DOCUMENT RESUME

ED 061 420 VT 014 721

TITLE	Report on Licensure and Related Health Personnel Credentialing.
INSTITUTION	Department of Health, Education, and Welfare, Washington, D.C.
REPORT NO	DHEW-Pub-HSM-72-11
PUB DATE	Jun 71
NOTE	163p.
AVAILABLE FROM	Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 (Stock No. 1720-0034, $.70)
EDRS PRICE	MF-$0.65 HC-$6.58
DESCRIPTORS	Accreditation (Institutions); *Certification; Credentials; *Employment Problems; Equivalency Tests; *Health Occupations; *Health Personnel; Occupational Mobility; Paramedical Occupations; State Licensing Boards

ABSTRACT

This report identifies major issues associated with licensure, certification, and other qualifications for practice or employment of health personnel. Chapters are: (1) Credentialing and the Public Interest, (2) An Overview of Health Personnel Credentialing, (3) The Organizational Setting of Licensure, (4) The Disciplinary Function of State Licensing Boards, (5) Foreign Graduates and Licensure, (6) Geographic Mobility, (7) Career Mobility, (8) Proficiency and Equivalency Testing, (9) Continuing Education, (10) Several Approaches to Institutional Licensure, and (11) Departmental Actions and Recommendations. Summaries of current credentialing activities, issues relating specifically to the physician's assistant, a bibliography, and information on selected health occupations, licensure, and certification are appended. (SB)

Licensure and Related Health Personnel Credentialing

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Report on Licensure

and Related

Health Personnel Credentialing

June 1971

DHEW Publication No. (HSM) 72-11

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Office of Assistant Secretary for Health
and Scientific Affairs
Washington, D.C. 20201

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

July 28, 1971

To the Congress of the United States

In accordance with the requirements of the new subsection 799A of the Public Health Service Act (Public Law 91-519), I am herewith respectfully submitting to you a report identifying the major issues associated with licensure, certification, and accreditation for practice or employment of health personnel.

To assure implementation of the recommendations in Chapter XI of this report, the continuing cooperation and support of the Members of the Congress are also respectfully requested.

Secretary

Enclosure

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Washington, D.C. 20402 - Price 70 cents
Stock Number 1720-0034

PREFACE

Public Law 91-519, enacted on November 2, 1970, contained an amendment to the Public Health Service Act in the form of a new subsection; i.e., Sec. 799A, which is quoted as follows:

"SEC. 799A. The Secretary shall prepare and submit to the Congress, prior to July 1, 1971, a report identifying the major problems associated with licensure, certification, and other qualifications for practice or employment of health personnel (including group practice of health personnel) together with summaries of the activities (if any) of Federal agencies, professional organizations, or other instrumentalities directed toward the alleviation of such problems and toward maximizing the proper and efficient utilization of health personnel in meeting the health needs of the Nation. Such report shall include specific recommendations by the Secretary for steps to be taken toward the solution of the problems so identified in such report."

ACKNOWLEDGEMENT

This report was prepared by a working group, comprised of a number of representatives of this Department and assisted by other Federal agencies. The cooperation of the professional organizations is also gratefully acknowledged.

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INTRODUCTION

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CREDENTIALING AND THE PUBLIC INTEREST

Better health care is clearly a national priority of the highest order. The achievement of this goal requires more and better trained health-manpower, especially allied health personnel; more responsive and more appropriate health-care facilities; improved financing arrangements for the entire population; and more effective planning to create a health system that will deliver what it promises to all.

Happenstance did not cause health manpower to be placed first on the list of requirements above. Health manpower represents the key element in building a National Health Strategy sufficient to confront and overcome the present, deepening crisis in the United States. At this time, impending changes in the patterns of health-care delivery can be sketched in a general outline. These changes include an increasingly larger ratio of allied health personnel to physicians; increasing numbers of prepaid, group-practice plans; increased public attention on health-care financing plans; more attention to the effective functioning of health-care teams; greater emphasis on care outside acute-care hospitals in the forms of ambulatory, preventive, and health-maintenance care; a shifting of attitudes toward health care as a public utility with appropriate accountability to the public; rapid acceleration in the utilization of continually advancing biomedical knowledge and technology; and a management-systems orientation for health-care delivery. In the context of these expectations, manpower issues become considerably more critical, not less.

The increased Federal funding for the development of health personnel provided over the last few years reflects a national concensus concerning the importance of education, training, and full utilization of this Nation's manpower resources. Understandably, the American taxpayer wants an equitable return on his public investments. Specifically, with regard to health manpower, he expects the removal of all obstacles to substantially increased productivity -- this to be coupled with the maintenance or, in some cases, improvement of the quality of health care provided. Unless there are structural changes in the organization of health care, there is grave danger that those dollars will simply contribute to an inflationary mirage to frustrate an increasingly health-conscious public.

Only a few years ago, issues such as licensing, certification, and accreditation were generally thought to be the concern of only the professional individuals and organizations that were affected by them. The public-policy aspects of these issues were not often perceived by decision-makers, long accustomed to the guild traditions that have characterized attitudes in this

area. Today, these matters are not immune from public criticism; and the responsibility of both public and private leadership is to fuse health-manpower credentialing with the public interest.

It is surprising that the delivery system in this country has functioned as well as it has for so long, when one considers the stresses placed on it not only by new knowledge and technology, but also by escalating health-care demands. Earlier, many of the inherent inefficiencies of the system were absorbed by dedicated people working long hours and, in some cases, for extremely low pay. It is unrealistic to expect these compensatory phenomena to continue indefinitely.

The purpose of this report is to examine the major problems of licensure and related aspects of certification and accreditation. What inefficiencies are they contributing to the present health-care system?

During the past quarter century, this country has experienced a sharp increase in occupational licensing legislation. Twice the number of professions, skilled trades, and even semiskilled jobs are contingent upon a satisfactory demonstration of competence and integrity before a governmental licensing body.

Licensing was originally intended to protect the public from dishonest and incompetent practitioners. Current licensing practices may obtain an additional result; they limit the number of practitioners by imposing unnecessarily difficult requirements as conditions for acquiring a license. Furthermore, licensure qualifications are set, generally, by the professions themselves; and professional control is maintained through boards of examiners composed of or dominated by the professional practitioners. Thus, licensure may mean only that licensed practitioners meet standards set by their own profession; it does not necessarily mean that the State has evaluated the profession's standards and has approved these standards as being valuable to society.

Improvements are needed, as suggested in this report, not only in the public regulation -- licensing -- of health manpower, but also in the private credentialing processes of accreditation and certification. Accreditation procedures, for example, are currently being criticized for allegedly contributing to the perpetuation of the guild system associated with professional education. New forces are facing higher education today; they pose the question of whether or not accreditation can be fused with public accountability.

While the needs of and expectations for credentialing are great; so, too, are the opportunities for responding to these challenges. This appears to be a most favorable period for improved endeavors. Current reasons for this include:

1. Health care is ranked as one of the major concerns of the American people.
2. Students are highly motivated to encourage and support constructive change.
3. Many professional associations are eager to play a leadership role in finding better ways to provide high-quality health care for all Americans.
4. Signs point increasingly to a greater receptivity of national leadership concerning the various aspects of health-personnel credentialing.

To progress amidst the complexities of licensure, certification, and accreditation requires continued dialogue and cooperative action among educators, professional leaders, and government officials at State and national levels. For example, to prevent further fragmentation of health careers, professional organizations should be encouraged to continue coordinating interrelated allied health personnel within career lines. Additional progressive developments that foster good working relationships between categories of health personnel should be supported. These include joint statements and actions by professional organizations that provide guidelines for the education and training of given categories of health personnel as well as attempts to clarify obscure areas of practice acts by recognizing customary practice between professions. A number of professional groups have contributed new and innovative programs in this field that have aided the development of a more rational system of health disciplines and occupations. The Department endorses these efforts and is taking steps to encourage further innovation and experimentation.

At the Department's recent Working Conference on Health Personnel Licensure, discussions confirmed the value of close contact with professional groups. Communications -- before and after the Conference -- with both Conference participants and representatives of other organizations have underscored the merit of cooperative action. The purpose of the Conference was not to solicit formal organizational positions on detailed issues, but to provide representatives of the Department with insight and information, based on the judgment of non-Federal health leaders, as to the directions that should be pursued in the field of credentialing.

The States, too, are taking important action on these matters. Several States have enacted legislation that provides for the functioning of new categories of health practitioners, such as assistants to physicians. Assistance

should be provided to those States requesting it in their efforts to update their health-personnel credentialing regulations. Furthermore, State licensure has been or is being sought by many different health occupations; with additional enactments, it will be increasingly difficult for the States to provide meaningful surveillance over the many licensing statutes on their books. In advocating State changes in health licensure, the full potential impact of such changes within that State must be recognized -- for example, the relationship of changes to the State personnel merit-system.

Two matters that are receiving considerable attention today -- group practice and medical malpractice -- should be briefly mentioned in connection with this report. With regard to group practice, the general rule has been that, while a corporation is for many purposes legally considered to be a person, a corporation cannot be licensed to practice a learned profession. Thus, most prepaid, group practices are forced to contract with physicians for their services. This creates questions in connection with the liability and responsibility for supervision of allied health professionals who may be utilized by the group plan. Additionally, certain group practices operate health-care plans in several States. In many cases, the lack of licensure reciprocity precludes the possibility of transferring trained health professionals throughout their organizational network.

The President, in his recent Health Message, directed that a Commission on Medical Malpractice be established. Its mandate is to undertake an intensive program of research and analysis into this complex problem. The detailed aspects of the relationship between personnel credentialing and malpractice will be studied and reported by March 1, 1972. Two points, however, should be made here:

1. Both malpractice and licensure influence the quality of health care. Medical malpractice actions assess specific cases to determine whether or not care was rendered free from negligence; licensure laws influence the quality of care through the establishment of standards for entry into a specific field of practice.
2. Under the doctrine of *respondeat superior,* the employer is responsible for all negligent acts of persons in his employ, where such acts occurred within the scope of employment. Thus, physician liability for negligent acts of an assistant exists, whether or not the assistant is licensed, as long as the assistant is working under his supervision and control. The question of licensure, however, is relevant in some jurisdictions to the procedural matter of the burden-of-proof regarding negligence.

Although there are no hard data on the economic effect of licensing laws, an analysis of increased hospital costs suggests some effect in salary demands

when there is legislative recognition of health occupations; the health-insurance industry and, in turn, policy holders are also affected. With continued licensing of professions, individual practitioners may become more guild-oriented and may prefer to practice independently of the physician or other health professional. Such a result could lead to separate billings from each of the members on the health team; furthermore, it could create certain problems in administering health-insurance programs. Add to these factors the variations in licensure among the States, and the problems of determining who is eligible for payment become insurmountable.

There are other economic considerations in credentialing that should be examined. The time and monetary burdens to educational institutions must be recognized where licensure and certification requirements result in formal training that is longer than is really needed to acquire appropriate qualifications for health-care occupations.

Despite an awareness of the various ramifications of these serious and complex problems, quick solutions are often endorsed. First, it would be easy to offer the impression that all of the solutions to the health-manpower problems faced by this country are related to licensure, certification, and accreditation. To the contrary, many forces other than these contribute to these issues and will have to be considered in the ultimate solutions. Wages and working conditions, requirements of educational institutions, location and standards of health facilities, and administrative and organizational patterns of providing services are frequently more directly involved in resolving manpower problems than licensure laws and certification procedures. Regulation of personnel, however, does affect each of these problems. Credentialing procedures should affirmatively contribute to manpower solutions; or, at the very least, they should not constitute hurdles to be overcome in the delivery of services.

Secondly, with increased public discussion of these matters, there is a temptation to accept the following types of allegations without critical examination:

1. That licensure and certification have outlived their usefulness as quality-control and consumer-protection measures, inasmuch as self-perpetuating judgments on these matters are being made almost exclusively by vested-interest groups.
2. That these systems have become exclusion-oriented devices for the protection of professional and economic interests of certain groups.
3. That licensure and certification rigidities have severely limited career opportunities for new types of professionals and, thus, have contributed directly to the health-manpower shortage.

Obviously, these are emotion-laden matters; and they must be carefully and objectively examined before action is undertaken. Progress beyond the present situation will require provisions not only for new categories, but also for the full utilization of those that presently exist. Increased endorsement and application of the health-team concept may well lessen the need for new occupational titles to be supported by governmental regulation. Incentives are needed to induce progress and to replace reliance on negative controls.

Health care in the United States will undoubtedly continue to be in a state of flux for some time. Although specific steps are needed for improving the credentialing system, simultaneous and ongoing changes must be recognized and accommodated so that inflexible measures are not adopted prematurely. In the eager quest for reform, this Nation should not be deluded by adopting quick solutions that, ten years hence, may result in nothing better -- or even worse, a further deterioration in health status.

While a concern for the achievement of social goals means that various factors will be considered in making policy that affects health-manpower resources, the overriding element of patient protection must be the all-controlling factor. Public safety cannot be sacrificed for other considerations, regardless of their merit.

It will be impossible to reconcile all of the disagreements on specific points in connection with health-personnel credentialing in the United States. In so broad and dynamic a field as this, such a situation is not only inevitable; it can also be healthy and lead to continuing improvement. Hopefully, this report will have succeeded in addressing itself to all decision-makers at every level in both public and private sectors; if their talents and skills can be brought to bear on these issues, health-care problems will be solved in a manner that their national importance merits.

