experience that can be credited toward a college degree. We have also included in this category (1) a 4-year program that essentially replaces the prior medical experience requirement with 2 additional years of training and (2) a unique medex program (the Drew Postgraduate Medical School program in California), which meets the State's definition of a physician assistant by requiring 1 year of full-time clinical training and academic courses equivalent to academic credits required for a 2-year associate of arts or science degree. This medex program abandoned the original concept of a 3-month classroom phase and a 12-month preceptorship because of State requirements.

The 2-year physician assistant/associate programs emphasize a broad understanding of theoretical and scientific medical concepts. According to one school's philosophy, this

type of training prepares the graduates to function effectively for 10 to 20 years, while task-oriented skills may become outmoded. Another factor supporting the conceptual approach is the difficulty in defining the task-oriented role of the physician extender because every physician practices medicine somewhat differently.

Nurse practitioner

The nurse practitioner programs are designed to supplement the medical knowledge already possessed by registered nurses, enabling them to function in an expanded role. The content and length of the nurse training programs in our review varied. Some programs were to help the nurse practitioner provide expanded care to all patients, while others were to provide training for expanded child care.

Family nurse practitioner

The family nurse practitioner programs are intended to provide additional training to experienced registered nurses for an expanded role in delivering primary health care to all patients. Graduates from these programs are expected to be able to perform, under physicians' supervision, many of the more routine tasks, such as physical exams and medical history taking, previously performed by the physicians. Length of combined academic and on-the-job training varied from 12 to 18 months.

Pediatric nurse practitioner

Pediatric nurse practitioner programs enroll registered nurses who have prior pediatric experience or who are currently employed in a pediatric practice. These programs generally provide from 4 to 9 months of academic and clinical training.

The role of pediatric nurse practitioners varies from setting to setting, but they are generally trained to examine newborn, preschool, and school-age children and to assess the progress of both well and ill children under physician supervision. They are also trained to recognize abnormal findings and to refer problem cases to the supervising physician while frequently managing the more common illnesses themselves.

Child health associate

The first program of the type is being conducted at the University of Colorado. It is a 3-year program that essentially provides academic and clinical training in pediatrics to individuals with at least 2 years of college credit, with the

intention of producing an individual capable of providing a wide range of care to a large portion of the children seen in a medical practice.

DETERMINING THE BEST TRAINING METHOD

At the time of our review, HEW had not determined which program design was most economical and efficient. HEW officials suggested that, because the physician extender programs were new and innovative, more experience should be gained with a variety of approaches before any such evaluation was made.

As part of the early development of physician extenders, HEW's National Center developed a Uniform Manpower Evaluation Protocol which was designed to determine in part

- methods of maintaining effective health care standards;
- the strengths and weaknesses surrounding the use of extenders as perceived by physicians, incumbents, and patients; and
- the impact of extenders on the redistribution of medical services in areas of low access.

According to an HEW official, the National Center paid a private contractor \$281,450 from April 1971 to June 1973 to carry out an evaluation using the Protocol. In its final report to HEW, dated June 29, 1973, the contractor stated:

"Concluding two years of Medex Project evaluation, the contractor wishes to strongly reaffirm his findings of the first year, that the National Uniform Manpower Protocol should be abandoned, recalled and replaced with a scientifically and administratively sound evaluation program."

A National Center official said the results of this research were virtually useless for evaluation purposes.

Evaluation of individual programs

Specific program evaluations identified in our review included (1) patient acceptance studies on eight programs, (2) task analysis studies on five programs, (3) evaluations of the effect of a physician extender's work on his employer's practice on five programs, (4) an evaluation of the impact of an extender on health care costs on one program, and (5) a manpower demand study on one program. Several HEW offices and divisions support these programs, and no uniform

methodology for evaluation is required of the grantees or contractors. We could identify no HEW efforts to coordinate or compile the resulting data for comparison.

The above studies, though limited to individual programs, reached similar conclusions. They showed that physician extenders

- are accepted by patients,
- perform tasks traditionally done by physicians, and
- increase the number of patients seen by a medical practice and the length of an average patient encounter.

In studies of two medex programs, employers reported that since employing a medex they had decreased the number of hours that they spend on the job.

EMPLOYMENT OF PHYSICIAN EXTENDERS

We identified the employment setting of 533 of the 805 students who had graduated from the programs reviewed. Of these, 450 (84 percent) were in primary health care, 42 were specialists, and 41 were teachers or administrators. The following table shows the distribution of the graduates of the 19 programs by type of employment.

	Number of graduates (note a)	Employed in		Teach- ing or admin- istration
		Primary care (note b)	Specialty care	
Physician assistants/ associates	165	111	32	22
Medex	134	125	8	1
Pediatric nurse practitioners	185	172	2	11
Child health associates	7	7	-	-
Family nurse practitioners	<u>42</u>	<u>35</u>	<u>-</u>	<u>7</u>
Total	<u>533</u>	<u>450</u>	<u>42</u>	<u>41</u>

a/ Excludes 231 physician extenders who were recent graduates or whose job status could not be determined and 41 who were unemployed, deceased, or continuing their education.

b/ Includes general and family practice, pediatrics, internal medicine, and obstetrics and gynecology.

As shown in the table below, about 46 percent of the 533 graduates whose work setting we could identify were employed in institutions and about 41 percent were employed in private practice. The percentage of nurse practitioners employed in institutions was greater than the percentage of physician assistants and medex so employed. Conversely, more of the latter were employed in private practices than were the nurse practitioners. One program director told us that most graduates of her program in teaching or administration also practice part time.

Number of graduates whose work setting was identified by GAO	Graduates working in								
	Institutions (note a)		Private practice		Prepaid practice		Teaching or administration		
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
Physician assistants/associates	165	79	48	57	35	7	4	22	13
Medex	134	16	12	106	79	11	8	1	1
Pediatric nurse practitioners	185	115	62	49	27	10	5	11	6
Child health associates	7	6	86	1	14	-	-	-	-
Family nurse practitioner	<u>42</u>	<u>27</u>	64	<u>6</u>	14	<u>2</u>	5	<u>7</u>	17
Total	<u>533</u>	<u>243</u>	46	<u>219</u>	41	<u>30</u>	6	<u>41</u>	8

a/ Includes individuals working in various types of clinics, hospitals, and public health departments.

USE OF PHYSICIAN EXTENDERS

All types of physician extenders seemed to spend considerable time performing similar functions--such as giving physical examinations and taking patient histories. Studies done by the various programs and data we developed indicated that most of the graduates were filling the roles for which they were trained. Although we did not independently determine the tasks performed by the graduates in their jobs, we had access to the results of four programs' task analyses.^{1/} The methods used in preparing these analyses varied, but the results were relatively similar. Each study pointed out that physician extenders independently take patient histories, give physical examinations, and carry out other medical functions, such as counseling.

According to the returned questionnaires, 290 physician extenders (93 percent of those answering the question) were independently seeing patients in their employer's office. Also, with the general exception of the family nurse practitioners, most were independently making hospital rounds under a physician's orders.

CONCLUSIONS

Physician extenders are being trained over varying periods of time by programs using different methods. Students' health care backgrounds vary greatly in length and type of training and experience. However, graduates of the programs in our review are performing essentially the same functions.

Despite the variances in training periods and methods and the evidence that many physician extenders are performing essentially the same functions, HEW has made no effort to analyze and compare the various training approaches to determine whether all types are needed or whether one or more approaches are more economical and efficient than the others.

Even though differences in training approaches might be expected because the physician extender concept is new and innovative, we believe sufficient time has elapsed for HEW to determine the relative efficiency and economy of each approach.

^{1/} The Duke and Alderson Broadbuss Physician Assistant/Associate, the University of Washington Medex, and the Northeastern Pediatric Nurse Practitioner programs.

RECOMMENDATION TO THE SECRETARY, HEW

We recommend that the Secretary of HEW study the various physician extender training programs to determine which methods (1) are best suited for producing the best qualified physician extenders in the most efficient and economical manner and (2) best meet the needs of the health care delivery system.

AGENCY COMMENTS AND OUR EVALUATION

In responding to the above recommendation, HEW stated:

"While we generally concur with the recommendation, we believe the language of the report creates the false impression that the Department is uninterested in evaluation while in reality evaluation initiatives have been consistently under development. We recognize the need for a more uniform approach to evaluation and work has begun in this regard, perhaps indirectly, through the support we have provided for the National Board of Medical Examiners proficiency examination."

The evaluation initiatives we identified, other than the one by HEW's National Center, discussed on page 7, were undertaken by the various physician extender training programs we reviewed. As discussed on pages 7 and 8, these evaluations were not completed in a manner enabling HEW to perform comparative analyses.

HEW also commented:

"We have some difficulty with the recommendation to the extent that it suggests that there should be a single standard curriculum for physician extenders. We would prefer to recognize the variety of academic and experiential backgrounds possessed by persons who enter physician extender training, as well as the different kinds of health delivery settings in which these persons function, and to concentrate evaluation efforts on determining whether the final product is reasonably standard and whether it prepares trainees with the flexibility to carry out the varied functions and responsibilities agreed to be essential for full performance."

We recognize that persons entering physician extender training programs have widely different backgrounds, levels of education, and prior experience. Our evidence showed, however, that graduates of all types of programs were fulfilling the same basic role and program officials were unable to provide us with any specific examples of how graduates from various programs

differed with regard to the functions they could perform. Because of this, we believe HEW should take a critical look at the various types of training programs being funded to determine which method or methods are most economical and efficient. We do not necessarily believe that only one training approach should be used, unless, of course, the recommended study would justify such an approach.

Further, HEW commented that:

"Within the scope of analysis being undertaken in response to Section 222 of the Social Security Amendments of 1972, SSA is planning to collect a wide range of data dealing with the impact of Physician Extenders on productivity, quality, delegation, costs, etc. This is an appropriate foundation for a valid comparative evaluation. In addition, we concur that collection of data on training costs, certification examination scores, professional and consumer acceptance, etc. should be begun in anticipation of incorporation of the results into a major comparative model. It seems appropriate to caution, however, that no definitive statement will be possible before we are able to view the relative merits of different types of physician extenders in their on-the-job performance."

As shown in appendix II, some physician extenders have been performing on the job for a substantial period of time. It appears to us that sufficient time has lapsed to allow HEW to examine the different types of physician extenders in their day-to-day performance and carry out the comparative analyses discussed above.

CHAPTER 3

ACCEPTANCE OF PHYSICIAN EXTENDERS

Acceptance of physician extenders by the medical profession and the public is generally increasing. Many States now have laws recognizing physician extenders of some type. The American Medical Association (AMA) and the American Nursing Association (ANA) are both involved in accrediting training programs. The National Board of Medical Examiners has developed a national examination for physician extenders, which was first administered in December 1973. The examination is intended to be the basis for certifying the competence of program graduates and is to be given annually. Physicians and patients in contact with physician extenders have, for the most part, expressed satisfaction with the services provided.