CHAPTER II

AN OVERVIEW OF HEALTH PERSONNEL CREDENTIALING[1/]

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 aspects are closely interrelated and, at times, the terminology is employed interchangeably. State practice acts, establishing the procedures for licensing, usually contain educational requirements. Professional associations, too, usually require that the applicant satisfy certain educational qualifications. For purposes of clarity, the following definitions are presented:

Accreditation -- The process by which an agency or organization evaluates and recognizes an institution or program of study as meeting certain predetermined criteria or standards.

Licensure -- The process by which an agency of government grants permission to persons to engage in a given profession or occupation by certifying that those licensed have attained the minimal degree of competency necessary to ensure that the public health, safety, and welfare will be reasonably well protected.

Certification or registration -- The process by which a nongovernmental agency or association grants recognition to an individual who has met certain predetermined qualifications specified by that agency or association. Such qualifications may include: (a) graduation from an accredited or approved program; (b) acceptable performance on a qualifying examination or series of examinations; and/or (c) completion of a given amount of work experience.

Interlocking Relationships

Accreditation, licensure, and certification have developed independently of one another to meet pragmatic functional and social needs. Based upon this historic pattern of evolution, the structure of these evaluative systems today interlock with each other.

1. In most cases, the key persons involved in all three procedures simultaneously are bona-fide members of the profession. It is not unusual to find the same individuals serving at once in two capacities; for example, on accrediting teams and on a State licensure board.

[1/] Substantive material in this chapter has been reproduced from two Public Health Service reports: *Accreditation and Certification in Relation to Allied Health Manpower* (NIH Pub. No. 71-192) and *State Licensing of Health Occupations* (PHS Pub. No. 1758).

2. Licensure and certification are dependent upon graduation from prior accredited programs; previously-qualified students are subjected to narrowly-focused, specialized examinations that are primarily related to formalized academic experience. In short, the examinations actually revalidate academic study rather than assess current competency or past experience.
3. The health field, in the past -- relatively speaking -- has been organized so as to avoid dependence upon outside sources of influence. Furthermore, the health professions' claims of specialized knowledge and expertise have minimized outside intervention. Consumers of health services and patients under medical care have, generally, relied upon the health professions' assertions of unquestioned autonomy and authority, due to the inability of the layman to assess the quality of health services.

Counter-balancing these factors, certain other aspects should be considered:

1. The medical system has, in fact, eliminated the abuses prevalent before publication of the Flexner Report;
2. Approaches such as Medicare, MEDEX, and physician-assistants programs are being more widely examined and supported;
3. Biomedical research and scientific knowlege have attained high standards of excellence and have advanced the health status of our population.

As the frontiers of health science and knowledge expand into an increasingly complicated state-of-the-art, there arises an equally vital and increasing need to achieve reforms within the profession and its credentialing system. These reforms should focus upon the need to ventilate the professions' attitudes beyond immediate techniques and technicalities by exposing professionals to broader, outside influences. Thereby, a larger social perspective would be attained, and a larger public responsibility would be voluntarily assumed by the health professions as a whole.

Such responsibility inevitably will be forthcoming; the question is not whether it shall come, but rather in what context and under what format? And the query is whether such responsibility will be accepted, acknowledged and led by the medical professions, or rather, will it be imposed by society upon a reluctant and unwilling professional group?

During recent years, considerable attention has been focused upon the various aspects of health-personnel credentialing. The following sections provide an overview of accreditation, certification, and licensure. (1)

Accreditation of Educational Programs

Accreditation is a form of regulation or control that is exercised over educational institutions and/or programs by external organizations or agencies. It developed in this country as a procedure of voluntary self-regulation by peer groups of educators and members of the respective profession, in contrast to review and regulation of educational institutions as a governmental activity in other countries. The initial focus was on colleges and universities to meet the needs of educators, educational institutions, programs, and professional groups and subgroups within our society; only later, was there concern for the public interest.

The U.S. Office of Education defines accrediting as the process whereby an association or agency grants public recognition to a school, institute, college, university, or specialized program of study having met certain established qualifications of standards as determined through initial and periodic evaluations. Increasingly, accrediting also implies stimulation toward quality-improvement beyond the minimum standards specified by the accrediting body.(2)

The purposes of accreditation as they have evolved in this country are many and varied. Among the functions relating to or using accreditation are the nine listed below:

1. Certifying that an institution has met established standards;
2. Assisting prospective students in identifying acceptable institutions;
3. Assisting institutions in determining the acceptability of transfer credits;
4. Helping to identify institutions and programs for the investment of public and private funds;
5. Protecting institutions against harmful internal and external pressures;
6. Creating goals for self-improvement of weaker programs and stimulating a general raising of standards among educational institutions;
7. Involving the faculty and staff in institutional evaluation and planning;
8. Establishing criteria for professional certification, for licensure, and for upgrading courses offering such preparation; and
9. Providing bases for determining eligibility for Federal assistance.

The accrediting procedure, itself, usually follows a pattern of five basic steps:

1. The accrediting agency, in collaboration with professional groups and educational institutions, establishes standards.

2. The institution or program desiring accreditation prepares a self-evaluation study that provides a framework for measuring its performance against the standards established by the accrediting agency.
3. A team selected by the accrediting agency visits the institution or program to determine first-hand if the applicant meets the established standards.
4. Upon being satisfied through the information obtained from the self-evaluation and the site visit that the applicant meets its standards, the accrediting agency lists the institution or program in an official publication with other similarly accredited institutions or programs.
5. The accrediting agency periodically re-evaluates the institutions or programs that it lists to ascertain that the standards are being met.

In general, there are two types of accreditation: institutional and specialized. Institutional accreditation applies to the total institution and indicates that the institution as a whole is achieving its own validated and specified objectives in a satisfactory manner. Specialized program accreditation is aimed at protecting the public against professional incompetence. Whereas the eligibility criteria, basic policies, and levels of expectation are similar among institutional accrediting associations, the criteria for accreditation, definitions of eligibility, and operating procedures of the specialized program accrediting agencies vary considerably.

Due to the differing emphases of the two types of accreditation, accreditation of the institution as a whole by the institutional accrediting associations should not be interpreted as being equivalent to specialized accreditation of each of the several parts or programs of an institution. Institutional accreditation does not validate a specialized program in the same manner and to the same extent as specialized accreditation. For example, institutional accreditation of a college or university does not imply that each specific curriculum and/or department, such as dental hygiene or physical therapy, is accredited. However, specialized accreditation usually requires that the program be housed in an institution that has been accredited.

U.S. Office of Education. Unlike most other countries, the United States has no ministry of education or other centralized authority that exercises control over educational institutions. The States, and in many cases, counties and cities, assume varying degrees of control but permit institutions of higher education to operate with considerably autonomy. As a consequence, institutions vary widely in the character and quality of their programs. Private (nongovernmental) educational associations of regional or national scope have established criteria to evaluate institutions or programs, with the intent of determining whether or not they are operating at basic levels of quality.

For purposes of determining eligibility for certain Federal programs of aid to education, the U.S. Commissioner of Education is required by law to publish a list of nationally recognized accrediting agencies and associations that he determines to be reliable authority as to the quality of training offered by educational institutions and programs.(2) Most institutions thus become eligible for Federal funds by way of holding accredited or preaccredited status with one of the accrediting bodies recognized by the Commissioner. In some legislation, especially that intended to help new institutions, provision is made for special qualifying steps that may be taken as alternatives to the normal accreditation process, such as evidence of working toward accredited status.

The Commissioner's list of nationally recognized accrediting agencies and associations includes institutional and specialized associations having responsibility for accrediting post-secondary institutions and programs. Inclusion of an institution on the approved list, which is revised periodically, of nationally recognized accrediting agencies and associations is generally accepted as the most significant indication of institutional quality.

National Commission on Accrediting. The National Commission on Accrediting was established in 1949 by colleges and universities for the primary purpose of serving as a coordinating agency for accreditation activities in higher education.(3, 4) An independent educational agency with a membership of more than 1,425 colleges and universities, the National Commission has worked as the agent for its members in granting recognition of qualified accrediting agencies, helping to improve accrediting standards and practices, fostering increased cooperation among accrediting agencies, and recommending action concerning accreditation to its member institutions. The National Commission does not itself perform an accrediting function, but recognizes specialized agencies to grant program accreditation in 37 fields and relies upon the seven college commissions of the regional associations to grant institutional accreditation.

The National Commission on Accrediting has recognized the Council on Medical Education of the American Medical Association for the accreditation of allied medical programs for the training of medical record librarians, medical technologists, occupational therapists, and physical therapists. Similar recognition has been given to the Council on Dental Education of the American Dental Association for the accreditation of allied dental programs for the training of dental hygienists, dental assistants, and dental laboratory technicians.

AMA Council on Medical Education. Organized medicine has taken leadership in the approval of medically-related educational programs. The Council on Medical Education of the American Medical Association is the focal

point for the establishment and maintenance of standards of quality and recognition of educational programs meeting these standards. Minimum requirements or essentials for an educational program are developed in collaboration with the national professional association representing the medical specialty and the allied health profession which is specifically concerned. When these requirements have been agreed upon, they are submitted to the AMA Advisory Committee on Education for the Allied Health Professions and Services. The Advisory Committee, in turn, transmits the "Essentials" to the Council on Medical Education and subsequently to the AMA House of Delegates for its seal of approval.

The first cooperative interorganizational efforts began in 1933 when the American Occupational Therapy Association requested the AMA Council on Medical Education and Hospitals (now the Council on Medical Education) to develop standards for the education of occupational therapists. These Essentials were initially adopted by the House of Delegates in 1935. In response to a request from the American Physical Therapy Association, the Council developed standards which were adopted by the House of Delegates in 1936. The initial standards for education of medical technologists were also adopted in 1936; those for medical record librarians in 1943, for radiologic technologists in 1944, and for medical record technicians in 1953. It should be noted that from 1928 to 1936 the approval of educational programs for physical therapists was carried out by the American Physical Therapy Association; and prior to 1944 the approval of schools for X-ray technicians had been a function of the American Registry of X-ray Technicians. (5, 6)

The AMA Council on Medical Education functions as an accrediting body for a growing list of allied-health educational programs. In addition to considering and developing several other fields, the Council, in collaboration with the allied health professions and the medical specialties concerned, now provides accrediting for the following 15 categories of educational programs: (7)

- Certified Laboratory Assistant
- Cytotechnologist
- Histologic Technician
- Inhalation Therapy Technician
- Medical Assistant
- Medical Record Librarian
- Medical Record Technician
- Medical Technologist
- Nuclear Medicine Technician
- Nuclear Medicine Technologist
- Occupational Therapist
- Orthopedic Assistant
- Physical Therapist
- Radiation Therapy Technologist (or Technician)
- Radiologic Technologist (formerly X-ray Technician)

Because accreditation is primarily a self-evaluation study, as noted earlier, the institution requesting AMA accreditation assembles background material that can be used for judging whether or not its educational program meets or exceeds the AMA requirements as outlined in the Essentials. The AMA Department of Allied Medical Professions and Services in the Division of Medical Education processes the material for distribution to a joint review committee consisting of representatives of the collaborating organizations. A site visit is made by a survey team that includes a qualified physician and an allied-health professional; in addition, the team may include an AMA-staff member and a dean of a comparable allied-health school or program. Meetings are held with the administrator, the director of the educational program, instructors, and students. Both the academic and clinical facilities are reviewed; the resulting detailed analysis is reported to the joint review committee, which agrees on the recommendation concerning accreditation. The recommendation is transmitted to the Secretary of the AMA Advisory Committee on Education for the Allied Health Professions and Services. Subsequently, the Council on Medical Education accredits the educational program, subject to the approval of the AMA House of Delegates. Lists of AMA-accredited educational programs are published by the AMA and the collaborating organizations. (8)

ADA Council on Dental Education. In addition to the approval of educational programs for dentists, accreditation activities of the American Dental Association have gradually broadened to include training programs for dental auxiliaries. Requirements were established for programs in dental hygiene in 1947, dental laboratory technology in 1948, and dental assisting in 1960.

Training programs are considered for accreditation on the basis of requirements adopted by the ADA House of Delegates and in accordance with the policy established by the Council on Dental Education. The administration of the educational institution requests the Council to accredit the specific program. Efforts are then made by the Council to coordinate the accreditation procedures and site visits with those of the several regional accrediting agencies.

The Council publishes lists of accredited programs for the training of dental auxiliaries in January and in June of each year.

Issues in accreditation. Many allied health professions have followed the pattern of physicians and certain other practitioners in controlling the training of their new members through accreditation of educational programs and attempting to prevent nonaccredited schools from functioning. Professionally-accredited programs not only raise the beginning competence of the workers, but also provide a fairly standard set of skills, thereby enabling movement from one institution to another in search of better jobs. On the other hand, some State licensure statutes inhibit the recognition of educational programs offered in other States and, thus, hinder reciprocity.

Accreditation should ideally be used as the primary management device for validating and improving the quality of education for the various allied health professions, rather than a device to stifle the orderly and valid development of educational programs. A related issue is the accreditation schism that exists between non-profit and proprietary educational institutions. It is perhaps time to rethink and consider means for enabling both groups to contribute qualified personnel for allied health occupations.

The proliferation of accrediting agencies places a burden of time, cost, and effort on the institution being surveyed. Some attempt should be made to pull together the various bodies concerned with allied health programs, for a combined approach to accreditation -- if not for all programs, at least for a clustering within the field. (9)

Accreditation is an exceptionally complex mechanism, and it should have an adequate base of concensus among all the groups it affects. Control over accreditation must be vested in the community and not with any one segment of the community. It appears that in the future the public will demand representation on the governing councils of accrediting bodies.