The legal status of physician extenders, however, is confused and varies considerably from State to State; decisions need to be made on whether extenders should be licensed or certified and on how this process should be carried out.

LEGAL RECOGNITION

In general, graduates of physician assistant and medex programs practice under legislation related to the States' medical practices acts, while graduates of the nurse practitioner programs practice under the States' nursing practices acts.

Legal recognition of physician assistants and medex

Two distinct statutory forms are used by States to sanction physician assistants and medex. The first is the general delegatory statute that amends the existing medical practices act to allow them to work under a supervising physician. The other is referred to as a regulatory authority statute and authorizes an agency--usually the State board of medical examiners--to establish rules and regulations concerning education and employment qualifications and functions. By January 1975, 30 States had enacted regulatory legislation and 7 States had enacted delegatory authority legislation. Of the States with regulatory authority statutes, 10 had not yet issued rules and regulations. Appendix III lists the 37 States and the types of legislation enacted in each.

Although some State laws sanction physician assistants and medex, at least one State regulatory agency's actions have had the effect of counteracting that intent of the State's law. In September 1970 the Governor of California approved legislation "* * *" to provide that existing legal constraints should not be an unnecessary hindrance to the more effective provision of health care services." One purpose of this law was to allow for innovative development of programs for educating physician assistants and medex. The State board of medical examiners was charged with establishing standards for approving training programs and supervisory physicians in California.

The regulations developed by the California board require strict compliance with its (1) standards for training programs and student qualifications, (2) determinations of the professional qualifications of the physician assistant or medex and the employing physician, (3) prohibitions against physician assistants and medex performing certain tasks, such as pelvic and endoscopic examinations, (4) requirement for written patient consent before a physician assistant or medex can provide nonemergency general medical services, and (5) requirement that an extender practice in close physical proximity to the supervising physician. The regulations specifically require that the supervising physician consult with the assistant or medex and the patient after the completion of a history taking and physical examination. He must also consult with both before and after the extender performs routine laboratory and screening techniques and therapeutic procedures outlined in the act, except when they are part of the history taking and physical examination or followup examination.

According to one program official, such strict requirements for physician consultation and supervision involving all treatment procedures would require the physician to spend almost all of his time consulting with patients and the extender. Coupled with the other regulations imposed by the board, these requirements may remove the incentive to employ a physician assistant or medex.

In an April 1973 letter, HEW informed the board that the California regulations concerning the training and use of physician assistants and medex rendered the employment prospects for program graduates unlikely and that HEW intended to discontinue its support of such programs. However, HEW extended its financial support of the Drew program through fiscal year 1975 because of State assurances that the regulations could be modified as the need to do so was demonstrated by physician assistants and medex practicing in California.

According to its May 1973 reply to HEW, the board's principal concern was the protection of patients, physicians, physician assistants, and medex. The board explained that it had carefully avoided any requirement that the supervising physician be "physically present" when the extender performs services.

The board's response also stated that "In those instances where the Assistant [physician extender] has gained the trust and confidence of the supervising physician, it is assumed that the requisite review or consultive process will be minimal."

According to Drew program officials, 16 of the 19 graduates of their program were employed as of August 1973, but only 9 were employed in California. Seven of the nine told us in August 1973 that the regulations prevented them from practicing at the level for which they were trained. The board informed us that, as of May 30, 1974, 7 of Drew's first medex graduating class were employed in California and 12 were located elsewhere.

As a result of the board's regulations on education standards, the Drew program--originally intended to test the medex program design in an urban setting--abandoned its medex-type training period for one resembling that of the physician assistant/associate model discussed in chapter 2.

Legal recognition of nurse practitioners

Officials of two nurse practitioner programs said that their graduates were practicing under existing State nurse practices acts. According to ANA, many of these acts prohibit nurse practitioners from performing medical tasks they have been trained to perform. Consequently, nurse practitioners in States that have not amended their nurse practices acts to allow them to perform tasks previously done only by physicians may be performing extended medical tasks without specific legislative sanction.

Only some States have changed their nursing laws to sanction nurse practitioners. For example, Arizona, on the advice of its attorney general, amended existing nursing legislation to cover the nurse practitioners.

In March 1973 the Virginia legislature amended its medical practices act to allow nurses to perform, under the supervision of a licensed physician, tasks previously done only by physicians. The amendment specified, however, that the services provided must be authorized by rules and re-

gulations adopted by the State's boards of medicine and nursing. According to an official of the University of Virginia's pediatric nurse clinician program, these regulations became effective on October 1, 1974.

In June 1973 a representative of the Virginia attorney general's office told us that certain medical tasks could be performed under a "custom and usage" concept. Examples of such tasks are giving immunizations and taking blood pressure. Tasks not customarily delegated, however, could not be performed until the above-mentioned regulations were implemented. However, nurse practitioners working in the State who responded to our questionnaire indicated that they had performed tasks formerly performed only by physicians--tasks taught in a physician extender program in the State--which are not covered by custom and usage during the 19-month period during which there were no implementing regulations.

According to the October 1 implementing regulations, a person certified by the State boards of medicine and nursing as a nurse practitioner is authorized to (1) collect medical histories and physical data and to organize and report the data to the physician for appropriate action, (2) pursue positive findings and make a preliminary diagnosis, (3) perform diagnostic procedures upon the specific or general instruction or direction of the physician, (4) prepare a recommendation of a final diagnosis or treatment plan to the physician, (5) implement a treatment plan upon the direction of the physician, and (6) initiate emergency treatment according to established protocols when the physician is not available.

The regulations require that the supervising physician (1) be readily available for consultation by the nurse practitioner and the patient and (2) retain the ultimate responsibility for directing the specific course of medical treatment.

In California a committee was established in August 1972 to study the use of nurse practitioners and recommend regulations to the State legislature. On October 19, 1973, reacting to the lack of medical and legal sanctions in the State for nurse practitioners, the board of medical examiners urged that all new nurse practitioner training programs be held in abeyance until the legislature provided specific authority for nurse practitioners. This legislation was approved on September 19, 1974. At least nine institutions in California were training nurse practitioners between August 1973 and September 1974.

Legal recognition of child health associates

Colorado is unique in that it is the only State with a law, separate from any other physician extender legislation, specifically sanctioning child health associates. The law defines the child health associate as a person who, subject to limitations provided in the law, practices pediatrics as an employee of and under the direction and supervision of a physician whose practice is to a substantial extent in pediatrics. A unique provision in the law permits child health associates to prescribe nonnarcotic drugs. Otherwise, this law is similar to the regulatory authority method of sanctioning physician assistants and medex.

ACCREDITATION, CERTIFICATION, AND LICENSURE

To determine the level of professional acceptance of physician extenders, we inquired into the status of their accreditation, certification, and licensure. According to HEW's "Report on Licensure and Related Health Personnel Credentialing," issued in June 1971, credentialing of health manpower takes three forms--accreditation of educational programs, certification of personnel by the profession, and licensure by a government agency. The three forms are closely interrelated and the terms are sometimes employed interchangeably. State practice acts establishing the procedures for licensing usually contain educational requirements. Professional associations also usually require the applicant to satisfy certain educational qualifications. For clarity, we include the following definitions.

- Accreditation is the process by which an agency or organization evaluates and recognizes an institution or program of study as meeting certain predetermined criteria.
- Certification or registration is the process by which a nongovernmental agency or association grants recognition to an individual meeting its qualifications. Such qualifications may include (1) graduation from an accredited or approved program, (2) acceptable performance on a qualifying examination or series of examinations, and (3) completion of a given amount of work experience.
- Licensure is the process by which a government agency grants permission to engage in a given profession or occupation. Those licensed must have attained the degree of competency necessary to reasonably protect the public health, safety, and welfare.

A description of the efforts being made in each of these areas to gain acceptance and recognition for physician extender programs follows.

Accreditation

AMA has developed "Essentials of an Approved Educational Program for the Assistant to the Primary Care Physician" in collaboration with the American Academy of Family Physicians, American Academy of Pediatrics, American College of Physicians, and American Society of Internal Medicine. AMA's House of Delegates adopted these standards in December 1971. The objective of these standards is to facilitate cooperation between educators and health professionals in establishing and maintaining quality educational programs for extenders and to provide recognition for those training programs that meet or exceed minimum standards.

The standards are a guide for the development and self-evaluation of physician extender training programs. Lists of AMA-approved programs are published for the employers and the public. As of December 1973, eight of the programs we reviewed had received full AMA approval and one had received preliminary approval.

Certification

To make the certification process more uniform and to lessen the burden of the State examining agencies, the National Board of Medical Examiners, which administers professional examinations for physicians, has designed a standardized test for assistants to the primary care physician under a \$425,843 HEW grant. According to a National Board official, about 880 individuals took the December 1973 test and about 770 passed. She estimated that about 95 percent of all the eligible medex, 70 percent of the eligible physician assistants/associates, and 10 percent of the eligible nurse practitioners took the test. Graduates of 14 of the 19 programs we reviewed were represented at the first test. When the examination was given, the number of States that would recognize it for certification was not known.

To be eligible for the December 1973 examination, an individual had to have graduated or have expected to graduate by January 31, 1974, from a program that

--had received full or preliminary approval from the AMA council of Medical Education for training physician extenders,

--had been funded by HRA to train physician extenders, or

--trained pediatric or nurse practitioners in a program of at least 4 months' duration within a nationally accredited school of medicine or nursing.

According to the National Board, the certifying examination is to assess the candidate's knowledge and performance of health care functions identified by potential employers as ones that the physician extender may be called on to perform. ANA and the American Academy of Pediatrics are also developing certification examinations.

In November 1973 ANA took the following position on the relationship of the physician extender certification process to nurse practitioners:

"* * * the certification process for physicians assistants is not designed for nurses and * * * nurses will not be encouraged, invited or coerced into participation in the certification process including setting for taking the examination. It is recognized that some nurses might select the route of a Certified Physicians Assistant, however, the implications for scope and practice as it relates to the states medical and nurse practice acts remain to be tested; perhaps in the courts."

The ANA Board of Directors has said "the term physician's assistant should not be applied to any of the nurse practitioners being prepared to function in an extension of the nursing role." ANA has also stated that nurses are responsible for their own practice and accountable to their clients and their clients' families for maintaining standards of practice. According to ANA, if a nurse decides to become a physician assistant, he or she

--will not be licensed as an individual;

--cannot determine the scope of the practice, which may well be limited to physical diagnosis and assessment; and

--will not be responsible to the patient, but to the employing physician, for the care given.

ANA explained that the distinction between nursing and medical practice is the different emphasis--the nurses' emphasis is on the psychosocial needs of patients, not just the pathological; preserving health, not just curing sickness; the whole patient, his family, and his community,

not just an isolated organ; and coordinating total health care, not just providing isolated bits of care.

Licensure

State governments have traditionally been responsible for the licensure of medical professionals. A considerable controversy exists as to whether additional health professions should be licensed. HEW's "Report on Licensure and Related Health Personnel Credentialing" stated:

"At a time when the education and training of health professionals is undergoing rapid change, when the organization of health care is being modified, and when the functions of health workers in the various service settings are being revised and broadened it would be unwise to develop new statutes that define functions narrowly and that establish rigid requirements for education and training."

In June 1973 a second HEW report on this matter said more time was needed to properly assess some of the new directions that State legislatures, licensing boards, professional organizations, and the educational community have taken toward credentialing health manpower. According to an HEW official, HEW's Health Manpower Coordinating Committee is formulating alternatives in this area to be presented to the Assistant Secretary for Health in December 1975.

OTHER INDICATIONS OF ACCEPTANCE

According to HEW officials, patient acceptance studies have established that the use of physician extenders is a viable concept from the patients' viewpoints. This is supported by surveys in locations where graduates of about half of the programs in our review are employed. Also, about 82 percent of the 217 physicians responding to our question concerning patient satisfaction indicated that their patients were satisfied with extender services.

A significant difference has been noted, however, between acceptance by patients unfamiliar with the physician extender and by those who have received care from an extender. For example, the University of Utah measured patient attitudes toward medex in 10 practices. In October 1971, before the medex were introduced, 48 percent of the patients favored the concept. A followup survey of the same practices in October 1972--after the medex and been practicing for about 10 months--showed an increase to 76 percent. According to a Bowman-Gray School of Medicine patient survey of 378

patients in 3 practices, 66 percent of the patients not knowing the physician assistant preferred to have the physician provide routine medical services, whereas only 35 percent of those previously receiving the graduate's services preferred the physician.

Surveys have also shown that the number of physicians who favor using physician extenders exceeded the number who indicated that they need or would employ an extender. For example, in 1972 a private marketing research and consulting firm conducted a survey for the California State Board of Medical Examiners that included interviews with 311 physicians. The survey showed that two-thirds of the physicians rated the physician assistant concept as excellent or good, but only 20 to 25 percent indicated a definite interest in hiring an assistant at that time. According to the consultant's report, many physicians said they would not hire an assistant because they did not need one.

In April 1973 we surveyed 141 general practitioners, internists, and obstetrics/gynecology specialists practicing in south-central Los Angeles--the area where Drew medex graduates were intended to serve--to determine if these physicians would hire a Drew medex graduate. Of the 79 respondents, 24 (30 percent) said they would hire a Drew medex and 45 (57 percent) said they would not. Eight qualified their answer and two did not answer this question. Reasons for not hiring a medex included lack of need for an assistant, concern about additional malpractice liability and patient reluctance, and lack of adequate office facilities.

Another indication of the extent of physician extender acceptance is employment status. We identified the employment setting of 533 graduates of the programs in our review. Of the 328 who responded to our question concerning the difficulty of obtaining employment, 284 (87 percent) said they experienced no problems obtaining their present jobs.

CONCLUSIONS

A large segment of the public and the medical profession appear to be accepting physician extenders. Many States have granted legal recognition and developed procedures to insure that training programs meet standards and that graduates are qualified. Program graduates have generally been able to secure employment without difficulty. Studies have shown that most patients and employing physicians have been satisfied with physician extenders.

The legal situation is not entirely clear. Some State boards of medical examiners have not yet issued regulations defining how physician extenders may practice or what duties and tasks they may perform. Other States have not clearly defined the extenders' role or provided specific legislative sanction for their expanded duties. This is a particular problem for some of the nurse practitioner programs. In addition, in at least one State, the board of medical examiners has developed strict regulations that apparently inhibited the development of the physician extender.

Furthermore, at least three different professional organizations are developing national certification examinations for physician extenders--a situation which could lead to confusion concerning the qualifications and capabilities of those passing the examinations.

RECOMMENDATIONS TO THE SECRETARY, HEW

We recommend that the Secretary of HEW work with the States to develop the necessary legislation to clearly define the role of physician extenders and provide a legal framework enabling them to carry out the duties for which they have been trained.

We also recommend that the Secretary work closely with professional organizations and State licensure boards to determine the most appropriate manner of granting official recognition to physician extenders.

AGENCY COMMENTS AND OUR EVALUATION

HEW concurred with the need for a clear definition of the role of physician extenders and stated that, in accordance with the Social Security Amendments of 1972 (Public Law 92-603) and the Health Training Improvement Act of 1970 (Public Law 91-519), a single set of standards is being developed to delineate the parameters of the physician extender role. According to HEW, although the standards will guide the States in developing legislation, the jurisdictional authority for practice rests entirely with the individual States.

HEW also concurred with our recommendation that it work closely with professional organizations and State licensure boards to determine the most appropriate manner of granting official recognition to physician extenders. It stated that the most appropriate manner of granting this recognition will be addressed now that the national certifying examination provides documentation of a minimal degree of competency to insure that the public health, safety, and welfare will be reasonably protected.

Although we recognize that the national certifying examination is an attempt to protect the public health, safety, and welfare, we do not believe that it will be a panacea. Presently, at least two other physician extender certifying examinations are being developed (see page 19) which we believe will cause confusion among States in granting official recognition to extenders.

Also, as discussed on page 19, ANA has stated that the certification process for physician assistants was not designed for nurses. As a result, we believe that HEW needs to encourage the States and the medical profession to develop uniform credentialing criteria appropriate for all physician extenders.

CHAPTER 4

DEPLOYMENT OF PHYSICIAN EXTENDERS

One legislative goal of the physician extender programs was alleviating problems caused by the geographical maldistribution of physicians. It was hoped that physician extenders could be placed in geographical locations where health manpower was scarce, to expand the capabilities of physicians in those locations.

Despite the increasing number of physicians being injected into the health care system, geographical maldistribution is still a problem. AMA stated that, as of December 1972, 140 of the Nation's counties had no active physicians providing patient care. According to an estimate of the National Health Service Corps, an agency that places health personnel in medically needy areas, 4,000 to 5,000 U.S. communities did not have an adequate number of practicing physicians in the summer of 1974.

Some programs we reviewed emphasize alleviating the problems caused by geographical maldistribution of health manpower and have a system for deploying graduates in health manpower shortage areas. Most of the programs, however, have no such deployment system, and as a result, graduates are not intentionally placed in areas having the greatest health manpower need. In addition, differences in State educational requirements may limit the mobility of physician extenders, precluding them from practicing in geographical areas having the greatest need.

GEOGRAPHICAL DEPLOYMENT

Seven of the 19 programs we reviewed--IHS's Community Health Medic program, the Maine Family Nurse Associate program, the North Carolina Family Nurse Practitioner program, and the four medex programs (excluding the Drew program)--were designed to intentionally place graduates in health manpower shortage areas or recruit students already in these areas who intend to remain after graduating. According to the Drew program director, the Drew program was originally designed to place individuals in the underserved areas of Los Angeles, but because of restrictions imposed by the California Board of Medical Examiners, the deployment system could not be effectively implemented. The other programs have no such deployment system.

The Community Health Medic program assigns its graduates to IHS field locations where tribal communities do not have

adequate medical care. Students of this program are IHS employees, committed in advance to work in certain field locations upon graduating. They function either on a dependent duty health team directly supervised by physicians at field hospital locations or on semi-independent duty at satellite health clinics.

The objective of the University of Maine Family Nurse Associate program, sponsored by Medical Care Development, Inc., is to prepare nurses for an expanded role in the delivery of primary care to adults in Maine. Although some of the other nurse practitioner programs in our review limit admission to residents of certain States, this nurse program and the North Carolina Family Nurse Practitioner program were the only ones that had the reduction of problems caused by maldistribution of physicians as a major goal.

To be considered for admission, applicants for the Maine program must be from that State and must have a sponsoring physician or agency. The sponsor must provide employment, make a commitment for the student's continuing education, and furnish adequate physician supervision for field activities. Priority is given to applicants from areas where residents have limited access to health care. As of May 31, 1973, six of the seven October 1972 graduates were still employed by their original sponsors in Maine. The other was unemployed.

The University of North Carolina Family Nurse Practitioner program places a major emphasis on recruiting registered nurses from local communities who have expressed an interest in working in those communities. This program is part of an overall plan to meet North Carolina's health manpower needs. The plan is being implemented by the University of North Carolina and the statewide system of Area Health Education Centers.

The medex programs attempt to direct manpower to areas where obtaining satisfactory primary care is a problem. In most cases, program officials identify preceptor physicians in such areas before accepting the applicants. Criteria for selecting the preceptor physicians include a need for assistance, a willingness to use innovative health professionals, a desire and ability to train nonphysicians, and an established and secure practice in the community. Students are matched with selected medical practices and deployed there for the preceptorship phase of training.

The other programs reviewed did little to influence the deployment of their graduates into health shortage areas.

Although some maintained a file of physicians or institutions interested in hiring physician extenders, graduates were left on their own to find jobs in the open market.

To determine the effect of a deployment system on the Nation's health manpower needs, we used AMA data to compute the ratio of population to physicians providing patient care for each of the counties where graduates of the programs in our review were employed. These ratios were then compared to (1) a ratio of 770 to 1, the overall national ratio of population to non-Federal physicians delivering patient care, and (2) a ratio of 1,000 to 1, which is based on prepaid providers' experiences indicating that approximately 10 doctors were needed to provide comprehensive family health care to a population of 10,000 and an Office of Economic Opportunity estimate that 1 physician is needed for every 1,000 people being served by their community health centers.

We also determined the number of physician extenders who had located in areas identified by HEW as needing health manpower and the number of physician extenders who had located inside or outside of standard metropolitan statistical areas (SMSAs), where most of the Nation's physicians reside.

As illustrated in the following tables, programs with a deployment system have succeeded better in placing their graduates in areas of need than programs with no such system. A comparison of the 19 programs is given in appendixes IV through VI.

Ratio of Population to Non-Federal
Physicians in Patient Care in Counties
Where Physician Extenders Are Employed

	Number of graduates whose location was identified in GAO survey	Graduates working in counties			
		With more than 770 persons per physician		With more than 1,000 persons per physician	
		Number	Percent	Number	Percent
Programs with a deployment system	<u>165</u>	<u>125</u>	<u>76</u>	<u>105</u>	<u>64</u>
Programs without a deployment system:					
Child health associate	7	5	71	4	57
Physician assistant/associate	135	70	52	54	40
Pediatric nurse practitioner	251	64	25	40	16
Family nurse practitioner	<u>15</u>	<u>1</u>	7	<u>1</u>	7
Total	<u>408</u>	<u>140</u>	34	<u>99</u>	24

In March 1973 HEW designated the former Health Services and Mental Health Administration ^{1/} as lead agency for the Health Service Scarcity Area Identification Program, which was designed to provide a uniform scarcity definition for all health services programs. Using the definition and guidelines developed by the Health Services and Mental Health Administration, State and areawide comprehensive health planning agencies identified the scarcity areas within their planning jurisdictions and provided basic information on available resources in those areas. The following table shows the number of graduates from programs with and without a deployment system who were working in scarcity areas.