Voluntary versus Federal accreditation. Accreditation in postsecondary education is a fragmented, disjointed effort with many of the current policies, procedures, and standards being subjected to increasing criticism. This situation produces numerous problems for the Federal Government in its efforts to administer funding assistance programs for education. (10)

Legislation passed during the last 20 years has consistently deferred to accreditation as the primary base criterion for Federal funding. Furthermore, there has been a continuing acceptance of accreditation as a standard for evaluation by both Congress and the general public without a full understanding of its concepts or an adequate appraisal of its compatability with legislative intent.

With the allocation of significant amounts of public funds to students and to institutions through the eligibility for funding status provided by accrediting associations, accreditation carries with it the burdensome responsibility of public trust. Accrediting associations are functioning today in a quasi-governmental role, and their activities relate closely to the public interest.

The central issue is the degree of influence that voluntary agencies will be able to exert. Nongovernmental accreditation is viewed as a preferable alternative to accreditation by the Federal or State Governments. At the same time, the potential impact of a recent proposal is recognized. Senate bill S. 426, introduced in January 1971, would provide national guidelines to "assure

adequate training of radiologic technicians by providing for the establishment of criteria and minimum standards for accrediting schools for the training of radiologic technicians". (11)

It is urgent that first priority be given to the development and implementation of the national Study of Accreditation of Selected Health Educational Programs, guided by appropriate educational groups from within and without the health field. (12, 13, 14) This comprehensive study may well serve as a valuable chart facilitating the need to meet both present and future needs.

Certification of Qualified Personnel*

The process of recognizing the competence of practitioners of a profession may take the form of association membership, registration, certification, or a combination of the three. Here the reference is to the control that is exercised over individuals by voluntary associations and agencies, rather than by government.

Association membership. Some of the professional associations in the allied health field date back half a century. Examples are the International Association of Milk, Food, and Environmental Sanitarians founded in 1911 and the American Dietetic Association and the American Occupational Therapy Association founded in 1917. In the 1920's, several others were established -- the American Society of X-ray Technicians (now Radiologic Technologists), American Physical Therapy Association, American Dental Hygienists' Association, American Dental Assistants Association, and American Medical Record Association (formerly the American Association of Medical Record Librarians); and in the 1930's, the National Environmental Health Association (formerly the National Association of Sanitarians) and American Society of Medical Technologists. In 1947, the American Association for Inhalation Therapy was formed; and, in 1960, the Hospital, Institution, and Educational Food Service Society (for dietetic technicians and assistants).

To become a member of a professional association implies having met certain standards for admission. These requirements include qualifications of education and/or experience. They are aimed at including the qualified but at the same time they have the effect of limiting competition in the work force.

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*NOTE: Medical specialty certification procedures, although highly significant, have not been thought to fall within the scope of this report and, therefore, have not been detailed in this section.

A few of the associations accept members qualified at both the baccalaureate-or-higher level and at the associate-degree level. For example, the American Medical Record Association has registered record librarians, accredited record technicians, and other interested persons in almost equal numbers on its membership rolls. The membership of the American Occupational Therapy Association is made up of about 9,600 registered occupational therapists and 1,500 certified occupational therapy assistants. The National Environmental Health Association includes about 6,000 sanitarians and 200 sanitarian technicians. On the other hand, some of the emerging or new occupations such as dietary technician and physical therapy assistant are not accepted as members in the professional associations in their fields, nor are they numerous enough to form separate associations.

For membership in many professional associations, a basic requirement is graduation from an AMA-approved program in the specific field; for example, the American Physical Therapy Association stipulates this requirement. An additional prerequisite for membership may be registration or certification by a nongovernment agency, which implies a period of supervised experience and successful completion of the registry examination. Thus the American Society of Radiologic Technologists is open only to registered radiologic technologists -- R.T.(ARRT)'s.

Association membership may represent nearly all persons employed in the specific health field, such as occupational therapists in the case of the American Occupational Therapy Association, or a smaller portion of those carrying the job title such as radiologic technologists in the case of the American Society of Radiologic Technologists. Persons who could qualify for membership may not choose to belong for various reasons, while many others working in the field do not have the qualifications essential for membership.

Because associations often maintain records on current and past members, they are a source of information on manpower supply. They tend to keep in their files the names of former members in the event such persons may decide to reactivate their membership at a later date. Current members are those paying dues. Association mailing lists of members thus provide identification of qualified personnel and their geographic location, as exemplified by the American Dietetic Association and the American Physical Therapy Association. Some information on employment status and other items may also be obtained at the time of renewal of membership, as exemplified by the American Speech and Hearing Association. Membership lists usually are available, for general distribution or limited to paid members. Directories published periodically may list either members or members and non-members of the association.

Certification and registration. For some professions there are committees, boards, or registries concerned with distinguishing quality of personnel. The

certifying function may be within the professional association as exemplified by dental assistants, dietitians, medical record librarians, and occupational therapists. Or there may be agencies set up independent of (but obviously related to) the profession being controlled; examples are the Board of Registry of Medical Technologists of the American Society of Clinical Pathologists, American Registry of Inhalation Therapists (sponsored by physicians and inhalation therapists), and American Registry of Radiologic Technologists (sponsored by physicians and radiologic technologists).

The certifying organizations not only qualify persons who meet their standards; but they are also usually aware of individuals working toward certification. The organizations maintain lists of all persons registered to date, as well as those currently registered. The registry of medical record librarians, for example, since its founding in 1932 has qualified a total of 6,400 persons; of these, about 4,000 are currently registered and active in their profession. The ASCP Board of Registry of Medical Technologists has qualified 81,000 since 1928; approximately 42,000 are now registered and professionally active. The American Registry of Radiologic Technologists has registered nearly 72,000 since 1922, with some 40,000 registrants in active practice at the present time.

The lists of qualified personnel may be published by the registry or the professional association. In the case of The National Roster of Certified Inhalation Therapy Technicians, 1970 (15, 16), the Technician Certification Board of the American Association for Inhalation Therapy (AAIT) has certified that each of the 75 members of the national roster has met the following standards:

1. Passed a written examination administered at the Fifteenth Annual Meeting of AAIT, November 1969, which examined the candidate as to his technical skills, clinical knowledge, and professional competence in the practice of inhalation therapy.

2. A member of the American Association for Inhalation Therapy; and has joined in its purposes to advance the science, technology, ethics, and art of inhalation therapy; to promote better education for aspirants to the field and continuing education for members; and to cooperate with other professional groups and the public in establishing the highest possible standards of patient care in the practice of inhalation therapy.

3. Fulfilled one of the following education and experience requirements:
   A high school education or, in the judgment of the Credentials Committee of the Technician Certification Board, an equivalent education, plus two years of experience in inhalation therapy, under medical supervision; or A graduate of an Inhalation Therapy Program, on an Associate-Degree level, approved by the Joint Review Committee for Inhalation Therapy Education in collaboration with the AMA Council on Medical Education.

The first standard cited above is the successful completion of a written examination given by the registry. The proportion of applicants that pass varies considerably from one field to another. For example, at least 90 percent of the dietitians, medical record librarians, and medical record technicians who took registry examinations last year were successful, in contrast to about 70 percent of the radiologic technologist candidates. These examination results include persons taking the test for the first time and those repeating for the second time or more. The passing point on the curve is usually determined in relation to first-timers and is set each time by the agency administering the examination to permit only a certain proportion (usually between 70 and 90 percent) to pass. A few registries have their examinations administered by an outside agency, known for its competency in testing services; in this event, the profession participates in the formation of the questions. The written examination is accompanied by a practical examination of technical skills in the case of dental assistants and dental technicians. Both written and oral examinations are taken by inhalation therapist candidates.

Membership in the professional association is the second standard cited for certification. When the registry is a part of the professional association, the applicant may be required to be a member of the association at the time of the registry examination, as in the case of dietitians; this is not true for dental assistants, medical record librarians, and medical record technicians. When the registry is a separate agency, even though the professional association is one of its sponsors, membership in the association may not be necessary; e.g., medical technologists and radiologic technologists. Registration is a requirement for membership in the American Occupational Therapy Association, so that payment of annual dues to AOTA constitutes renewal of the registered occupational therapist.

Education and experience together make up the third standard. Graduation from an approved program in the specific subject matter is required in almost all cases. Only recently, has there been recognition of an equivalent to such education, as cited for inhalation therapy technicians.

It is the usual practice in establishing the initial registry, and for a specified time thereafter, to blanket-in experienced persons who may have lesser education than the current standard, thus substituting competence in actual practice for formal training. An example of the grandfather clause ending with a moratorium on the qualification privileges is the registration program for dietitians that was initiated June 1, 1969, and held open for three months. During that time, 19,000 of the 21,000 members of the American Dietetic Association applied for registration without taking the written examination and thus became registered dietitians.

One feature of the registry of dietitians that is noteworthy is the continuing education requirement that must be met every 5 years for a member's registration to remain in effect. Two dental occupations -- dental assistant and dental laboratory technician -- also require evidence of continuing education upon renewal of certification. Few other health professions have a refresher requirement with the objective of maintaining or increasing the competency of the practitioner after graduation and registration. In this connection, it should be also noted that State licensure could and, in some instances, does foster continuing education. This subject is discussed in greater detail in Chapter IX.

Of the approximately 6,000 members of the National Environmental Health Association and as many as 15,000 sanitarians employed in 1970, only about 300 sanitarians have been certified as diplomates of the American Intersociety Academy for Certification of Sanitarians, founded in 1966. The basic requirements for this certification are a Master's degree, State registration (available in 35 States), and successful completion of written and oral examinations administered by the Academy. These standards are obviously high in relation to the qualifications of persons working in the field.

Specialty certification. Upgrading action within the profession for better statement of competence may lead to certification of specialists. This is evident for medicine, dentistry, and veterinary medicine; it is being studied for optometry. (17) Assuring high-quality care as a result of graduate education is usually the function of American Specialty Boards. To be a diplomate of an American Board requires graduate education, a period of supervised experience, recognized competency, and the successful completion of an examination given by the Board.

Among the allied health professions and occupations, there is little specialization. However, recognition of special fields for medical technologists is provided by the Board of Registry of Medical Technologists (ASCP), which certifies persons as technologists in blood banking, chemistry, microbiology, and nuclear medicine. Specialties recognized by the American Registry of Radiologic Technologists include the more generalized diagnostic X-ray technology, nuclear medicine technology using radioactive isotopes, and radiation therapy technology using radiation-producing devices. The last two specialties were recognized by the Registry in 1962. Whether technologists in blood banking, nuclear medicine, and radiation therapy are to function as specialists, as noted here, or are to be counted as separate occupational categories requires careful attention.

Issues in certification. Professional association efforts are mainly concentrated on raising the quality of workers in their field. The certification

procedure is designed to assure that there will be a selection of well-trained professionals who have met established standards of education and experience.

Many associations have set minimum certification requirements for beginning workers that, in effect, attempt to prevent employment of uncertified persons. The certification process is helpful to the potential employer as a guarantee of quality, rather than his having to judge from the educational and experience background of each worker. Health care administrators and other employers should be encouraged to contribute to the establishment of certification standards.

Certification provides the worker with an orientation to his profession. This should result in a professional attitude and efforts to improve his competence. The prestige attached to certification makes the worker feel he is the best qualified to do the work in his field. However, the employer may have an over-qualified individual with resulting job dissatisfaction and a high turnover rate.

Many of the registries started with persons already working in the occupation who became certified under grandfather clauses. The older workers tend not to meet the present level of training required for certification. Current practice indicates that any new registry should impose a brief and definite time-limit to grandfather clauses.

Whether the professional association can control the quality of performance of its members, once certified, is open to question. For instance, when the recipient has ceased to pay annual dues to the registry and/or professional association, there is some question of his continued use of the special designation and the implied proof of quality. It would seem desirable to have renewal of registration contingent upon the demonstration of maintained competency as evidenced by continuing education, experience in the field, or successful completion of an appropriate test. This point is developed more fully in Chapter IX.

State Licensing of Health Occupations

The main objectives of licensing laws are to control entrance into the occupation and to support and enforce standards of practice among licensed practitioners. The accomplishment of these objectives usually involves such activities as:

1. Examination of applicants' credentials to determine whether their education, experience, and moral fitness meet statutory or administrative requirements.

2. Investigation of schools to determine whether the training programs meet requisite standards.
3. Administration of examinations to test the academic and practical qualifications of applicants to determine if preset standards are met.
4. Granting of licenses on the basis of reciprocity or endorsement to applicants from other States or foreign countries.
5. Issuance of regulations establishing professional standards of practice; investigation of charges of violation of standards established by statute and regulation; suspension or revocation of violators' licenses; and restoration of licenses after a period of suspension or further investigation.
6. Collection of various types of fees.

Compulsory versus voluntary acts. The nature of licensing statutes currently in force has been classified as compulsory or voluntary according to the following definitions:

> *Compulsory.* -- Only persons holding a license are permitted to practice the occupation, and unlicensed persons are prohibited from working in the field.
>
> *Voluntary.* -- Only persons holding a license are authorized to use a particular title or official designation; unlicensed persons are not prohibited from working in this field but they may not use the protected title.

It should be noted that some laws and regulations include exceptions that may invalidate compulsory provisions.