Distribution of Physician Extender
Graduates In HEW's Health Scarcity Areas

	Number of graduates whose location was identified in GAO survey	Graduates working in counties -----					
		Considered scarcity areas		Containing scarcity areas (note a)		Not considered scarcity areas	
		Number	Percent	Number	Percent	Number	Percent
Programs with a deployment system	<u>165</u>	<u>44</u>	<u>27</u>	<u>38</u>	<u>23</u>	<u>83</u>	<u>50</u>
Programs without a deployment system:							
Child health associate	7	-	-	-	-	7	100
Physician assistant/associate	135	24	18	24	18	87	64
Pediatric nurse practitioner	251	23	9	66	26	162	65
Family nurse practitioner	<u>15</u>	<u>7</u>	47	<u>7</u>	47	<u>1</u>	6
Total	<u>408</u>	<u>54</u>	13	<u>97</u>	24	<u>257</u>	63

a/ This column includes those individuals employed in counties having some sections designated as health scarcity areas. We were not able to determine if these physician extenders were actually working in health scarcity areas.

^{1/} The Health Services and Mental Health Administration was abolished on July 1, 1973. See appendix VIII, footnote b, for further explanation.

According to AMA statistics, as of December 31, 1972, 85.5 percent of all non-Federal physicians providing patient care in the United States and its possessions were in 300 metropolitan areas--252 SMSAs and 48 areas considered to be potential SMSAs. About 74 percent of the population resides in these metropolitan areas. On the basis of a resident population estimate of 207.5 million and a non-Federal patient care physician total of 269,095 (as of December 31, 1972), the population to physician ratio in the 300 metropolitan areas is 663 to 1, compared with 1,408 to 1 in the rest of the Nation. The following table shows the percentage of physician extender graduates employed in and outside SMSAs.

Distribution of Physician Extender
Graduates In SMSAs (note a)

	Number of graduates whose location was identified in GAO survey	Graduates working in SMSAs		Graduates working outside SMSAs	
		Number	Percent	Number	Percent
Programs with a deployment system	<u>165</u>	<u>60</u>	<u>36</u>	<u>105</u>	<u>64</u>
Programs without a deployment system:					
Child health associate	7	6	86	1	14
Physician assistant/associate	135	81	60	54	40
Pediatric nurse practitioner	251	217	86	34	14
Family nurse practitioner	<u>15</u>	<u>15</u>	100	-	-
Total	<u>408</u>	<u>319</u>	78	<u>89</u>	22

a/ Included are 300 areas, 252 SMSAs and 48 "potential" SMSAs.

STATE REGULATIONS AFFECTING DEPLOYMENT

Graduates of physician extender programs in some States may not be able to practice in others because of different requirements for length and type of training, education, and experience.

For example, the North Carolina agency charged with regulating the practice of physician assistants and medex has stipulated that they be graduated from a program of at least 2 academic years in length. As a result, it appears that no graduate of a 3-month medex program could legally practice in North Carolina. No such restriction is placed on nurse practitioners in that State.

According to information obtained from HRA, similar situations exist in a number of States. In Vermont, candidates for registration as physician extenders must have completed (1) a recognized physician extender program, (2) 2 years of nursing school, (3) 1 year of medical school or school of osteopathy and 1 year of experience and training under a physician, or (4) 2 years of experience and training under a physician. To qualify for registration under alternatives (3) or (4) the candidate must have been trained to perform certain services detailed in State regulations. In contrast, California permits full academic credit through equivalency measures but provides that no student shall graduate without spending at least 1 year in residence in full-time clinical training with direct patient contact.

Georgia regulations require graduation from an approved physician extender program or 4 years of training combining satisfactory completion of a formal course of study in the health field with related work experience. The New York State health commissioner has the discretion of accepting--in lieu of all or part of an approved training program--evidence of an extensive health-oriented education and appropriate experience and training.

CONCLUSIONS

Physician extender programs have the capability of placing graduates in areas with health manpower shortages. Many of the programs with built-in deployment systems have been reasonably successful in this regard. However, where no such deployment system exists, program graduates tend to follow physicians to areas where supplies of health manpower are greater. Although many factors affect graduates' job selections, a system to insure placement of graduates in health manpower shortage areas is needed if the physician

extender concept is to help alleviate the physician maldistribution problem.

More consistent State regulations concerning physician extender qualifications are also needed to provide graduates with the greatest possible flexibility in deciding where to practice. At present, extenders moving from one State to another may be faced with different requirements for approval. Because many physician extender programs are federally assisted and because mobility of graduates is essential in alleviating the health manpower maldistribution problem, these differences need to be resolved in a manner providing the greatest possible mobility for extenders.

The Nation's health manpower needs vary as the population distribution shifts. To meet these changing needs and to avoid confusion concerning where graduates will be able to practice, HEW should work closely with the States to develop uniform criteria for physician extender employment.

RECOMMENDATIONS TO THE SECRETARY, HEW

To derive maximum benefit from physician extenders by deploying them to areas of health care shortages and to insure the mobility necessary for such deployment, we recommend that the Secretary of HEW

- require as a condition of Federal financial support that physician extender programs incorporate in their design a method to place graduates in areas where health manpower is scarce and

- work closely with the States in developing criteria specifying training and experience qualifications acceptable to all States.

AGENCY COMMENTS AND OUR EVALUATION

HEW agreed with our recommendation on the need for physician extender programs to develop and incorporate into their design a plan for the placement of graduates in areas of health manpower shortages and indicated that it had attempted to accomplish this. HEW believed, however, that, since physician extenders must function under the supervision of licensed physicians, the problems of geographical distribution of physician extenders and physicians are essentially the same. Also, HEW indicated that physician extenders should not be located exclusively in health manpower shortage areas because this would lend substance to an allegation that the Federal Government supports a policy of second-class medicine in rural areas.

As indicated on pages 24, 25, and 26, some of the physician extender programs are actively attempting to place graduates in health manpower shortage areas while others are not. Moreover, since (1) 4,000 to 5,000 communities in the United States do not have an adequate number of practicing physicians, (2) past efforts at correcting the physician maldistribution problem have met with little success, and (3) one of the reasons for creating physician extender programs was to alleviate the geographical maldistribution problem, every possible effort should be made to place as many physician extenders as possible in such areas. Placing extenders in areas where sufficient numbers of physicians already exist tends only to further exacerbate the maldistribution problem.

The allegation that placing physician extenders in health manpower shortage areas indicates that the Federal Government is supporting a policy of second-class medical care for these areas does not seem to be supported by the facts. As mentioned previously, physician extenders perform many medical tasks previously performed by physicians but not requiring their extensive knowledge and skill. Physicians and patients in contact with extenders have, for the most part, expressed satisfaction with the services provided.

HEW also indicated that its contracts already provide for placing physician extender graduates in medically deficient areas. Our evidence, however, indicated that only 7 of the 19 programs we reviewed (as discussed on page 24) were making a concerted effort to accomplish this goal. In this regard, HEW indicated that it intended to more vigorously pursue efforts to have its contractors place graduates in manpower and service deficient areas.

With regard to our recommendation that it work closely with the States in developing uniform training and experience criteria, HEW said this matter is being implemented through the establishment of the National Commission for the Certification of Physician Assistants. HEW also commented that the unique manpower and services needs, quality control objectives and capabilities, and patient and provider acceptance problems of the individual States make universal acceptance of a uniform standard unlikely.

Although the process of certifying physician extenders should add to their professional stature and provide additional assurance about the adequacy of their training, it will not resolve those problems emanating from the different education, training, and experience requirements of different

States. As indicated on page 29, graduates of physician extender programs in some States may not be able to practice in others because of these different requirements. Also, as stated on page 18, it was not known how many States would recognize the National Board of Medical Examiners' certification examination or the examinations being developed by other professional organizations.

We agreed with HEW that there will be problems involved in developing uniform training and experience criteria, but we do not believe that such problems will be insurmountable. If physician extenders are to have a major impact on the health manpower maldistribution, they must be given the opportunity to locate in geographical areas with the greatest need for their services, and artificial barriers should not stand in their way.

CHAPTER 5

IMPACT OF PHYSICIAN EXTENDERS

ON THEIR EMPLOYERS' PRACTICES

AND REIMBURSEMENT FOR SERVICES RENDERED

Our review showed that in those practices employing physician extenders:

- The number of patients seen has increased while the physicians' total on-the-job time has remained the same or decreased.
- The cost of malpractice insurance and the potential threat of malpractice suits have not deterred the employment of extenders.
- Fees charged for extender services have been the same as if the physician provided the service.

In addition, some physicians have spent a greater percentage of their time on more complex cases.

Also, two HEW agencies are promoting the training and development of physician extenders, while a third has stated that statutory authority does not allow payment for certain services which the extenders provide.

IMPACT ON HEALTH CARE PROVIDED

Of the 246 physicians who replied to our questionnaire concerning physician extender impact on patient workload, 172 (70 percent) reported an increase in the number of patients seen by their practice, 73 (30 percent) reported no change, and only 1 reported a decrease. In the case of the decrease, the physician said the patients were now going to a clinic manned by the extender. The increases reported ranged from 2 to 50 percent.

Of the 266 physicians who answered our question concerning the impact of the physician extender upon the hours they spent in practice, 66 (25 percent) reported a reduction in their hours worked, 185 (70 percent) reported no change, and 15 (5 percent) reported an increase.

In addition to the above responses, 15 physicians volunteered additional comments noting that employing a

physician extender gave them more time to spend with patients and to handle more complex cases.

One way physician extenders give physicians more time is through the creation of satellite clinics. Eight community health medic graduates work in rural IHS hospitals, and seven travel to satellite clinics two or three times a week to serve isolated Indian communities. Of the seven supervising physicians responding to our questionnaire, four stated that the medic assistance reduced their workweek by 2 to 10 hours and none reported increased hours. Four of the seven reported an increase in patient load ranging from 10 to 30 percent, two noted no change, and one reported a decrease because about 15 to 20 percent of his patients went to the satellite clinic manned by the community health medic. All seven physicians said that the medic gave them more time for hospital patients, complex cases, and administrative duties.

A satellite health clinic in rural Maine is staffed with a graduate of the Maine Family Nurse Associate program who is the only full-time health care provider in the area. The clinic is equipped with a television system linked to five physicians who provide backup support. The graduate handles all routine visits, consulting daily with one of the backup physicians, to whom she refers cases beyond her capabilities. She sees about 25 patients daily and refers about one-half to a physician. One other graduate of the Maine Family Nurse Associate program was also working in a satellite health clinic.

Similar satellite clinics were being staffed by graduates of three other programs we reviewed.

IMPACT ON FEES

Very few physicians indicated fee changes resulting from hiring physician extenders. Most physicians charged equal fees regardless of whether the physician or the extender provided the service. None of the training programs examined had reducing health care costs as a major objective, and in only one--the University of Washington Medex--could we identify a study measuring the financial impact of a physician extender on a medical practice. This study of nine practices employing medex graduates discovered no trend; some practices' revenues and expenses increased while others' decreased.