The tendency in occupational licensing has been to move toward a compulsory or mandatory licensing act; that is, to prohibit by statute the practice of the particular occupation to anyone who is not properly licensed. The movement toward compulsory licensing often begins with a permissive or voluntary statute that prohibits the use of a particular title rather than the practice itself.

Medical practice legislation is typical of the compulsory licensing statute. All States and the District of Columbia have enacted such restrictive legislation, embodying the principle that no person may practice the profession of medicine unless he has complied with certain conditions and then applied for and received a license. State regulation of chiropractors, dental hygienists, dentists, opticians, optometrists, osteopaths, pharmacists, podiatrists, and veterinarians is also mandatory.

Typical of the voluntary statute are the laws providing for the optional registration of practical nurses. In almost half of the States, a person may make

himself available for employment as a practical nurse as long as he or she does not use the title, licensed practical nurse. The desire to protect the public through higher standards for nursing care has led the nursing associations to strive for a compulsory licensing system, with the result that only 23 States currently have voluntary registration for practical nurses and nine States, for professional nurses. Physical therapists, psychologists, sanitarians, and social workers also have voluntary licensing statutes in some of the States.

Exclusions and exceptions from licensure requirements are always made for Federal employees in the course of their employment and frequently for State and municipal workers. Personnel engaged in research or educational pursuits are sometimes excluded, as are students and auxiliary personnel working under the supervision of a licensed practitioner. Out-of-State licensed practitioners who provide occasional or contiguous-area services may also be exempt from licensure. Other exemptions may be specified in the laws or regulations for the individual occupation.

Organizational patterns of licensure responsibility. A few departments in the States license occupations directly. Where there are boards attached to the department, they may be largely advisory in nature or they may possess broad powers. Many of these boards function independently with the department providing only administrative assistance. The usual pattern for State organization is to establish a separate board for licensing each occupational group. Generally, a separate law governs all aspects of the organization and operation of each board.

Some of the States have taken steps to centralize the licensing of occupations within a department of registration. Examples of such coordinated departments are the California Department of Professional and Vocational Standards, District of Columbia Department of Occupations and Professions, Hawaii Department of Regulatory Agencies, Illinois Department of Registration and Education, Massachusetts Department of Civil Service and Registration, Michigan Department of Licensing and Regulation, Utah Department of Registration, and Virginia Department of Professional and Occupational Registration.

Among the States that have centralized licensing in the department of health are Nebraska and Rhode Island; while centralized licensing is to be found in the department of state in Colorado, Georgia, Pennsylvania, and Vermont; and in the department of education in Missouri and New York. Examples of other locations of occupational licensing agencies are as follows: Alaska Department of Commerce, Idaho Department of Law Enforcement, New Jersey Department of Law and Public Safety, Tennessee Department of Insurance and Banking, and Washington Department of Motor Vehicles.

Licensing functions may or may not be carried out by the department; the degree of departmental participation varies from administrative support to active participation in licensing. Where there is a central organization for occupational licensing, this department may regulate not only the bulk of those in the health field but many additional occupations. The California Department of Professional and Vocational Standards, for example, lists about 50 occupations in their 1964 report; the New Jersey Department of Law and Public Safety regulates approximately 30 occupations.

Composition of licensing boards. Most State boards engaged in the licensing of occupations in the health field are composed of representatives of groups with direct interest in areas regulated by the boards. State officials who serve as ex-officio members of one or more occupational licensing boards are usually the heads of the departments that are directly concerned with the licensing of the occupation in question. Very few of the boards include representatives of the general public.

About half of the occupational licensing statutes require that all board members be licensed practitioners in the occupations regulated by the boards on which they serve. In many cases, they are required to have practiced within the State for a specific number of years. Faculty members of professional educational institutions are rarely specifically included. With a few exceptions, only dentists serve on dental licensing boards; only optometrists, on optometry boards; pharmacists, on pharmacy boards; psychologists, on psychology boards; and veterinarians, on veterinary medical boards.

At the other extreme, a few occupations are licensed by boards that include no members of the particular occupation but include members from related occupations. Dental hygienists are licensed in all States and the District of Columbia; and, in each, licensing is by the regular dental board that includes no dental hygienists. In some States, practical nurses are licensed by boards of registered nurses on which no practical nurses serve. A similar situation exists for midwives who are licensed by boards that do not include any members of that occupation. For at least eight other occupations, there are a few State boards without representation from the particular group.

In the fields of medicine, osteopathy, physical therapy, and podiatry, about half of the State licensing boards are limited to practitioners in the licensed occupation; while the remainder have mixed membership. Engineers, chiropractors, and professional nurses also have relatively large numbers of State boards composed of representatives of their own groups.

The boards that license doctors of medicine usually license related professions such as osteopaths, physical therapists, and podiatrists. They may

have additional representatives of these health professions serving on the board at that time; however, these persons are not considered as members of the medical boards for the licensing of physicians. The boards that license professional engineers may serve land surveyors and/or architects. The range in the number of board members is from 3 to 20 persons. However, relatively few of the boards have as many as 10 members.

Powers and duties of licensing boards. Licensing agencies possess powers and duties related to examination or other determination of eligibility of applicants for licenses; issuance of licenses; suspension, revocation, and restoration of licenses; enforcement of licensing statutes; and approval and supervision of schools. The boards make specific rules and regulations governing the licensing and the practice of the occupations. They maintain all necessary records and make whatever reports are required. The five major powers and duties are detailed below:

1. *Examination.* Most licensing boards prepare, conduct, and grade all examinations of persons applying for licenses. They determine the subject matter to be covered by examinations, the kind of examination to be given, and the passing grade -- all factors that influence the number of applicants who will succeed in obtaining licenses. Examinations are generally held twice a year. Usually the board determines what type of examination will be used -- written, oral or practical, or a combination of these. Also a board may decide to use all or part of a national examination, such as those prepared by national examining services or by national boards of examiners.

2. *Issuance of licenses.* The formal issuance of licenses to applicants who meet all qualifications established by law and by the board is one of the routine duties of most boards. Many statutes require licenses to be renewed periodically and thus make it possible for the boards to maintain a current list of practitioners. Such lists aid in enforcement of laws directed against unauthorized practice.

In States where licensing boards have been placed within or attached to a department of the State government, the department usually performs clerical tasks connected with the issuance of licenses. It may formally issue licenses to applicants certified or recommended by boards or committees.

3. *Suspension and revocation of licenses.* As discussed in Chapter IV, licensing statutes generally specify grounds for suspension or revocation of licenses, such as obtaining a license by fraud, performance of actions prohibited by the statute, and conviction of a felony. The numbers and kinds of acts prohibited by licensing laws vary considerably.

Legislation may include salient features of professional codes common to the profession and generally accepted by their practitioners and the public. Violation of the code would then constitute grounds for suspension or revocation of license.

Procedures for suspending, revoking, and reinstating licenses are usually specified in statutes; but sometimes they are specified in the State's administrative procedure act or left to the discretion of the board. Usual requirements include a written notice of charges and a hearing at which the practitioner may offer evidence in his behalf. Frequently, licensing boards conduct the hearings; but the power to issue formal revocation orders may rest with the board or the head of the licensing department, and in a few instances, is vested in the courts.

Some of the States provide for disciplinary committees to screen charges of professional misconduct in a few occupations; they handle minor cases and refer those violations punishable by suspension or revocation of a license to the licensing agencies.

4. *Enforcement of licensing statutes.* The enforcement of licensing laws involves determining whether or not the practitioner has a license and whether or not he is practicing in accordance with provisions of the license and statutes. To determine if practitioners have licenses is simplified, because applicants seeking employment are usually required to present a current license; while those who are self-employed must display their licenses in their place of business. Periodic renewal of licenses is an aid in checking to see if the practitioner's license is valid.

It is a more difficult process to determine whether practitioners are violating sections of the regulatory statutes, because standards of performance must be formulated in broad terms. In general, licensing agencies follow the policy of investigating a practitioner's compliance with the law only when a complaint is filed. To a marked degree, the enforcement of licensing laws depends on the voluntary compliance of individual practitioners and the efforts of occupational associations.

5. *Approval and supervision of schools.* Statutes usually specify that applicants must receive their training in approved schools. The standards used in evaluating the schools and the ability of the approving agencies to measure compliance with these standards are major factors in this requirement. Licensing boards may accept a national association's list of approved schools. Licensing boards may also accept approval by appropriate regional college accrediting bodies. In some jurisdictions, the department of education may be designated as the State agency to inspect and accredit schools.

In addition, there are occupational licensing boards that inspect and accredit programs or schools. The standards set by the board or statute are usually in terms of length of training deemed necessary, curriculum content, staffing, qualifications of students, and type of facility to be provided. In nursing, State licensing agencies accredit educational programs; but, in addition, nursing programs are also accredited by the National League for Nursing (NLN).

An updated table on the licensure of health occupations is included in an appendix to this report. (18) Later chapters in this report extend the discussion of licensure and its major problems. Not every issue could be dealt with in all of its ramifications. For example, while physician internship is required by some licensure statutes, the report does not cover the subject in any detail -- inasmuch as this requirement has been treated in the more appropriate context of several recent studies on medical education.

PART TWO

INTERACTION BETWEEN
THE LICENSING PROCESS
AND PROFESSIONAL ORGANIZATIONS

CHAPTER III

THE ORGANIZATIONAL SETTING OF LICENSURE

The organizational dimensions of personnel credentialing are not indicative of the activity or conduct of any one association of health practitioners -- and, in many instances, apply to organizational behavior, in general. Studies of the credentialing of personnel often fail to highlight the significance of the role of professional associations. Any comprehensive examination of the subject must include an objective presentation of the organizational context of professional credentialing.

The primary vehicle by which professions have achieved collective status is the professional association. The desires of practitioners of an emerging profession to raise their status, to gain public recognition of their competency, and to maintain standards of character and honorable practice have motivated the formation of professional associations. (19) Professionals have sought control over their own work, because they have felt that their social status and power depended upon their ability to assure the merit of persons admitted to the profession and to maintain intraprofessional discipline. (20) Professionals, moreover, have sought to create standards of practice and behavior that would be enforced by peers.

The early professional associations were often established by a small group of "elite practitioners who attempted to standardize professional performance by means of setting a good example." (21) Example-setting, however, proved to be an inadequate means of effecting the desired standards of behavior; additional sanctions were needed. One means by which the gap between ideal and actual behavior could be narrowed was to acquire governmental cooperation in the form of licensing statutes that would establish standards of performance.

It has been observed that "every profession strives to persuade the community to sanction its authority within certain spheres by conferring upon the profession a series of powers and privileges." (22) These powers and privileges include professional control over (a) academic and training institutions, by means of accreditation; (b) entry into the profession by requiring graduation from an accredited professional school; and (c) the legal ability of the individual to practice by means of state licensure. The two fundamental requirements for such licensing are a duly granted professional degree obtained by completing an accredited or "recognized" program of formal education and an examination before "a board of inquiry whose personnel have been drawn from the ranks of the profession." (23)

The screening of individuals who attempt to enter a profession has been found to be a necessary expedient for the profession to "present a reliable, uniform face to the public." (24) Moreover, professions have deemed it necessary to discipline those already within the profession. Inasmuch as the ability of professional associations to discipline their members has generally been weak, the professions have sought State-imposed sanctions when appropriate.

Submitting to "community control" in the form of licensing has generally served to ensure the profession's freedom to control its own work. (25) The insulation afforded by professional "self-regulation" is almost total in scope. Governmental licensing, which presumably represents the consensus of the community, bestows the community's seal of approval upon a profession. This approval is a recognition of the legitimacy and rank of the profession as well as the limits of its authority. Licensing, in turn, gives to the individual practitioner and to the profession as a collectivity additional prestige and status. At the same time, licensure fulfills its more fundamental role of establishing minimum standards to protect the health and safety of the public. Thus, professions willingly have sought State licensure laws and examining boards.

Newly founded professional associations have usually become engaged in political activity directed at obtaining licensure and other types of public recognition. This has been described as one stage in the process of professionalization. (26) Many State professional associations, moreover, have been established for the "express purpose of promoting occupational legislation" and sometimes "to prevent other, already established, professions from regulating them." (27) National professional associations, established in the late 1800's, soon came to realize the political significance of coordinated organization at the State level. Near the turn of the century, many of these organizations adopted a structure that combined both State and national components. It was felt that statewide associations, working in conjunction with local societies, could provide the unity of purpose and decentralization of method necessary to work effectively in State legislatures for favorable legislation.

> Although federal legislation has come to assume greater importance for the national associations than it did formerly, the national bodies have not ceased to aid the state associations through the years. Each national association has a legislative committee or council which, as part of its responsibilities, cooperates with state and local societies in legislative matters. The national bodies provide the state societies with copies of state laws, charts and summaries of major provisions of various acts, results of national surveys, reports, model statutes, legal advice, and forums for discussing common problems, and in general put the weight of national organization behind enactment of state laws. (28)

In addition to seeking licensing laws, the professions actively urged the establishment of examining boards. Professional associations not only have assisted in the drafting of the State practice acts, but also have helped select and scrutinize the work of examining board members. A primary aim of professional associations in the early twentieth century was to help create licensing boards where none existed or to tighten professional liaison with the board, if one already existed, in an effort to bolster the board's effectiveness. The greatest growth in the creation of new licensing boards in the health professions occurred between 1910 and 1919. (29)

A public licensing board -- staffed by professionals who serve on a part-time basis and work intimately with the profession they regulate -- functions in many respects as a symbol to the State legislature of the legitimacy of the profession. The State licensing boards may work more or less discreetly to present the profession's position regarding legislative proposals. (30) In some States, professional associations work in conjunction with examining boards to inititate legislation, make additions or deletions, draft the preliminary and final proposed bills, persuade a legislator to introduce the bills, and then work for their passage. (31)

Further evidence of the close interrelationship of the professional association and the licensing board is the fact that board membership is, in most instances, dominated by practitioners in the licensed profession. As cited earlier, about 50 percent of the occupational licensing statutes in the health field require that all board members be licensed practitioners in the respective occupations. Even in boards that require representative members from other occupations, the majority of board members usually represent the licensed occupation. Moreover "board members are usually appointed by the Governor from lists of names submitted by associations representing persons practicing in the field. Even if the law does not have these provisions, many Governors follow the policy of consulting the associations before making appointments." (32)

Specific proposals for public laws, often initiated by a private group, pass through a stage of private group and government negotiations before entering the public arena. (33) In addition to the interaction between the profession and its regulator in the development of legislation, often there is considerable cohesion between these actors in the administration of licensure statutes. In the area of disciplining practitioners, this is particularly so and will be examined more fully in the next chapter.

A recent monograph on occupational licensing suggests that it might be possible to minimize some of the influence of professional associations vis-a-vis licensing boards by centralizing the licensing function within a departmental

unit, such as a State health department. "With administration centralized, occupational groups can continue to be major forces in establishing and enforcing regulatory policies, but through a State agency which can reconcile the interest of the general public with those of the private associations." (34) The current state of affairs in health-personnel licensing, however, is that the boards are generally autonomous; they have considerably stronger links to their respective professional associations than to other public agencies concerned with health services. The same situation applies to those boards that are organizationally located within State departments of health, education, or offices of the governor.

Furthermore, professional associations may help finance the investigative and prosecutive activities of the State examining board. Similarly, the State board may use part of its revenues from license and renewal fees to subsidize activities of the professional association. For example, according to Kentucky law, $2 of the renewal fees for a pharmacist's license must be turned over to the Kentucky pharmacists' association. Informal support of the associations by the boards is also common. (35)

In sum, professional associations generally have encouraged State regulation by means of personnel licensure. In addition to its function of guaranteeing a minimal standard of services, licensure -- as indeed other means of credentialing -- has afforded the professional associations a very tangible measure of social prestige, status, and influence. This suggests that organizational interest in occupational credentialing and its attendant problems is very significant and must be seriously considered in the ensuing discussion of issues.

CHAPTER IV

THE DISCIPLINARY FUNCTION OF STATE LICENSING BOARDS

The vast majority of health care practice acts virtually extend to the individual a life-time legal authorization to practice -- provided, of course, that the practitioner meets periodic re-registration requirements that provide little professional review. (36) However, these acts define certain instances in which the practitioner's license may be suspended or revoked. Theoretically, these potential sanctions may be viewed as one of the most effective and potent means of enforcing high standards of health care. In practice, however, State licensing boards are seriously hampered in performing effective professional review through disciplinary action against practitioners. Although the public has a justifiable concern for an effective system of discipline and professional review, the diverse organizational patterns of the various board-association interrelationships make broad generalizations in this area somewhat tenuous.

Perhaps the most obvious problem in this area is the natural reluctance on the part of board members to invoke disciplinary action against fellow practitioners. Such review of the licensed profession is admittedly a fundamental ingredient in the State's protection of the public. In the final analysis, regardless of the sympathy of board members for the errant practitioner, "their primary responsibility is the safety of the patient." (37) Nonetheless, there is reluctance to pursue such action. As Derbyshire observes with regard to physician licensure: "Without a doubt the most onerous duties demanded of members of boards of medical examiners lie in the field of medical discipline. The awesome responsibility of having to revoke the license of a physician, thus depriving him not only of a means of livelihood but also his entire way of life, weighs heavily upon them." (38)

A related phenomenon in the disciplinary activities of licensing boards is the close interaction -- and almost coalescence -- of the boards with the professional associations. In some instances, the board, in effect, delegates the burden of disciplining a practitioner to its constituent association, relying, as it were, upon its good judgment. Disciplinary action following this route is quite common; and, in some cases, takes the form of a State subsidy of the association with the licensing board relying on the grievance committee of the corresponding association to discipline its members. Where the association cannot effectively discipline a practitioner, the board may proceed with legal sanctions. (39)

To further illustrate the relationships between the licensing board and the professional association in invoking disciplinary action, some organizations go

the other route of subsidizing the board's activities in dealing with unethical and illegal practice. For example, one State dental association has been financially supporting the board's investigative and prosecution activities by amounts of $2,500 to $3,000 per year. This pattern is found all over the United States. "One State dental society's monetary assistance for a board's enforcement activities averages $31,000 a year." (40)

An additional problem facing licensing boards is that they frequently must assume "the multiple roles of investigators, prosecutors, juries, judges, and executioners." (41) Whether this system provides adequate safeguards with respect to conflict of interest and dues process is at this time largely unanswered. One point should be obvious, however; to ensure the proper functioning of the disciplinary process in the manner described, licensing boards must be appropriately staffed and funded. This, however, is hardly the case. As one observer put it:

> Our boards are not adequately financed or staffed. Too often the physicians' annual registration fees are diverted by the state into the general fund. The board then is at the whimsy of the state for inadequate funds. State boards are of necessity relatively inexperienced in investigating and developing complaints. They need the aid of competent help. They do not report as a general rule. They do not exchange transactions of disciplinary procedures. ... (42)

Given the inadequate capacity to process many of the complaints against practitioners, one writer suggests that "the functions and powers of the boards are poorly understood ... so that they are besieged by complaints which have no merit." (43)

In light of these difficulties, it is instructive to examine Derbyshire's findings of a five-year survey of the disciplinary action of licensing boards. (44) From 1963 through 1967, a total of 938 are divided into four broad classes as indicated below.

Types of Disciplinary Actions Taken against Physicians, 1963-67	Numbers
All types.	938
Probation	375
Revocation	334
Suspension	161
Reprimand	68

Two apparent conclusions may be made from this data. First, disciplinary action by medical boards is almost insignificant in terms of the universe of practicing physicians. This fact becomes especially obvious when considering Jervey's estimate that from one to three percent of the physician population represent disciplinary problems "within the legal concept of the problem," and that this percentage would be dramatically increased "if one includes those who are delinquent within the broader field of ethical considerations." (45)

Secondly, Derbyshire's data indicate a tendency toward leniency even in the relatively few cases that result in formal board action. This is evidenced by the fact that the single most common sanction was the imposition of probation. Probation is typically preceded by an order of revocation -- the execution of which is stayed pending certain terms and conditions. This fact suggests that many, if not most, of the probation orders might have remained as revocation orders under more stringent circumstances. In addition, some of the revocations were not based on original violations but rather resulted from violations of terms of previous probations. (46)

One final problem in the area of discipline by licensing boards is the gross ambiguity and the lack of precision in certain statutory provisions delineating the grounds for revocation and suspension. As Hansen noted, while "most acts list specific grounds which give no difficulty of definition or interpretation, ... the real problem arises in connection with the ambiguity of provisions which are broad, not susceptible of interpretation, and difficult to apply to a given set of facts." (47) This category includes such ambiguous phrases as "unprofessional conduct," "gross immorality," "malpractice or gross misconduct in the practice of the profession," "grossly unethical practice," and "conduct unbecoming a physician." According to Hansen, "the courts are split as to whether sanctions phrased in such language are valid and enforceable, and are reluctant to state the limitations of the phrases, in some cases suggesting that the correction lies in the legislative branch of government." (48)

This statutory vagueness is in consonance with Derbyshire's data on the grounds for the reported 938 cases of disciplinary action. Narcotics violations alone numbered 46 percent of the total disciplinary actions taken by State medical boards from 1963 to 1967. Moreover, of the 13 grounds for sanctions identified by Derbyshire's study, three -- narcotics, abortions, and conviction of a felony -- accounted for 62 percent of the total actions. (49)

Because these grounds are more clearly defined and interpreted, they obviously present fewer problems in processing and thus constitute a much higher proportion of disciplinary action than the more-difficult-to-interpret "unprofessional conduct" clauses. Forgotson *et al.* characterized the judicial uneasiness and reluctance to enforce nebulous terminology as resulting in "a fear of litigation" by licensing boards that generally "discourages disciplinary actions, except possibly when a statute is clear or where the evidence is clear cut. ... The result is that the disciplinary process of the licensure statutes protects the public only against relatively infrequent and extreme cases." (50)

PART THREE

THE SPECIAL PROBLEMS OF FOREIGN GRADUATES

CHAPTER V

FOREIGN GRADUATES AND LICENSURE

In the past few years, foreign graduates of schools of medicine and the other health professions have come to the United States in increasing numbers. Responsible persons here and abroad have expressed concern over the process of their admission to this country, the quality of training they receive here, their influence on the quality and quantity of health services in the United States, and the effects of the continued loss of trained personnel from the countries that provide them. The magnitude of the problem is underscored not only by the numbers of foreign medical graduates (FMG's) now in the United States, -- not all of whom are qualified to practice in this country, but also by the increasing influx each year of physicians both as permanent immigrants and as exchange visitors. (51) While the process of licensure addresses itself to its primary mission of protecting and serving the health interests of people, it must necessarily reflect sensitivity to the broad implications of the imigration of physicians and other health professionals.

As of December 31, 1970, the date of the latest American Medical Association census of physicians in the United States, there were about 57,000 graduates of foreign medical schools (17.1 percent) out of an approximate total of 334,000 physicians. (52) In a similar analysis made by the Public Health Service in 1959, only 8.6 percent of the 241,036 physicians in this country were graduates of non-U.S. medical schools. Thus, in this interval the total supply of physicians in the United States has increased by 35 percent; the proportion of physicians receiving their basic medical training outside of the United States has more than doubled.

Categories of Foreign Trained Physicians

The three groups of foreign medical graduates (FMG's) warrant separate consideration: (a) permanent-immigrant physicians -- largely from developing countries, predominantly from the Philippines and other Southeast Asian countries; (b) exchange-visitor physicians coming to this country for graduate professional training -- also largely from Southeast Asian countries; and (c) American nationals receiving their training abroad -- a minor category in terms of numbers.

During the last nine years, there has been a general upward trend of both permanent-immigrant and exchange-visitor physicians coming to the United States. Data obtained from the Immigration and Naturalization Service of the Department of Justice indicate that 8,723 physicians of foreign nationality entered the United States in FY 1970. Of these, 3,158 entered on permanent immigrant visas; and 5,365, on exchange visitor visas to receive graduate

medical training as interns and residents in U. S. hospitals and then, presumably, to return to their own countries that are predominantly, as mentioned above, the developing countries of the world. American citizens who are studying medicine abroad number between 2,800 to 3,000; approximately 500 to 600 students start such training each year.

Characteristics of Foreign Medical Graduates

Permanent immigrants. Since 1965-67, immigration of physicians has diminished relatively from Northern European countries -- where educational standards are high and more compatible with those of the United States. In the years 1968-70, the largest number of foreign medical graduates came from the following five countries: The Philippines (3,547), India (2,627), Canada (1,867), the United Kingdom (1,229) and Korea (959).

Other data indicate that many of the physicians entering the United States from Canada and the United Kingdom are natives of and received their training in other countries, primarily in Southeast Asia where shortages of health manpower exist. In India, for example, the ratio of physicians to population is 2 per 10,000; Korea, 3.7; Republic of Vietnam, 0.3; Pakistan, 1.6; and the Philippines, 7.5. The current physician-to-population ratio in the United States is 15 per 10,000. (53)

Exchange visitors. Exchange-visitor physicians have also increased significantly in recent years. These physicians come to the United States to receive graduate professional training in American hospitals and then return to their own homeland to practice there. However, shortages of U. S. trained physicians and other factors tend to keep these foreign trained physicians in the United States for longer periods. Recent changes in U. S. immigration laws are clearly accentuating the trend toward retention of these physicians in the United States. In April 1970, Congress amended the Mutual Educational and Cultural Exchange Act of 1961, thus removing the two-year foreign residency requirement for any foreign national with visitor status.

United States citizens. United States nationals seek training opportunities in medicine abroad due either to qualification deficiencies or insufficient places in domestic schools. Only about one-fourth of the 500 to 600 who matriculate abroad actually complete their training over a five- to six-year curriculum to return to the United States. Those who graduate and return do poorly on qualifying examinations for U.S. internships and residencies or for licensure. A newly instituted program, sponsored by the Association of American Medical Colleges, aims to make possible the transfer of significant numbers of American nationals studying medicine abroad to advanced standing in U.S. medical schools, thus accelerating their reentry into the mainstream of American medical education and practice.

The Screening Process

The initial screening of FMG's takes place either here or abroad by means of an examination administered by the Educational Council for Foreign Medical Graduates (ECFMG). The Council is a non-governmental regulatory body created and supported by voluntary medical organizations in the United States. The ECFMG examination is, in general, designed to evaluate whether or not an FMG is prepared to serve as an intern or resident in a United States hospital. The Council has no explicit legal authority.

FMG's are allowed to take the ECFMG examination with no requirements other than verification of full-time enrollment in a medical school listed in the World Health Organization Directory, regardless of their country of origin or quality of undergraduate education. Part of the ECFMG examination is a test of the candidate's ability to understand spoken English. This is a significant factor, because one of the most persistent problems among all foreign-trained health professionals is the language barrier that limits communication with colleagues and with patients. The examination itself is a multiple-choice type in which the candidates listen to the proctor as he speaks certain words or reads short materials, and they try to select the correct answer from a series of alternatives. The standard examination administered by the ECFMG is essentially based on questions previously used in the National Board Examination, but those considered particularly difficult are screened out.