Officials of two training programs expressed disapproval of a system establishing different fees for the same service depending on who performed it because such a



COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

B-164031(5)

To the President of the Senate and the
Speaker of the House of Representatives

Having reviewed physician extender programs throughout the country, we are (1) reporting on the problems that hamper the extenders in improving health care delivery and (2) presenting recommendations to the Secretary of Health, Education, and Welfare for remedying these problems.

We made our review pursuant to the Budget and Accounting Act, 1921 (31 U.S.C. 53), and the Accounting and Auditing Act of 1950 (31 U.S.C. 67).

We are sending copies of this report to the Director, Office of Management and Budget, and to the Secretary of Health, Education, and Welfare.

A handwritten signature in black ink, reading "Thomas B. Staats".

Comptroller General
of the United States



system would falsely imply a difference in the quality of service.

Physician extenders' responses to our question about their current salaries are summarized in appendix VII.

REIMBURSEMENT FOR SERVICES

HRA and IHS provide financial assistance for training physician extenders, but SSA is not providing reimbursement for extender services under part B of the Medicare Program, which provides for payment of physicians' services on a reasonable charge, fee-for-service basis. According to SSA, part B of Medicare does not allow payment for services traditionally performed by physicians unless they are the kinds commonly furnished as a necessary adjunct to the physician's personal in-office services. SSA may reimburse institutions, however, for physician extender services under part A of Medicare as it does for the services of any salaried employee of a hospital or extended-care facility. 1/

In 1965, when the Medicare legislation was enacted, there were few, if any, physician extenders working, and no allowance was made for their reimbursement.

The issue of reimbursement came to a head on May 10, 1971, when an SSA official in Boston wrote to a New England Medicare coordinator that

"The question of whether payment may be made for the services of physician assistants who are physician employees depends--on whether they meet the requirements of Section 1861(S)(2)(A) of the [Social Security] Law which provides coverage of services 'furnished as incident to a physician's professional services of kinds which are commonly furnished in physicians' offices and are commonly either rendered without charge or included in the physician's bills'."

The letter concluded that "Some of the services physician assistants would perform would not presently meet the 'commonly furnished in physicians' offices' requirement."

1/ In commenting on our draft report, HEW said there may be exceptions when reimbursement would not be provided under part A of Medicare. (See app. I.)

SSA regulations specify that services to be covered under section 1861(S)(2)(A) of the Social Security Act must be of kinds that are "commonly furnished" as a necessary adjunct to the physicians' personal in-office services. Thus, according to the Medicare law, the performance by a physician extender of services traditionally reserved to physicians cannot be covered under part B of Medicare even though all other requirements have been met.

Responding to this problem, the Congress in the Social Security Amendments of 1972 provided that a study be made to determine (1) under what circumstances payments to physician extenders would be appropriate, (2) what payment methods would be the most appropriate, equitable, and non-inflationary, and (3) how large the reimbursements should be that are paid under health programs authorized by the Social Security Act. A contract covering the first phase of this study--designing a data collection, evaluation, and analysis initiative--was let in February 1974. The study itself began in December 1974.

According to an official of SSA's Bureau of Health Insurance, letters have been sent to third-party carriers asking them to review bills submitted by doctors employing physician extenders. This official advised us that insufficient audit capability exists, however, to review every bill submitted by a physician employing an extender. Consequently, SSA is probably unknowingly reimbursing physicians for services rendered by extenders under part B of Medicare.

We contacted a number of health insurance carriers to determine their practices regarding reimbursement for physician extender services. The private carriers were reimbursing for physician extender services if

- the extender was employed by and under the supervision of a physician,
- extenders were legally recognized in the State, and
- the fee was in accordance with "reasonable and customary" charges.

MALPRACTICE CLAIMS AND INSURANCE

With one exception, we found no evidence of any malpractice claims filed against physician extender graduates or their employing physicians for work performed by an extender. The only instance of any such claim we observed involved a physician associate student at Duke University

who was assisting a physician in the university's hospital. The malpractice claim resulted from an act that took place in September 1971, and at the time of our visit, the case had not yet come to trial.

According to physician extenders, employing physicians, and insurance companies, malpractice insurance is available to extenders. An exception was in California, where, because of legal uncertainties, the availability of malpractice insurance at the time of our review was in doubt.

Of the 306 physician extenders responding to our question on this point, 297 had some sort of malpractice coverage, either through individual coverage, under a rider of the employing physician's policy, or under the umbrella coverage of the employing institution. In some instances, nurse practitioners were covered by the same policy that protected them when they practiced solely as registered nurses.

CONCLUSIONS

Physician extenders have generally improved the accessibility and quantity of medical care provided in their employers' practices. The expense of their salaries and additional malpractice insurance premiums has apparently not inhibited their employment.

Fees charged by practices employing physician extenders are based on the services provided, not on the person providing the service. Thus, the same fee is charged whether the services are provided by a physician or an extender.

The issue of reimbursing for physician extender services needs to be resolved. HEW should conduct the study required by the Social Security Amendments of 1972 in an expeditious manner and use the results as they become available to resolve this matter.

RECOMMENDATION TO THE SECRETARY, HEW

We recommend that the Secretary of HEW insure that the study required by the Social Security Amendments of 1972 is conducted expeditiously and use the results as they become available to resolve the problems concerning the reimbursement for services provided by physician extenders under the Social Security Act.

AGENCY COMMENTS AND OUR EVALUATION

HEW commented that the study required by the Social Security Amendments of 1972 is well underway. The study has

been designed to test the impact of physician extenders on the delivery of primary medical care and the effects of alternative methods and amounts of reimbursement for extender services on extender practice, productivity, and finance.

According to HEW:

"The baseline information plus subsequent experimental data should provide us with a useful picture of how physician extenders function in different practices, and their impact on practice productivity and quality of care. These data should also help in defining the relationship between the costs of employing physician extenders and the additional revenues generated by the practice which can be attributed to the physician extender. Through these data, we should be able to determine the conditions under which Medicare reimbursement for physician extender services is appropriate and also, the most equitable and non-inflationary way to reimburse for them. In answering these questions, the Physician Extender Reimbursement Study will help address many of the other issues discussed in the draft report."

We agree that the study will address many of the issues discussed in this report. The information being developed on how physician extenders function in different practice settings and affect practice productivity and quality of care should be particularly useful.

We reiterate our main concern--that the study be made expeditiously and that the information obtained be used as soon as it becomes available to resolve the problems surrounding the reimbursement for services provided by physician extenders.



DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
OFFICE OF THE SECRETARY
WASHINGTON, D C 20201

FEB 3 1976

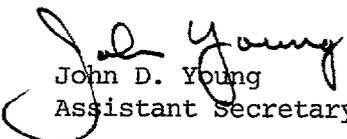
Mr. Gregory J. Ahart
Director
Manpower and Welfare Division
General Accounting Office
Washington, D.C. 20548

Dear Mr. Ahart:

The Secretary asked that I respond to your request for our comments on your draft report to the Congress entitled, Training, Placement, and Use of Assistants to the Primary Care Physician (B-164031(5)).

We appreciate the opportunity to comment on this draft report before its publication.

Sincerely yours,


John D. Young
Assistant Secretary, Comptroller

Enclosure

GAO note: Page numbers in this appendix may not refer to the final report.

COMMENTS OF THE DEPARTMENT OF HEALTH, EDUCATION,
AND WELFARE ON THE COMPTROLLER GENERAL'S DRAFT
REPORT TO THE CONGRESS OF THE UNITED STATES
ENTITLED, "TRAINING, PLACEMENT, AND USE OF
ASSISTANTS TO THE PRIMARY CARE PHYSICIAN"

The Department of Health, Education, and Welfare is in general agreement with the findings and intent of the recommendations in the draft report. It represents a diligent effort to obtain and analyze information from a variety of physician extender programs and the information it contains will be helpful to the Department as we implement more plans for systematic support mechanisms related to this new group of medical professionals. Our comment on each recommendation in the draft report follows.

GAO RECOMMENDATION

That the Secretary, HEW, conduct a study of the various programs which are training physician extenders and determine which method or methods is best suited for producing the most qualified physician extenders in the most efficient and economical manner.

DEPARTMENT COMMENT

While we generally concur with the recommendation, we believe the language of the report creates the false impression that the Department is uninterested in evaluation while in reality evaluation initiatives have been consistently under development. We recognize the need for a more uniform approach to evaluation and work has begun in this regard, perhaps indirectly, through the support we have provided for the National Board of Medical Examiners proficiency examination. We have some difficulty with the recommendation to the extent that it suggests that there should be a single standard curriculum for physician extenders. We would prefer to recognize the variety of academic and experiential backgrounds possessed by persons who enter physician extender training, as well as the different kinds of health delivery settings in which these persons function, and to concentrate evaluation efforts on determining whether the final product is reasonably standard and whether it prepares trainees with the flexibility to carry out the varied

functions and responsibilities agreed to be essential for full performance. Within the scope of analysis being undertaken in response to Section 222 of the Social Security Amendments of 1972, SSA is planning to collect a wide range of data dealing with the impact of Physician Extenders on productivity, quality, delegation, costs, etc. This is an appropriate foundation for a valid comparative evaluation. In addition, we concur that collection of data on training costs, certification examination scores, professional and consumer acceptance, etc. should be begun in anticipation of incorporation of the results into a major comparative model. It seems appropriate to caution, however, that no definitive statement will be possible before we are able to view the relative merits of different types of physician extenders in their on-the-job performance.

GAO RECOMMENDATION

We recommend that the Secretary, HEW, work with the States to develop the necessary legislation which will clearly define the role of physician extenders and provide the necessary legal framework for them to carry out the duties for which they have been trained.

We also recommend that the Secretary work closely with cognizant professional organizations and State licensure boards to determine the most appropriate manner of granting official recognition to physician extenders.

DEPARTMENT COMMENT

We concur with the need for a clear definition of the role of physician extenders. In accord with the Social Security Amendments of 1972 (P.L. 92-603) and the Health Training Improvement Act of 1970 (P.L. 91-519), a single set of standards is being developed which will delineate the parameters of the physician extender role. The standards will provide guidance to the States in the development of legislation. The jurisdictional authority for practice, however, rests entirely with the individual States.

We concur with the second part of the recommendation. The certifying examination for the assistant to the primary care physician will be our most effective tool in the development of standardized credentialing. This examination is administered by the National Commission

for the Certification of Physician Assistants. Representatives from the Federation of State Boards of Medical Examiners serve on the Commission. The examination is open to nurses practitioners. The most appropriate manner of granting official recognition to physician extenders will be addressed now that the certifying examination provides documentation of a minimal degree of competency to ensure that the public health, safety, and welfare will be reasonably protected.