This double standard as applied to the testing of FMG's and United States Medical Graduates (USMG's) is causing growing concern among both educators and licensing boards. Comparisons have been possible between FMG and USMG scores in certain segments of the ECFMG examination. Over the last several years, a striking difference has been obvious between the predictable initial failure rate (2 percent) of the USMG's and the actual failures (60 percent) of the FMG's who responded to the same questions. Furthermore, the scores of the FMG's who did pass were heavily concentrated around the minimal passing mark, so that an increase of the passing level to 80 percent, rather than the present 75 percent, could eliminate half of those who now pass. (54) In 1970, the ECFMG administered nearly 30,000 examinations, more than twice as many as in 1969.

Certification of a candidate by the ECFMG requires, in addition to passing the examination, completion of the course of study leading to licensure as a physician as prescribed by the country in which the student has studied. In the case of U.S. nationals who studying abroad, may not be eligible for licensure in a foreign country, the ECFMG will require completion of the educational requirements that are equivalent to eligibility for licensure.

State Licensure

Available data indicate major differences in FMG and USMG performance on State licensing examinations. The implications of these differences are causing concern among State licensing boards.

USMG licensure. For the graduates of U.S. medical schools, licensure examinations are not a problem. Although individual States and Territorial licensing bodies continue to exercise the traditional privilege of determining the suitability of any physician who wishes to practice medicine under their jurisdictions, the examination itself may be almost a technical formality. A State resident who has obtained an M.D. degree from his State university almost invariably passes that State's licensure examination. Reciprocity between States or endorsement of the licenses of other States is common; and there is growing acceptance of the National Board Examination as well as the Federation Licensing Examination (FLEX). The latter examination has been developed by the Federation of State Medical Boards.

USMG -- FMG comparisons. By contrast, the achievement of licensure for FMG's constitutes a major hurdle; as an initial prerequisite, candidates for the licensure examination must have passed the ECFMG examination. In 1970, which is a characteristic year, National Board endorsement accounted for 9,139 of licensed USMG's. FMG's other than Canadians are not admitted to the National Board Examination. The failure rate on all State boards was 37.3 percent for FMG's and 9.3 percent for USMG's.

Since 1935, the FMG failure-rates have been as high as 59.2 percent (in 1941) and as low as 29 percent (1961) with a 31-year average (1935 to 1966) of 40.2 percent. The performance from State to State varies widely. The most recent American Medical Association report on licensure examinations reflects a marked rise in 1970 failure-rates of USMG's to an unprecedented 9.3 percent. The current report indicates no change in the 37 to 38 percent failure rate of FMG's. (55)

Variations among States. For the foreign medical graduates, there are marked differences among States both in terms of the difficulty of the examination and in the number of additional requirements. Four States -- Illinois, Maryland, New York and Virginia -- represented 73 percent of all State Board failures by FMG's in 1966. The requirements for medical licensure of FMG's in these four States is as follows: all require internship; and Maryland, New York, and Virginia also require ECFMG certification; Maryland requires 3 years' hospital service in the United States; New York requires 1 to 2 years'

hospital experience; and Virginia demands 2 years' accredited-hospital training. The 1970 statistics show an easing of the citizenship requirement. Only eight States now require full citizenship for FMG licensure in contrast to the 1969 figure of 21 States requiring full citizenship.

Requirements. Although immigration laws have been eased, medical organizations have been instrumental in the adoption of rules requiring that the potential physician immigrant prove that: (a) he has met licensure requirements or requirements for the examination in the State within which he intends to practice; or, (b) he has met the requirements for and has been offered an AMA-approved internship or residency; or, (c) he has passed the ECFMG examination; or, (d) his appointment does not involve direct patient-care.

Licensure Reciprocity

Foreign medical graduates who have successfully fulfilled licensure requirements continue to function with severe handicaps in terms of mobility. Although most States will license American graduates by endorsement, the rules are far different for the foreign graduate who wishes to move from the State of his original licensure. A bewildering array of laws, rules, and regulations exist among the 50 States. In addition to the many variations in citizenship requirements, in 21 States an FMG must pass a basic science examination before he can even be considered eligible for licensure examinations.

Specialty Board Certification

Certain provisions for certification of foreign trained physicians by the various specialty boards constitute additional obstacles to the FMG. Several of the specialty boards require citizenship for all applicants for certification -- a fact that bars FMG's from even applying for certification for at least five years. The American Board of Dermatology will award nonresident certification to an FMG on the conditions that (a) he supplies a notarized statement that he will return to his homeland to remain and practice there and, (b) that he will surrender his special certification should he ever return to practice in the United States or Canada. The specialty boards for internal medicine and orthopedic surgery have similar provisions for foreign physicians. The neurological surgery board and the preventive medicine board grant to foreign doctors special Foreign Certificates, which are issued only after the physician has returned to his home country. The board for obstetricians and gynecologists does not certify foreign physicians but instead provides "authentication." In the words of the board, "it merely authenticates that the person has completed an approved residency -- and has passed the written examination of this Board." (57)

Other Health Professions

Among the health professions other than medicine, the problems of foreign-trained members is not an acute one. Nurses immigrate at the rate of about 6,000 per year; but only small numbers of dentists, veterinarians, physical therapists, social workers, and other allied-health professionals seek entry and eventually become licensed in this country each year. Nevertheless, many professional organizations and State licensing agencies have developed criteria of varying degrees of effectiveness, through which they hope to evaluate the professional competency of those who seek to practice in this country. In other than the medical profession, the immigration of foreign-trained professionals at this point in time does not appear to be a critical issue of concern as the examples described below will illustrate.

Until 1969, the Council of the National Board of Dental Examiners declined to examine foreign trained dentists. During that year, the States of California, Minnesota, and New York requested the Council to examine those graduates of foreign dental schools who qualified as candidates for State licensure. During 1970, the first year with the new provisions, a total of 297 graduates of foreign dental schools were examined. By the end of 1970, 42 had passed the examinations. (58)

Foreign-trained physical therapists are admitted to licensure examination if they are graduates of a school that is a member of the World Confederation for Physical Therapy in London. Available data on number of the physical therapists immigrating are sparse; one source is the number of foreign-trained physical therapists who apply for membership in the American Physical Therapy Association. It is common employment-practice in this country to hire physical therapists who hold membership in the Association. Data for 1969 indicate that 293 foreign-trained physical therapists applied for membership. To date, 30 of these have successfully completed the membership examination. The greatest number of applicants continue to come from Great Britain and West Germany. (59)

An increasing number of foreign trained social workers, many at the master's level, are entering the United States from Southeast Asia. Because social-work education reflects the social conditions of the country in which training occurs, many such immigrants find acceptance and adjustments to this country difficult. Due to the overwhelming need for social workers' skills in developing countries, immigration to the United States is discouraged by U.S. professional organizations. (60)

Licensure for foreign trained veterinarians has not been a sizeable problem in the past, inasmuch as only a small number have immigrated. However, in

more recent years, larger numbers are requesting licensure in this country. The American Veterinary Medicine Association currently accepts the credentials of foreign veterinary colleges recognized by the World Health Organization. The veterinarian trained abroad must spend one year in clinical practice under the supervision of a licensed, U.S.-trained veterinarian and pass an examination at least comparable to the National Board Examination. He is then eligible to apply for a State Board examination for licensure. He must also pass a test in the English language developed by the National Council on Testing of English as a Foreign Language. (61)

In 1968, according to the American Nurses' Association, 5,407 foreign nurses were licensed by the various States by endorsement of credentials from a total of 6,063 applicants. During that same year, 656 foreign nurses were licensed by State Board Test Pool examinations, also taken by U.S. graduates. (63) State licensing boards use criteria developed by the International Council of Nurses to judge the acceptability of the foreign-trained nurses' credentials. There is evidence of increasing numbers of foreign-trained nurses entering the United States from Southeast Asia, particularly from the Philippines, on permanent visas. The visitor-exchange program for nurses was discontinued several years ago when administrative difficulties and apparent abuses outweighed the advantages either to the foreign-trained nurse or to the health services system in this country.

Employment agencies engage in active nurse-recruitment programs in foreign countries, too often without sufficiently informing the foreign-trained nurses of U.S. requirements for licensure. In an effort to combat this exploitation of nurses, nursing organizations supported a regulation that would require the evaluation of the credentials of a foreign-trained nurse by the appropriate State Board prior to the issuance of a visa. The failure of this regulation to command sufficient support for adoption reflects the pressures that exist to ease licensure requirements for foreign trained nurses. (63)

In sum, the foreign medical graduate is becoming increasingly significant in the American health-care system as manpower shortages and maldistribution persist, demands for services increase, and a greater dependency on a foreign supply of manpower develops. The question of professional competence is a crucial one that educators, professional organizations, and licensing boards have tried to approach through the current process of licensure. This issue becomes more acute as a greater proportion of physician immigrants originate in developing countries where educational deficiencies are more common.

While there is a moral issue in the further depletion of the skilled manpower supply in medically-indigent countries through migration, the potential injustice imposed on physicians by denying them international

freedom of movement is also pertinent. Nevertheless, considerable opinion has been mounting with regard to the permanent loss of physicians to this country and to Canada and Great Britain. At the same time, realistic assessments of health-manpower resources and needs in less-developed countries are virtually nonexistent. The emigration of physicians from such countries often reflects an underutilization due to the notable difference between the human need for medical care and an effective demand for health services. On the other hand, the almost guaranteed availability of FMG's may reduce pressure on the U.S. medical-care system to strive for self sufficiency in the production and effective utilization of medical manpower. (64) At this time, the migration problem is largely concentrated in the area of physician manpower; although the increasing number of foreign-trained nurses and other health professionals may constitute a more serious problem in the future.

In current and future studies of FMG licensure, the recommendations of the National Advisory Commission on Health Manpower warrant consideration both for their direct and implied relationship to the licensure issue. In its 1967 Report to the President, the Commission recommended that, at a minimum, foreign trained physicians who will have responsibility for patient care should pass tests equivalent to those for graduates of U.S. medical schools. In view of the apparent varying professional competences among FMG's, the Commission further recommended that orientation and educational programs be instituted for FMG's prior to their assumption of patient-care responsibilities. These programs would provide training appropriate to the countries in which the FMG's are expected to practice. (65)

The final recommendation of the National Advisory Commission on Health Manpower, relative to the establishment of a non-Federal Commission on Foreign Medical Graduates, has already been implemented. The Commission is sponsored by national professional organizations representative of the medical profession, medical colleges, hospitals, and State medical boards in addition to the ECFMG. Now in its second year, this Commission is expected to study the subject of the foreign medical graduates in all of its aspects.

The uncertainties, inequities, and variations that seem to characterize the licensing procedures for FMG's reflect the general turbulence in the whole area of licensing and underscore the urgent need for change and improvement. The health services system of this country will be served best by a licensing process that ensures uniformly high standards of care and, at the same time, eliminates the discrimination against properly qualified foreign graduates that both restricts their mobility and limits their opportunities.

PART FOUR

THE INFLUENCE OF LICENSURE ON MOBILITY

CHAPTER VI

GEOGRAPHIC MOBILITY

It is widely held that State licensure poses direct obstacles to geographic mobility. The numerous practice acts that establish the educational, experience, and other qualifications for each licensed health occupation frequently differ considerably from State to State. Thus, in many health occupations, persons licensed in one State may be barred from practice in another State unless a second license for the same occupation is obtained. (66) Moreover, there is great disparity among the States as to which health occupations are licensed. Of the 32 health occupations licensed in this country, only 12 are licensed in every State and the District of Columbia. (67) While nursing-home administrators are licensed to practice in 48 States, less than one-third of the States license social workers and clinical-laboratory personnel, such as medical technologists or technicians. (68) Health practitioners, therefore, who are not required to be licensed in one State may, nonetheless, be barred from practice in another State unless a license is obtained. Then, too, the formal qualifications required for licensure in the second State may inadequately reflect the individual's training and experience received in the State from which he moved.

Despite the widely-held supposition that licensure of health personnel adversely affects geographic mobility, there has been little effort to date to validate empirically this relationship. Moreover, there is no way of predicting whether qualified health-personnel would move to areas deprived of health services if certain existing licensure requirements were abandoned. At the Department's recent Working Conference on Health Personnel Licensure, some concern was expressed that a system of nationwide recognition of the licenses of other States might, in fact, aggravate the growing problem of geographic maldistribution. Attractive environmental conditions as well as cultural, educational, and recreational facilities are frequently as important in stimulating mobility as career and income factors. Hence, in encouraging greater geographic mobility, consideration must be given to the very real possibility that such mobility may result in movement from cities to suburbs and from remote rural areas to urban and metropolitan centers.