GAO RECOMMENDATION

To derive the maximum benefit from the use of physician extenders through their geographical deployment to areas of health care shortages, and to insure the mobility necessary for such deployment, the Secretary of HEW should:

- require as a condition of Federal financial support, that physician extender programs develop and incorporate into their design, a plan or method to place graduates in areas of health manpower shortage;
- work closely with the States in developing uniform criteria which would specify the type of training and experience needed by physician extenders that would be acceptable to all States.

DEPARTMENT COMMENT

We agree with the recommendations and have attempted to meet them. The draft report could, however, be somewhat more explicit in pointing out that since physician extenders must function under the supervision of licensed physicians, the problems of geographic distribution of physicians and of physician assistants are essentially the same problem. Therefore, we suggest that this recommendation be revised to recognize the close link between physician extenders and their employers, whether solo practitioners or institutions. Our contracts to support physician extender training programs have required from the beginning, as part of the contract workscope for projects supported under the Comprehensive Health Manpower Training Act, that the program provide "preceptorships or clinical rotation in primary care in rural and/or central urban areas" and provide "a program designed to assist in the placement of PA graduates with emphasis on employment in primary care practices in medically deficient areas." The MEDEX programs have the best

deployment mechanism because approximately three quarters or more of their training is provided in a preceptorship setting.

The Department intends to more vigorously pursue efforts to have its contractors place graduates in manpower and services deficient areas. However, it is important that graduates not be located exclusively in such areas. To do so would be to lend substance to an allegation that the Federal government supports a policy of second class medicine in such areas. In addition, research has suggested that utilization of physician extenders can lower the cost per unit of service delivered by the practice. It seems prudent to take advantage of such potential savings in all sectors of the delivery system.

The recommendation that we work with the States in developing uniform training and experience criteria is being implemented through the establishment of the National Commission for the Certification of Physician Assistants. However, we wish to point out that the unique manpower and services needs, quality control objectives and capabilities, and patient and provider acceptance problems of the individual States make universal acceptance of a single uniform standard unlikely.

GAO RECOMMENDATION

The Secretary, HEW, should take the steps necessary to to conduct in an expeditious manner the study required by the Social Security Amendments of 1972 and use the study results as they become available to resolve the problem surrounding the reimbursement for services provided by physician extenders under the Social Security Act.

DEPARTMENT COMMENT

The Physician Extender Reimbursement Study is well underway. In line with the objectives of Section 222 of the Social Security Amendments of 1972, we designed the study to test the impact of physician extender utilization on the delivery of primary medical care and the effects of alternative methods and amounts of reimbursement for physician extender services upon physician extender practice, productivity and finance. We have contracted with the University of Southern California for the collection and processing of baseline information on physician extenders and their practices as well as on a set of matched control practices which do not employ

physician extenders. Some of this data -- the distribution of physician extender practices, physician extender practice organizations, etc., -- will be available by January 1975.

The baseline information plus subsequent experimental data should provide us with a useful picture of how physician extenders function in different practices, and their impact on practice productivity and quality of care. These data should also help in defining the relationship between the costs of employing physician extenders and the additional revenues generated by the practice which can be attributed to the physician extender. Through these data, we should be able to determine the conditions under which Medicare reimbursement for physician extender services is appropriate and also, the most equitable and non-inflationary way to reimburse for them. In answering these questions, the Physician Extender Reimbursement Study will help address many of the other issues discussed in the draft report.

GENERAL COMMENTS

In addition to our responses to recommendations shown above, you may wish to consider the following comments concerning specific items in the draft report:

Page 50, next-to-last paragraph: The statement is made to the effect that a conflict exists within HEW in that HRA and IHS are promoting the development and use of physician extenders, while SSA has promulgated regulations prohibiting Medicare reimbursement for their services. Our regulations -- and in this case it would be SSA's Medicare Part B Intermediary Manual -- follow the law. Consequently, any conflict that may exist does not arise because of our manual instructions or regulations, but because of the provisions of the law itself.

Page 52, last paragraph: The subject of "Impact on Fees" refers to a very complex issue. There are some very valid questions raised regarding the priority of charging the same fees for services of physicians and physician extenders when there are very large differences in the levels of training, experience, and skills applied in the treatment individual patients receive. Perhaps, public acceptance of care by physician extenders should not be based on

the questionable premise that services rendered by them are exactly the same as the services of physicians. It may be better in the long run to base any acceptance of their services on the idea that even though physician extenders have different levels of training and experience, they are able to meet most patients' uncomplicated needs at a somewhat lower cost.

Page 53, last paragraph: The first sentence states in part that SSA's position is that it does not have legal authority to make reimbursement for services provided by physician extenders under Part B. As mentioned in Section 6103 of the Medicare Part B Intermediary Manual, these services may be reimbursed if they are incident to a physician's professional service, are not the kind of services which traditionally have been reserved to physicians, and are billed by the physician.

The last sentence of this paragraph reads: "SSA does reimburse institutions, however, for the services of physician extenders under Part A of Medicare in the same manner as any other salaried employee of a hospital or extended care facility." This statement is a generalization and could be misleading. Physician extenders may be nurses or health technicians who undergo additional training, or they may be novices who are introduced to health care through the extender training. Thus, the services they are qualified to render will vary depending on the individual. Covered inpatient hospital services could include services rendered by a physician extender who is employed by the hospital or who furnishes services under arrangements made by the hospital. However, physician-type services rendered by a physician extender are not generally provided -- as specified in 1861(h) (7) of SSA Regulations -- by skilled nursing facilities and, thus, are not reimbursed as extended care services.

Page 54, third paragraph: We suggest that the date -- "May 1972" -- be deleted from the first sentence since the provision in the law concerning the "commonly furnished" requirement has appeared in Medicare regulations from the start. In addition, the second sentence should be changed to read, "Thus, according to the Medicare law

the performance by a physician extender...."
The way the report reads on pages 4, 5, 50, 53
and 54, the inference could be drawn that SSA
is resisting departmental activities toward
paying for physician extenders' services when
in fact it is the provisions of the Medicare
law that govern coverage and reimbursement.

Page 55, second paragraph: The opening words --
"Despite SSA's ruling not to reimburse physician
extenders..." again imply that it is SSA's decision,
rather than the law, that governs reimbursement.
The first sentence of this paragraph continues
"...an official of SSA's Bureau of Health Insurance
advised us that the SSA position against provid-
ing reimbursement is unenforceable since SSA
does not have the staff to audit every bill...."
This is also mentioned on page 5, second para-
graph. We think this is an overstatement and
not really an appropriate argument in favor of
coverage for these services. SSA instructions
(section 6103 of the Medicare Part B Intermediary
Manual) provide that a physician should be
sufficiently involved to perform at least an
individual evaluation of the patient so that
there is a physician's professional service
to which the paramedic's service may be an
incidental part. For example, where a physician
extender works alone in a satellite facility and
a physician is rarely present there, the physician
extender's services obviously would not be covered;
but where the physician extender works in the same
office as the physician, it would, of course, be
difficult to establish in any given case that the
physician was sufficiently involved to make an
independent evaluation as discussed in the manual
instructions.

PROGRAMS REVIEWEDMedex Programs

<u>Starting date of first class</u>	<u>Program</u>	<u>Sponsoring institution</u>	<u>Length of training</u>	<u>Graduates 6-30-73</u>	<u>Cummulative HEW funding as of 6-30-74 (note a)</u>
1-71	Medex	Dartmouth College, Hanover, N.H.	3 mos. classroom and clinical, 9 mos. preceptorship	44	\$1,611,176
11-70	Medex	University of North Dakota, Grand Forks, N.D.	3 mos. classroom and clinical, 9 to 12 mos. preceptorship	19	1,113,144
9-71	Medex	University of Utah, Salt Lake City, Utah	3 mos. classroom and clinical, 9 to 12 mos. preceptorship	25	1,141,827
6-69	Medex	University of Washington, Seattle, Wash.	3 mos. classroom and clinical, 9 to 12 mos. preceptorship	<u>67</u>	<u>2,867,842</u>
Total				<u>155</u>	<u>\$6,733,989</u>

a/ These totals represent direct assistance provided by HEW's Special Programs Staff, Division of Nursing, National Center, Regional Medical Programs, IHS, and Office of Maternal and Child Health as of June 30, 1974. Funds provided by other Federal agencies, States, schools, and private sources have not been included. The funding periods and federally supported budget items, such as research and evaluation, vary considerably. Thus, any comparison of economy based on this table is invalid.

Of the above programs, the University of Washington program has had graduates in practice the longest. Its first class of 14 entered the preceptorship phase of training in September 1969 and graduated in September 1970.

Physician Assistant/Associate Programs

<u>Start- ing date of first class</u>	<u>Program</u>	<u>Sponsor- ing in- stitution</u>	<u>Length of training</u>	<u>Grad- uates 6-30-73</u>	<u>Cumula- tive HEW funding as of 6-30-74 (note a)</u>
9-69	Physician assis- tant	Bowman-Gray School of Medicine, Winston- Salem, N.C.	9 mos. class- room, 12 mos. clinical, 3 mos. preceptor- ship	20	\$ 561,351
9-65	Physician asso- ciate	Duke Univer- sity, Dur- ham, N.C.	9 mos. class- room, 15 mos. clin- ical, no preceptor- ship	109	947,189
1-71	Physician asso- ciate	Yale Univ- ersity School of Medicine, New Haven, Conn.	9 mos. class- room, 15 mos. clin- ical, no preceptor- ship	5	502,410
4-71	Medex	Charles R. Drew Post- graduate Medical School, Los Angeles, Calif.	3 mos. class- room, 9 mos. clin- ical, 3 mos. pre- ceptorship (note b)	19	1,334,640
2-71	Community health medic	Phoenix Indian Med- ical Cen- ter, Indian Health Serv- ice, Phoe- nix, Ariz.	12 mos. classroom and clin- ical, 12 mos. pre- ceptorship	10	824,547
9-68	Physician assis- tant	Alderson- Broaddus College, Philippi, W. Va.	33 mos. classroom, 8 mos. clin- ical, 1 mo. preceptor- ship (covers 4 school years)	<u>35</u>	<u>205,820</u>
Total				<u>198</u>	<u>\$4,375,957</u>

a/ See footnote a on page 47.

b/ Requires an additional year of academic premedex training.

Duke's program, which began in September 1965 with a class of three, was the first of the above programs to graduate a class (in 1967).

The medex program at the Drew Postgraduate Medical School in Los Angeles differs from the other medex programs in that the State requires that graduates have academic training equivalent to an associate of arts or science degree.

In February 1971 IHS began a 2-year training program for community health medics at the Phoenix Indian Medical Center. The program objective was to recruit individuals from an Indian-oriented background who are ex-military, independent duty corpsmen or nurses and other allied health personnel with at least 3 years of experience.