The medical practice acts in 49 States and the District of Columbia authorize varying degrees of recognition of other States' licenses either through endorsement of the existing license or through reciprocity with the licensing state. (69)

> Theoretically, endorsement requires only that either the qualifications of the licensee or the standards required for licensure in the original licensing State be equivalent to the licensure requirements of the State in which licensure is being sought. Reciprocity has two components -- equivalence of licensure requirements in the two States, and recognition by the original licensing State of the licenses of the State in which licensure is sought. As a practical matter, the two terms are often used interchangeably. (70)

The arguments advanced in support of an expanded interstate recognition of licenses revolve around the urgency created by shortages in health manpower, which might be alleviated if restrictions upon mobility were removed. In a 1968 survey of dental practice, the comment most frequently made by dentists favoring complete reciprocity was that "dentists should be able to go and come as they see fit." Some dentists thought that present restrictions on reciprocity "have kept the best men from entering the dental profession." (71) The counter argument is that States are completely justified in requiring a high level of professional competency for protection of their citizens. By insisting that the standards in other States are the equivalent of its own standards, the State is making a reasonable exercise of its "police power." According to this position, "States should be free to discriminate against licenses issued by other States on the basis of examination standards inferior to their own." (72) In the above-cited survey of dental practice, "the most prominent reason for opposing complete licensure reciprocity among all states was the belief that this would lead to inferior dentistry or would lower the standards of the dental schools. Others defended the right of certain States to maintain higher standards than others and said that this right would be undermined by reciprocity." (73)

Hence, a primary objective in manpower policy is the upgrading of standards to provide uniform, minimum qualifications that would be required in each State for licensure of health personnel. Measures have already been taken in the licensing of physicians to achieve this uniformity in the two most fundamental licensure standards required by all States: graduation from an approved medical school and passing a licensure examination. "For the former, equivalence of medical education is assured by national accreditation, which has eliminated substandard medical schools and provided certifications used by all State licensing agencies. For the latter, equivalence of examination performance may eventually be assured by universal requirement and recognition of the examinations given by the National Board of Medical Examiners," (74) and the Federation Licensing Examination (FLEX), developed by the Federation of State Medical Boards. (75)

Nursing is one of the few professions utilizing national standardized examinations for licensure of registered and practical nurses in all jurisdictions.

These examinations have reportedly been "one of the most effective means of facilitating the interstate licensing process for nurses." (76) Nurses who are licensed in one State and who wish to practice in a second State usually will not be required to take another examination unless their scores on the first examination fail to meet the second State's standards. An indication that mobility of nurses is facilitated by interstate endorsement of licenses can be seen in the increasing number of nurses that have been granted licenses by endorsement in selected recent years.

Licenses Granted by Endorsement	Year
40,000	1968
31,000	1964
27,000	1960

Another example of a profession that utilizes a national standardized examination is veterinary medicine. Thirty-eight licensing boards currently use the veterinary medical examinations of the National Board of Veterinary Examiners as the official State examination. The remaining 14 licensing agencies prepare their own examinations. The National Board utilizes the Professional Examination Service (PES) in the preparation of its examinations.

The Interstate Reporting Service of the PES maintains a permanent record of the scores on national board examinations administered by State boards for veterinary medicine, psychology, physical therapy, and nursing-home administration; upon request of a candidate, such scores can be reported to another State board to which the candidate wishes to apply for licensure. This Service is advantageous to candidates who want to be licensed in more than one State; it avoids the problem of possibly conflicting examination-dates and further reduces the difficulties of reciprocity among States.

It should be noted that this approach to uniformity suggests a nationwide recognition of minimum standards by the profession itself, and would not necessitate any major realignment of the existing State licensing authorities. Derbyshire endorses this approach, pointing out that the answer to the problem of interstate recognition of licenses is apparent: "It can only be based upon uniformly high standards." He goes on to cite a former president of the AMA who "wondered why all of the State boards could not accept the results of the National Board examination as the basis for granting a state license". (77) Clearly, there are numerous social and political traditions that must be understood in order to analyze accurately the reluctance on the part of some actors at the State level to "surrender their prerogatives."

There are other approaches to facilitate geographic mobility, however, that would entail considerable reform of the present system of State licensure. The National Advisory Commission on Health Manpower recommended the development of model legislation for specific licensure problems -- including the interstate recognition of licenses. (78) The American Hospital Association recently adopted a recommendation calling for further study of the development of model licensure laws as well as "Federal government guidelines for setting minimum qualifications standards for clusters of occupations. Actions could be supported through the development of model statutes and setting of conditions for Federal funding." (79) This course of action would clearly involve a major restructuring of State practice acts.

While a model law requiring licensure for each category of health manpower could alleviate some of the present restrictions on geographic mobility, it is not without problems. According to one writer:

> We must be careful with "model laws." ... Legally, it is importing a model law on plumbing from New York City, or the American Public Health Association headquarters, and plunking it down in the arid desert of a southern California town without any effort at adapting the model code to local conditions.
>
> The climate must also be examined before a new law is offered by public health authorities. The area must be ready for it. The political, social, legal, and medical-society climate must be such that the bill can get through the legislative process looking at least generally like the structure desired. ... What works in Philadelphia may not work in Phoenix. The climate is different. (80)

The Council on Health Manpower of the AMA also observed in a report on *Licensure of Health Occupations* that, (a) national standards may be inapplicable to regional manpower needs and uses, (b) States may be reluctant to abrogate their licensing authority, and (c) model statutes might "encourage additional proliferation in occupations licensed." (81) Moreover, if the Federal government were to establish national standards in licensure of health personnel, this would undoubtedly raise serious constitutional questions inasmuch as the States have traditionally regarded occupational licensure as a fundamental power reserved by the Constitution to the States. (82) In addition to the legal questions posed by Federal innovations in licensure of health personnel, numerous points of political resistance are posed by fifty different sets of practice acts; these acts "are in turn part of fifty different sets of general licensure laws and regulations which cover not only health-service personnel, but all other kinds of professions ..." As Curran remarks, this "multiplicity of points of resistance, i.e., fifty states plus upwards of

twenty odd individual and independent health manpower licensing boards in each state. ..." poses political obstacles of the highest order to nationwide reform in health manpower licensure. (83)

Three recent developments are of interest in the area of reciprocity policy by States. Forgotson *et al.* suggested in their study on physician licensure for the National Advisory Commission on Health Manpower that reciprocity restrictions may be conceived as exceeding the State's police power "since the existence or non-existence of interstate mutuality is entirely irrelevant to a physician's professional competence and licensure qualifications." They did note, however, the beginning of a trend to recognize out-of-State licenses even if that State had no reciprocal policy of recognition.

> Of the 49 jurisdictions which have some provision for recognizing other state's licenses, the licensing agencies of all but six currently have discretionary authority to endorse licenses issued by nonreciprocating states. Two states have recently amended their statutes to specify that their reciprocity requirements are discretionary rather than mandatory. If this discretion is exercised ... the effect of reciprocity may not be so objectionable. (84)

Secondly, the State of Alaska recently revised its medical practice act by removing from the State Medical Board the authority to enter into reciprocity agreements with any other State in the licensing of physicians and physical therapists. These practitioners will now be subjected to individual consideration even though they have already obtained licenses in other States. According to the Federation Bulletin, published by the Federation of State Medical Boards, "apparently particular emphasis will be placed on the thoroughness of the examination given by the medical examining board of the State ... at the time the license submitted for endorsement was issued." The Bulletin lauds the decision in Alaska and points out that "although the Federation in its earlier years considered 'universal reciprocity' a worthy goal, fortunately, member boards of the Federation now are aware of the language of endorsement and generally are more concerned with the qualifications and credentials of a candidate for licensure than with an archaic interstate compact." (85)

Also, there has been a recent interest by dental boards in a regional examination, whereby a candidate can pass a single examination and satisfy the clinical requirement of dental licensure in more than one State. Ten dental boards in the Northeast and three boards in the Midwest are now operating such programs. Other groups of States are now considering the initiation of these regional clinical examinations. This may be the forerunner of a national clinical examination similar to the written examination of the National Board

of Dental Examiners, which is now accepted by 47 States. Regional cooperation may also prove to be a more realistic and acceptable means of achieving uniform standards at this time than a single nationwide examination.

Thus, the political and legal issues basic to interstate reciprocity and endorsement are complicated by the concern for high standards of professional performance. According to this view, to remove licensure restrictions to out-of-State practitioners who present inferior qualifications will bring about a dilution of the requisite standards for professional practice.

CHAPTER VII

CAREER MOBILITY

Licensure and other forms of personnel credentialing have a profound influence on the career mobility of health professionals. These processes often operate in such a way as to "lock-in" individuals to certain positions with little potential for the assumption of increased responsibilities or mobility. Thus, after initial entry into a health occupation, licensure laws and certification processes generally specify the additional formal requirements that must be satisfied in order to move into a more responsible position within the same health field (vertical mobility) or to a similar position in a related health field (lateral mobility). Perry describes vertical and lateral mobility as follows:

> The visual concept of "ladder" is quite explicit: within each health profession there should be the potential for educational and occupational movement in a vertical, upward thrust that might make it possible, based upon completion of educational requirements and measured capabilities, for an individual to move with comparative ease from the level of the aide, to the assistant, to the full-fledged professional practitioner. . ..
>
> In addition to the ladder concept, recently the "lattice" concept in health careers has been described. This purports that in addition to the vertical-movement theory in a health field, there should be provided a possibility for the horizontal or lateral transfer *between* health professions, and specifically, allied health professions. Entry would not be at the lower level of the ladder or lattice, but with recognition of educational and occupational experience common to several health fields, entry to a new health career would be relatively easy to achieve by such lateral movement. (86)

In addition to the vertical and lateral dimensions of career mobility, there is a new dimension that is rapidly becoming one of the most controversial issues in health manpower: the physician assistant. This practitioner is specially trained to perform certain tasks that generally have been limited to physicians. The physician assistant approach, which is treated in greater detail in Appendix B, has generally been heralded as a potential solution of the growing manpower shortage in medicine.

The President in his recent Health Message addressed himself to these considerations:

> One of the most promising ways to expand the supply of medical care and to reduce its costs 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 allows him to treat many additional patients. (87)

Although much of the support and endorsement for the physician assistant and other surrogate health personnel is based on a projected easing of the physician shortage in this country, there is another potential advantage inherent in these programs. Increasing the responsibilities of certain health personnel may result in a simultaneous upgrading and career advancement of these positions. Both of these assumptions, however, require further documentation based on empirical research. Moreover, as emphasized in Chapter I, the safety of the patient must be paramount in consideration of any such developments.

Silver, one of the early advocates of the physician assistant concept, even urges a new classification for those health professionals who carry out functions and activities that traditionally were performed by physicians. He proposes as a generic name for these health professionals the term, syniatrist, defined as "an individual who practices in association, union, or together with a physician. ... It is recommended that there be three subgroups of syniatrists (associates, assistants, and aides) depending on the degree of independence and competence expected from the syniatrist in the application of their professional skills." (88) These three levels of assistants approximate the Types A, B, and C assistants as described in Appendix B. These categories, while assisting in the further definition of this new health occupation, also provide a means of career and status enhancement for the physician assistant.

Licensure and professional certification influence these three components of career mobility in several ways. The levels of advancement in many health professions are firmly rooted to a set of requirements such as formal education, training, and experience. There are instances where the licensure requirement duplicates to some degree the necessary qualifications required for initial entry. One writer describes the situation in New York City regarding career mobility in nursing as follows:

A student in a two-year RN program could, at the completion of the first year, take the LPN examination. If she passed the examination, she could practice as an LPN and complete the second year at her convenience. A student completing the requirements for LPN school also was eligible to sit for the same examination and, upon passing it, could practice as an LPN. However, if this LPN decided to enter a two-year RN program, no credit would be given for the year of training and experience. (89)

Although experimental efforts supported by the Office of Education, the National Institutes of Health, and others are now being undertaken to admit LPN's with full credit to a two-year RN program; this situation is the exception rather than the rule in many health professions. As Perry observes, career mobility, with its ladder and lattice concepts, is still very much in the talk stage at this time. (90)

A major resistance to the enlargement of career mobility in health professions comes from professional organizations that place a premium on the selectivity and high standards required for membership. (91) Licensure, certification, and accreditation are thus viewed in some quarters as symptomatic -- in the context of career mobility -- of the professionalism that has become a primary value in health occupations, almost preempting such values as the practitioner's skills and competence in job performance. When a certified laboratory assistant with seven years of competent service is required to take a full year of elementary bacteriology in a baccalaureate program, the situation is cited as evidence of inappropriate criteria for the credentialing of health personnel. As one writer put it, "Surely there must be ways in addition to formal education and the acquisition of a 'piece of paper' to prove the value and competence of a person on the job!" (92)

A former president of the Association of Schools of Allied Health Professionals has urged that the present barriers among professional associations must be broken down if career mobility is to become a reality.

> Accepting the importance of this independence of movement, is it not now about time to consider the relationship of each allied health profession to each other -- with the starting point of discussion not based upon the relationship of the professions but rather upon the relationship of each of the systems of health care and the function of each in relationship to the patient?As we break down the boundaries of indifference and suspicion of intent and concentrate on the similarities which exist in educational programs and in patient care function, we will discover ways in which core courses, perhaps core curricula, will become a standard of performance. (93)

Licensure laws also directly affect the third dimension of career mobility described above. The practice acts in most States prohibit anyone who is not a physician to perform those tasks for which physician assistants are being trained. The President addressed himself to this problem, noting that laws in most States prevent doctors from delegating certain responsibilities, such as giving injections, to their assistants. (94) In this connection, the State of California, which enacted in 1970 an innovative physician assistant law (95), has also taken important legislative steps in the area of career mobility. In 1969, the State required: (a) recognition of the training of medical corpsmen

who seek to become registered nurses; (b) recognition of equivalent education or experience of candidates for licensure as vocational nurses; and (c) allowance of some credit for vocational nursing training to facilitate upward mobility from vocational nurse to registered nurse. (96)

Related very closely to the concept of career mobility as well as to that of proficiency testing is the increasing interest both in and outside of the Department in *task analysis,* which is a form of occupational analysis that utilizes techniques for identifying and classifying jobs or portions of jobs. The essential elements of task analysis are to: (a) identify each task, (b) indicate the skill involved, (c) state the purpose of the task, and (d) describe the knowledge required to perform that task. The Department is currently sponsoring a number of projects dealing with task analysis that are designed to facilitate the upgrading of certain categories of health personnel.