All program participants are IHS employees. After they complete 1 year of didactic/clinical training and 1 year of preceptorship under the supervision of an IHS physician, they are certified and assigned to IHS field locations in tribal communities which have experienced difficulty in obtaining adequate medical care. Community health medics can function as dependent duty health team members directly supervised by physicians at field hospitals or on semi-independent duty at satellite health clinics. This is one of two such IHS programs; the other is in Gallup, New Mexico.

The physician assistant program at Alderson-Broadus College is unique in that it is 4 years long and offers a bachelor of science degree with a major in medical science. All applicants meeting the college's minimum entrance requirements are eligible for selection for this program, which does not require prior medical training or experience. Like the Duke, Yale, and Bowman-Gray programs, it emphasizes theoretical and scientific medical concepts rather than specific tasks.

Family Nurse Practitioner Programs

<u>Start- ing date of first class</u>	<u>Program</u>	<u>Sponsor- ing in- stitution</u>	<u>Length of train- ing</u>	<u>Gradu- ates 6-30-73</u>	<u>Cumula- tive HEW funding as of 6-30-74 (note a)</u>
9-70	Family nurse practi- tioner	University of Cali- fornia, Davis, Calif.	12 mos. class- room and clin- ical, 6 mos. pre- ceptorship	23	\$ 472,119
9-71	Family nurse associate	Medical Care De- velopment, Inc., Augusta, Maine	4 mos. class- room and clin- ical, 8 mos. pre- ceptorship (plus a 6- mos. pre- paratory home read- ing course before classroom and clin- ical phase)	7	194,865
9-70	Family nurse practi- tioner	University of North Carolina, Chapel Hill, N.C.	6 mos. class- room and clinical, 6 mos. precep- torship	<u>19</u>	<u>515,641</u>
Total				<u>49</u>	<u>\$1,182,625</u>

a/ See footnote a on page 47.

All of the above programs have had graduates in practice at least since November 1972.

Pediatric Nurse Practitioner Programs

<u>Start- ing date of first class</u>	<u>Program</u>	<u>Sponsor- ing in- stitution</u>	<u>Length of training</u>	<u>Grad- uates 6-30-73</u>	<u>Cumula- tive HEW funding as of 6-30-74 (note a)</u>
2-71	Pediatric nurse associate	Good Sama- ritan Hospital, Phoenix, Ariz.	4 mos. class- room and clinical, no precep- torship	30	\$ 243,994
9-68	Pediatric nurse as- sociate	Northeastern University, Boston, Mass.	4 mos. class- room and clinical, no precep- torship	180	499,867
1-70	Pediatric nurse clini- cian	University of Vir- ginia, Charlot- tesville, Va.	2 mos. class- room, 2 mos. clinical, no pre- ceptorship	50	280,469
9-72	Pediatric nurse practi- tioner	University of Wash- ington, Seattle, Washington	3 mos. classroom, 6 mos. preceptor- ship	6 <u>b/</u>	179,688
10-65	Pediatric nurse practi- tioner	University of Colo- rado, Denver, Colo.	4 mos. classroom and clin- ical, no preceptor- ship	<u>114</u>	<u>119,594</u>
Total				<u>380</u>	<u>\$1,323,612</u>

a/ See footnote a on page 47.

b/ These graduated in July 1973.

With the exception of the Washington Pediatric Nurse Practitioner program, all of the above programs have had graduates in practice for a considerable time. For example, the Colorado Pediatric Nurse Practitioner program graduated its first class early in

1966, and the Northeastern Pediatric Nurse Associate program (previously known as the Bunker Hill program) graduated its first class early in 1969.

Child Health Associate Program

<u>Start- ing date of first class</u>	<u>Program</u>	<u>Sponsor- ing in- stitution</u>	<u>Length of training</u>	<u>Grad- uates 6-30-73</u>	<u>Cumula- tive HEW funding as of 6-30-74 (note a)</u>
7-69	Child health associ- ate	University of Colo- rado, Denver, Colo.	2 yrs. class- room and clini- cal, 1 yr. in- ternship	23	\$ 848,609

a/ See footnote a on page 47.

STATES WITH LEGISLATION
SANCTIONING PHYSICIAN ASSISTANTS
AND MEDEX AS OF MAY 1974

<u>State</u>	<u>Type of law and year enacted</u>	<u>Regulatory agency</u>	<u>Power to make rules</u>	<u>Approval of physician assistant or medex</u>	<u>Job description</u>	<u>Activities prohibited</u>	<u>Certification renewal</u>	<u>Physician assistant or medex per physician</u>	<u>Education program approved</u>	<u>Approval of physician</u>	<u>Report to legislature</u>
Alabama	Regulatory authority, 1971	Board of medical examiners	Yes	Yes	Yes	Optometry	-	-	Yes	Yes	-
Alaska	Regulatory authority, 1971	Board of medical examiners	Yes	Yes	-	-	-	-	Yes	-	-
Arizona	Regulatory authority, 1972	Board of medical examiners, board of osteopathic examiners	Yes	Yes	-	Chiropractics, dentistry, optician's services, naturopathy, optometry, pharmacy	-	-	-	-	-
Arkansas	General delegatory, 1971	-	-	-	-	Optometric services	-	-	-	-	-
California	Regulatory authority, 1970	Board of medical examiners	Yes	Yes	Yes	Dentistry, dental hygiene, optometry	Annual	2	Yes	Yes	1972
Colorado	General delegatory, 1963	-	-	-	-	-	-	-	-	-	-
Connecticut	General delegatory, 1971	-	-	-	-	Dentistry, dental hygiene, optometry	-	-	-	-	-
Delaware	General delegatory, 1971	-	-	-	-	Optometry	-	-	-	-	-
Florida	Regulatory authority, 1971	Board of medical examiners	Yes	Yes	Yes	-	Annual	2	Yes	Yes	1973
Georgia	Regulatory authority, 1972	Board of medical examiners	Yes	Yes	Yes	Pharmacy	-	2	Yes	Yes	-
Hawaii	Regulatory authority, 1973	Board of medical examiners	Yes	Yes	-	Optometry	-	-	Yes	-	-
Idaho	Regulatory authority, 1972	Board of medical examiners	Yes	Yes	-	Pharmacy, dentistry, dental hygiene, optometry	-	-	Yes	Yes	-
Iowa	Regulatory authority, 1971	Board of medical examiners	Yes	Yes	Yes	Optometry	Annual	2	Yes	Yes	1973
Kansas	General delegatory, 1964	-	-	-	-	-	-	-	-	-	-

<u>State</u>	<u>Type of law and year enacted</u>	<u>Regulatory agency</u>	<u>Power to make rules</u>	<u>Approval of physician assistant or medex</u>	<u>Job description</u>	<u>Activities prohibited</u>	<u>Certification renewal</u>	<u>Physician assistant or medex per physician</u>	<u>Education program approved</u>	<u>Approval of physician</u>	<u>Report to legislature</u>
Maine	Regulatory authority, 1973	Board of registration in medicine	-	-	-	Optometry	-	-	-	-	-
Maryland	Regulatory authority, 1972	Board of medical examiners	-	-	-	-	-	-	-	-	-
Massachusetts	Regulatory authority, 1973	Board of approval and certification of physician assistant programs	Yes	-	-	Chiropractics, dentistry, dental hygiene, optometry, ophthalmology, podiatry	-	2	Yes	-	Annual
Michigan	Regulatory authority, 1973	Department of health	Yes	-	-	-	-	-	Yes	-	Annual
Montana	General delegatory, 1970	-	-	-	-	-	-	-	-	-	-
Nebraska	Regulatory authority, 1973	Board of medical examiners	Yes	Yes	Yes	-	Annual	2	Yes	Yes	Annual
Nevada	Regulatory authority, 1973	Board of medical examiners	Yes	Yes	-	Chiropractics, dentistry, optometry, podiatry, hearing aid specialists	-	1	Yes	Yes	-
New Hampshire	Regulatory authority, 1971	Board of medical examiners	Yes	Yes	-	Optometry, optician's services	-	-	-	-	-
New Mexico	Regulatory authority, 1973	Board of medical examiners	Yes	Yes	-	Optometry, podiatry	Annual	2	-	-	-
New York	Regulatory authority, 1971	Commissioner of health, commissioner of education	Yes	Yes	-	-	Biennial	2	Yes	-	-
North Carolina	Regulatory authority, 1971	Board of medical examiners	Yes	Yes	-	-	Annual	2	Yes	Yes	-
Oklahoma	Regulatory authority, 1972	Board of medical examiners	Yes	Yes	-	Optometry	-	-	Yes	-	-

<u>State</u>	<u>Type of law and year enacted</u>	<u>Regulatory agency</u>	<u>Power to make rules</u>	<u>Approval of physician assistant or medex</u>	<u>Job description</u>	<u>Activities prohibited</u>	<u>Certification renewal</u>	<u>Physician assistant or medex per physician</u>	<u>Education program approved</u>	<u>Approval of physician</u>	<u>Report to legislature</u>
Oregon	Regulatory authority, 1971	Board of medical examiners	Yes	Yes	Yes	Optometry, nursing, dentistry, dental hygiene	Annual	1	Yes	Yes	1973
South Carolina	Regulatory authority, 1974	Board of medical examiners	Yes	Yes	-	Optometry	-	-	-	-	-
Tennessee	General delegator, 1973	-	-	-	-	-	-	-	-	-	-
Utah	Regulatory authority, 1971	Medical association	-	-	-	-	-	-	Yes	Yes	-
Vermont	Regulatory authority, 1972	Agency of human services	Yes	Yes	-	-	-	-	-	-	1975
Virginia	Regulatory authority, 1973	Board of medical examiners	Yes	Yes	Yes	-	Annual	2	Yes	Yes	-
Washington	Regulatory authority, 1971	Board of medical examiners	Yes	Yes	Yes	Optometry, dentistry, dental hygiene, chiropractic services, chiropody	Annual	1	Yes	Yes	-
West Virginia	Regulatory authority, 1971	Medical licensing board	Yes	Yes	Yes	Pharmacy, optometry	Annual	-	Yes	Yes	-
Wisconsin	Regulatory authority, 1973	Board of medical examiners	Yes	Yes	-	Chiropractics, dentistry, dental hygiene, optometry, podiatry	Annual	-	Yes	-	Biennial
Wyoming	Regulatory authority, 1973	Board of medical examiners	Yes	Yes	Yes	Optometry	-	2	Yes	Yes	1975

a/ The table is reproduced from Health Services Reports, Vol. 88, No. 1, January 1973.

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RATIO OF POPULATION TO NON-FEDERAL PHYSICIANS

IN PATIENT CARE IN COUNTIES WHERE

PHYSICIAN EXTENDERS ARE EMPLOYED (note a)

Number of physician extenders whose location was identified in GAO survey	Graduates employed in counties								
	With fewer than 770 persons per physician		With more than 770 persons per physician		With fewer than 1,000 persons per physician		With more than 1,000 persons per physician		
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
<u>PROGRAMS HAVING A DEPLOYMENT SYSTEM</u>									
North Carolina Family Nurse Practitioner	14	3	21	11	79	7	50	7	50
IHS Community Health Medic	9	3	33	6	67	3	33	6	67
Dartmouth Medex	35	11	31	24	69	23	66	12	34
Washington Medex	59	14	24	45	76	17	29	42	71
Utah Medex	24	3	13	21	87	4	17	20	83
North Dakota Medex	19	3	16	16	84	3	16	16	84
Maine Family Nurse Associate (note b)	5	b/3	60	2	40	b/3	60	2	40
Total	<u>165</u>	<u>40</u>	24	<u>125</u>	76	<u>60</u>	36	<u>105</u>	64
<u>PROGRAMS WITHOUT A DEPLOYMENT SYSTEM</u>									
<u>Physician Assistant/Associate Programs</u>									
Duke	85	40	47	45	53	54	64	31	36
Bowman-Gray	19	8	42	11	58	9	47	10	53
Alderson-Broadbent	13	5	38	8	62	6	46	7	54
Yale	5	4	80	1	20	4	80	1	20
Drew	13	8	62	5	38	8	62	5	38
Subtotal	<u>135</u>	<u>65</u>	48	<u>70</u>	52	<u>81</u>	60	<u>54</u>	40
<u>Pediatric Nurse Practitioner Programs</u>									
Virginia	18	9	50	9	50	12	67	6	33
Good Samaritan	20	13	65	7	35	16	80	4	20
Northeastern	162	131	81	31	19	143	88	19	12
Washington	6	4	67	2	33	5	83	1	17
Colorado	45	30	67	15	33	35	78	10	22
Subtotal	<u>251</u>	<u>187</u>	75	<u>64</u>	25	<u>211</u>	84	<u>40</u>	16
<u>Child Health Associate Program</u>									
Colorado	7	2	29	5	71	3	43	4	57
<u>Family Nurse Practitioner Program</u>									
Davis	15	14	93	1	7	14	93	1	7
Total	<u>408</u>	<u>268</u>	66	<u>140</u>	34	<u>309</u>	76	<u>99</u>	24

a/ Excludes those in teaching or administrative positions.

b/ This program was funded for 1 year by the Regional Medical Programs Service with funds designated for the Model Cities Program; consequently three graduates are working in the Portland, Maine, Model Cities Neighborhood.

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DISTRIBUTION OF PHYSICIAN EXTENDER GRADUATESIN HEW'S HEALTH SCARCITY AREAS (note a)

	Number of graduates whose location was identified in GAO survey	Graduates employed in counties					
		Considered as scarcity areas		Containing scarcity areas (note b)		Not considered as scarcity areas	
		Number	Percent	Number	Percent	Number	Percent
<u>PROGRAMS WITH A DEPLOYMENT SYSTEM</u>							
North Carolina Family Nurse Practitioner	14	-	-	-	-	14	100
IHS Community Health Medic	9	2	22	5	56	2	22
Dartmouth Medex	35	18	51	1	3	16	46
washington Medex	59	11	19	28	47	20	34
Utah Medex	24	6	25	4	17	14	58
North Dakota Medex	19	6	32	-	-	13	68
Maine Family Nurse Assoc.	5	1	20	-	-	4	80
Total	<u>165</u>	<u>44</u>	27	<u>38</u>	23	<u>83</u>	51
<u>PROGRAMS WITHOUT A DEPLOYMENT SYSTEM</u>							
<u>Physician Assistant/Associate Programs</u>							
Duke	85	14	16	16	19	55	65
Bowman-Gray	19	2	11	-	-	17	89
Alderson-Broadus	13	4	31	3	23	6	46
Yale	5	-	-	1	20	4	80
Drew	13	4	31	4	31	5	38
Subtotal	<u>135</u>	<u>24</u>	18	<u>24</u>	18	<u>87</u>	64
<u>Pediatric Nurse Practitioner Programs</u>							
Virginia	18	3	17	3	17	12	66
Good Samaritan	20	1	5	15	75	4	20
Northeastern	162	14	9	32	20	116	71
Washington	6	-	-	6	100	-	-
Colorado	45	5	11	10	22	30	67
Subtotal	<u>251</u>	<u>23</u>	9	<u>66</u>	26	<u>162</u>	65
<u>Child Health Associate Program</u>							
Colorado	7	-	-	-	-	7	100
<u>Family Nurse Practitioner Program</u>							
Davis	15	7	47	7	47	1	6
Total	<u>408</u>	<u>54</u>	13	<u>97</u>	24	<u>257</u>	63

a/ Excludes those in teaching or administrative positions.

b/ HEW's health scarcity area determination takes into consideration minor civil and census tract divisions and counties. This column includes those individuals employed in counties having some geographical sections designated as health scarcity areas. We were not able to determine if these physician extenders were actually working in the designated health scarcity area.

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DISTRIBUTION OF PHYSICIAN EXTENDERGRADUATES IN SMSAs (note a)

	Number of graduates whose location was identified in GAO survey	Graduates employed in an SMSA (note b)		Graduates employed outside SMSAs	
		Number	Percent	Number	Percent
<u>PROGRAMS WITH A DE- PLOYMENT SYSTEM</u>					
North Carolina Family Nurse Practitioner	14	5	36	9	64
IHS Community Health Medic	9	2	22	7	78
Dartmouth Medex	35	9	26	26	74
Washington Medex	59	31	53	28	47
Utah Medex	24	6	25	18	75
North Dakota Medex	19	4	21	15	79
Maine Family Nurse Associate	<u>5</u>	<u>3</u>	60	<u>2</u>	40
Total	<u>165</u>	<u>60</u>	36	<u>105</u>	64
<u>PROGRAMS WITHOUT A DEPLOYMENT SYSTEM</u>					
<u>Physician Assistant/ Associate Programs</u>					
Duke	85	51	60	34	40
Bowman-Gray	19	10	53	9	47
Alderson-Broadus	13	7	54	6	46
Yale	5	4	80	1	20
Drew	<u>13</u>	<u>9</u>	69	<u>4</u>	31
Subtotal	<u>135</u>	<u>81</u>	60	<u>54</u>	40
<u>Pediatric Nurse Practitioner Programs</u>					
Virginia	18	11	61	7	39
Good Samaritan	20	16	80	4	20
Northeastern	162	146	90	16	10
Washington	6	6	100	-	-
Colorado	<u>45</u>	<u>38</u>	84	<u>7</u>	16
Subtotal	<u>251</u>	<u>217</u>	86	<u>34</u>	14
<u>Child Health Associate Program</u>					
Colorado	<u>7</u>	<u>6</u>	86	<u>1</u>	14
<u>Family Nurse Practitioner Program</u>					
Davis	<u>15</u>	<u>15</u>	100	-	-
Total	<u>408</u>	<u>319</u>	78	<u>89</u>	22

a/ Excludes those in teaching or administrative positions.

b/ Included are 300 areas, 252 SMSAs and 48 "potential" SMSAs.

SALARIES OF PHYSICIAN EXTENDERS IN GAO REVIEW

Number of Physician Extenders Whose Salary
Was Identified

<u>Annual salary</u>	<u>Total</u>	<u>Medex</u>	<u>Physician assistant/ associates</u>	<u>Pediatric nurse prac- titioners</u>	<u>Family nurse prac- titioners</u>	<u>Child health asso- ciates</u>
Less than \$7,000	3	-	2	-	1	-
\$7,000 to \$8,499	23	7	2	12	1	1
\$8,500 to \$9,999	69	30	11	23	5	-
\$10,000 to \$11,499	60	18	10	26	5	1
\$11,500 to \$12,999	113	30	37	30	12	4
\$13,000 to \$14,499	51	6	25	10	9	1
More than \$14,500	<u>71</u>	<u>12</u>	<u>47</u>	<u>6</u>	<u>6</u>	<u>-</u>
Total	<u>390</u>	<u>103</u>	<u>134</u>	<u>107</u>	<u>39</u>	<u>7</u>

PRINCIPAL HEW OFFICIALSRESPONSIBLE FOR ADMINISTERING ACTIVITIESDISCUSSED IN THIS REPORT

	<u>Tenure of office</u>	
	<u>From</u>	<u>To</u>
SECRETARY OF HEALTH, EDUCATION, AND WELFARE:		
Caspar W. Weinberger	Feb. 1973	Present
Frank C. Carlucci (acting)	Jan. 1973	Feb. 1973
Elliot L. Richardson	June 1970	Jan. 1973
Robert H. Finch	Jan. 1969	June 1970
ASSISTANT SECRETARY FOR HEALTH (note a):		
Theodore Cooper (acting)	Feb. 1975	Present
Charles C. Edwards	Mar. 1973	Jan. 1975
Richard L. Seggel (acting)	Dec. 1972	Mar. 1973
Merlin K. DuVal, Jr.	July 1971	Dec. 1972
Roger O. Egeberg	July 1969	June 1971
DIRECTOR, NATIONAL INSTITUTES OF HEALTH:		
Ronald W. Lamont-Havers (acting)	Feb. 1975	Present
Robert S. Stone	May 1973	Jan. 1975
John F. Sherman (acting)	Jan. 1973	May 1973
Robert Q. Marston	Sept. 1968	Jan. 1973
ADMINISTRATOR, HEALTH SERVICES AND MENTAL HEALTH ADMINISTRA- TION (note b):		
Harold O. Buzzell	May 1973	June 1973
David J. Sencer (acting)	Jan. 1973	May 1973
Vernon E. Wilson	July 1970	Dec. 1972
Joseph T. English	Jan. 1969	July 1970
ADMINISTRATOR, HEALTH RESOURCES ADMINISTRATION:		
Kenneth M. Endicott	Aug. 1973	Present
Robert J. Laur (acting)	July 1973	Aug. 1973

	<u>Tenure of office</u>	
	<u>From</u>	<u>To</u>
DIRECTOR, BUREAU OF HEALTH RESOURCES DEVELOPMENT (note c):		
Daniel Whiteside	Jan. 1975	Present
John C. Greene	Sept. 1973	Dec. 1974
Kenneth M. Endicott	Nov. 1969	Aug. 1973
Leonard D. Fenninger	Jan. 1967	Nov. 1969

- a/ Title of office was changed from Assistant Secretary for Health and Scientific Affairs in November 1972.
- b/ Effective July 1, 1973, this Administration was abolished and the Public Health Service was reorganized into six health agencies under the direction and control of the Assistant Secretary for Health. The Bureau of Health Resources Development was placed in the Health Resources Administration.
- c/ The Bureau of Health Manpower was created in January 1967 from a number of ongoing programs. It was a separate bureau of the Public Health Service until April 1968, when it was transferred to the National Institutes of Health. The Bureau's name was changed to the Bureau of Health Professions Education and Manpower Training in January 1969 and to the Bureau of Health Manpower Education in September 1970. In July 1973 the Bureau was transferred to the newly organized Health Resources Administration and its name was changed to the Bureau of Health Resources Development.

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