Data obtained from task analysis can be used to (1) evaluate the adequacy of an existing curriculum, (2) establish a curriculum, (3) restructure jobs in order to make opportunities available at other levels, (4) determine pay scales, and (5) determine if hiring requirements are realistic. Job analysis in the health field is recognized as an important factor in determining the redistribution of duties, functions, and responsibilities to effect an improvement in the health care delivery system. However, the method for accomplishing job analysis in a service-oriented, rather than product-oriented, industry is still in the experimental stage.

A final point with regard to career mobility is that the present emphasis on formal credentials tends to accentuate manpower shortages and maldistribution, "while permanently barring people, often minority-group members, from the opportunity to aspire to a professional career. Credentials need to be examined to the degree that they are unrealistic or outmoded ... Where possible, individuals should be able to offer their working experience in partial substitution of formal academic preparation." (97) As with so many of the issues underlying the licensure of health professionals, the need to balance certain values -- in this case, the value of professional standards of performance and the vital public interest in quality and safety as against the value of alleviating a growing manpower shortage. Fortunately we are not at the point where the latter value presupposes low-quality performance and incompetence. Each party to this debate clearly advocates the use of qualified and competent practitioners in the various health occupations; but, standards of quality are often elusive concepts, defying hard and fast definitions. In addition, task analysis that identifies the skills and qualifications of specific health occupations and that matches these with continually changing technology and educational curricula is at a very early stage in its development. A rational and definitive consideration of these issues is hampered, at this time, due to the lack of generally accepted criteria of high-quality care.

PART FIVE

DEMONSTRATING AND MAINTAINING PROFICIENCY

CHAPTER VIII

PROFICIENCY AND EQUIVALENCY TESTING

Proficiency and equivalency testing has been recommended in many quarters as a means of alleviating the critical shortage of qualified health manpower. A recent state-of-the-art study, sponsored by the National Institutes of Health, offered the following definitions:

> *Equivalency testing* refers to examinations used to equate nonformal learning with learning achieved in academic courses or training programs. Such tests may be designed to enable colleges and universities to grant academic credit for off-campus learning. They also may be used by employers or certifying bodies to qualify individuals whose non-formal study and on-the-job learning is deemed equivalent to that expected from a formal program.
>
> *Proficiency testing* refers to the measurement of an individual's competency to perform at a certain job level -- a competency made up of knowledge and skills, and related to the requirements of the specified job. Such testing is therefore not only a measure of the knowledge gained through didactic instruction but also an assessment of job capabilities. (98)

The study also pointed out that, while equivalency tests for liberal-arts subjects are not tests of proficiency, equivalency tests in occupational fields are generally proficiency tests as well. "The more closely an educational program is designed to relate to a specific job level, the more likely it is that an equivalency test for that educational program would also serve as a proficiency test to qualify individuals for that job." (99)

Health practice acts as well as professional certification typically rely upon a formal educational curriculum and other specific criteria as the basic qualification for licensure. Under a system of proficiency and equivalency testing, an individual's expertise and skills in the performance of specific tasks as well as his work experience would be recognized in lieu of some of the present requirements stipulated in licensure laws. The basic rationale underlying this approach is that numerous competent individuals who are presently ineligible for employment in a variety of health occupations due to such requirements as formal education and professional membership would be able to enter these occupations, if they were allowed alternative means of demonstrating their qualifications.

Proficiency and equivalency testing provides an opportunity not only for initial entry into health occupations, but also for the career mobility of health

personnel. As one study reported with regard to laboratory personnel, "civil service regulations, Federal and State, generally do not provide for the mobility of laboratory personnel from the technician level, requiring some training and experience past high school, to the professional technologist level, requiring essentially college graduation. ... State laboratory officials and others concede that there are certain individuals who can and do add to their own stores of knowledge -- practical and theoretical -- without setting foot in a classroom." (100) This is equally applicable to other health personnel who are required by State practice acts and certification bodies to begin, *de novo,* in the formal preparation and training for new positions even when transferring from related health occupations. One recent departure from this custom is the 1969 California legislation, cited above in connection with career mobility.

An effective system of proficiency testing would also contribute toward greater utilization of former military health personnel. Returning armed services corpsmen who wish to continue their careers in the civilian health field without additional training, generally, can enter only at the lowest rung of the health-occupation ladder. These positions offer little either by way of salary or responsibility. A number of programs are currently being supported by the Department to rechannel some of this reservoir of manpower into a variety of health occupations. Proficiency testing that would enable the qualified ex-medic to assume a higher-level position at initial entry would complement the Department's on-going efforts in this direction.

The Senate Finance Committee, in its report on the Social Security Amendments of 1970, (101) strongly recommended the adoption of proficiency measures in recruiting health personnel under the Federal Medicare program. Citing an earlier report on this subject, the Committee voiced its "concern that reliance solely on specific formal education or training or membership in private professional organizations might serve to disqualify people whose work experience and training might make them equally or better qualified than those who meet the existing requirements. ... Failure to make the fullest use of competent health personnel was of particular concern because of the shortage of such personnel." The Committee also took note of the recent ruling by the Medical Services Administration affecting nursing homes participating in Medicaid. In other than the day shift, which requires a registered nurse, the charge nurse must be a registered nurse or a licensed practical-nurse who is a graduate of a State-approved school or has the equivalent to graduation. According to the Committee, prior to this ruling, many hundreds of nursing homes had been covering some shifts with "waivered" practical nurses; i.e., "practical nurses, who do not have the required formal training, and who, in may States, have been licensed on a waivered basis."

The consequences of the ruling, however, are such that "many otherwise qualified nursing-homes are being, or soon may be, forced out of the program due to their inability to locate a registered or a licensed practical nurse." The Committee thus accentuated its proposed amendment to the Social Security Act, which would require the Secretary to develop a program to determine the proficiency of health personnel "who do not otherwise meet the formal educational, professional membership, or other specific criteria established for determining the qualifications of practical nurses, therapists, laboratory technicians, x-ray technicians, psychiatric technicians, or other health technicians and technologists." (102)

Although the Department has not yet developed a broad-scale response to the issue of proficiency testing, it clearly has taken cognizance of this approach as evidenced by its Medicare regulations with respect to (a) directors of clinical laboratories certified for Medicare participation, and (b) certain State-licensed physical therapists. Programs developing examinations for both of these categories were supported under contract from the Health Services and Mental Health Administration.

Under Medicare regulations, an individual may have qualified as a clinical laboratory director if he "achieved a satisfactory grade through an examination conducted by or under the sponsorship of the U.S. Public Health Service", even if he did not hold a bachelor's degree. (103) Launched in 1967, this program examined directors of independent laboratories who did not meet established educational requirements. To date, the examination has been given five times. Of the 908 examinations administered (including some taken by persons two and three times), 446 individuals qualified their laboratories to participate in the Medicare program, 97 failed to qualify, and 341 sought certification in an additional specialty or specialties. The expiration date of this examination series was July 1, 1970, on the assumption that substantially all persons who would be recognized by this mechanism had already applied by that date.

A similar type of proficiency test was authorized in 1970 under another section of the Medicare regulations. (104) This test seeks to determine skills of State-licensed physical therapists who do not have full professional training but who wish to qualify for full participation in the Medicare program. The examination has been administered once, in 1970, to 212 individuals; the scores are not yet available.

In addition, proficiency tests for physical therapy assistants have been developed by the Professional Examination Service; and equivalency tests are currently being developed in the fields of clinical chemistry, microbiology, hematology, and immunohematology by the College Entrance Examination

Board. Both of these activities are sponsored by the National Institutes of Health. A similar effort is under consideration in the field of occupational therapy. The National Committee for Careers in the Medical Laboratory is also conducting studies on proficiency testing under contract to the Labor Department's Manpower Division. The Civil Service Commission (CSC) has no provision for proficiency or equivalency examinations in health occupations. Although in setting its standards for various positions, "the CSC operates with the assumption that experience and education can be equated," the result is the opposite of what is being urged in equivalency testing. "Because it is an experience-based service, CSC allows applicants with advanced degrees to count them as part of the credit toward experience requirements." (105)

One final point that needs to be underscored is that proficiency testing is deemed important only insofar as it may attract qualified and competent individuals who are ineligible for certain positions, solely because they lack the formal education or professional credentials required by State practice acts or certifying organizations. The Senate Committee was quick to emphasize "its concern that only qualified personnel be utilized in providing care under Medicare and Medicaid. ... The committee does not advocate 'grandfathering' of poorly equipped health care personnel nor does it advocate usage of arbitrary and inflexible cutoff standards of qualification which rule out of program participation many competent personnel." (106)

The Department, too, has voiced an element of caution in proceeding too quickly into the field of proficiency testing. In a 1968 report to Congress on *Personnel Qualifications for Medicare Personnel,* the Secretary stated that proficiency testing is generally "not viewed as being an overall substitute or alternative to recognized educational requirements. ... Proficiency testing is still undergoing development and is not yet considered an accurate and reliable measure of competency." (107) Thus, while the Department has already undertaken work in proficiency testing and the related task analysis studies, mentioned in the earlier chapter on career mobility, it is important that these programs be carefully evaluated at various steps before they are supported as prototypes for a new system of determining the qualifications of health personnel.

CHAPTER IX

CONTINUING EDUCATION

The traditional rational for State licensure of physicians and allied health personnel, as has been mentioned several times in this report, has been to guarantee and to maintain minimum standards of quality in the delivery of health services. In theory, licensure of health professions has come to symbolize the means by which a State provides its citizens protection against low-quality health care. It is becoming increasingly apparent, however, that there is a considerable gap between objectives and reality in this area of public policy; especially, with regard to the issue of professional obsolescence.

The typical State requirements may provide adequate safeguards at the initial level of entry into a profession. These requirements direct that any individual wishing to practice a given health professior must obtain a license contingent upon the completion of a specified academic curriculum and passing a State-administered examination. It is a considerably less-effective guarantee, however, against the growing problem of professional obsolescence. While most States require periodic reregistration of physicians -- many on an annual basis accompanied wi ee, (108) traditionally, there has been no requirement in S that the physician or other health professional complete a p se of continuing education or that be reexamined to maintain his license.

In its 1967 report, the National Advisory Commission on Health Manpower noted a number of potential disadvantages with relicensure of the health professional, which will be presented below, and concluded that "simply making educational opportunities available will not assure their utilization ... unless sufficient incentives are provided. One way of providing such incentives would be to relicense health professionals periodically on the basis of acceptable performance in programs of continuing education, or on the basis of challenge examinations for those who choose not to participate formally in continuing education." Taking the position that "the dual program of continuing education and relicensure is a feasible method for providing the health professional with the new knowledge he needs and, at the same time, giving assurance to the public that a practitioner's knowledge reflects the most advanced results of medical progress" the Commission recommended that "professional societies and State governments should explore the possibility of periodic relicensing of physicians and other health professionals." (109) Clearly, this reflects the growing sentiment that licensure and certification should not be pursued as a one-time endeavor but rather as an on-going process that requires periodic updating.

According to Forgotson, State licensure laws were "enacted before the technological and information explosion which began in the late 1930's. ... These laws did not recognize that development of new information would render a person's initial qualifications to practice obsolete unless they were upgraded periodically by a program of continuing education." (110) The relicensure of health professionals, moreover, would not require any fundamental changes in the existing practice acts, for as Shindell observes, "It is certainly within the power of a State to require re-examination, just as now it is within its power to require examination for initial licensure." (111)

According to other authorities, however, the need for continuing education -- while of crucial importance -- should not be imposed by the State but rather by the professions themselves. The recent report of the Carnegie Commission on Higher Education articulated this approach in recommending the periodic reexamination and recertification of all physicians and dentists by specialty boards and professional associations. (112)

To date, only a small number of national organizations require its members to attend a prescribed course of continuing education for renewal of certification. These include the American Academy of Family Practice, the American Dental Assistants Association, the National Board for Certification in Dental Laboratory Technology, the American Dietetic Association, and the American Registry of Clinical Radiography Technologists.

At the State level, in 1968, the Oregon Medical Association imposed a similar requirement of continuing education upon its members; and California has considered a similar requirement for hospital-staff membership. The Pennsylvania Medical Society is also reported to have approved a plan similar to that of Oregon; (113) More recently, the Arizona Medical Association has adopted a continuing medical education requirement for society membership. One problem with this approach is that a significant percentage of practicing physicians may not belong to the State medical society. One member of the Maryland Board of Medical Examiners estimated that as many as 10 percent of practicing physicians in Maryland were not affiliated with the State medical society. (114) In order to obtain a blanket protection against obsolescence, this physician has advocated relicensure to assure that all physicians in the State would come under a continuing education requirement. (115)

Twelve national medical specialty organizations are carrying on self-assessment programs that consist primarily of a comprehensive examination prepared by experts in the field and self-administered by physician members. After completion, the examination is scored, analyzed, and, in some specialty areas, compared with that of others with similar educational and clinical experience. Groups such as the orthopedic surgeons are

at the same time applying new knowledge about testing and examination procedures for Board certification.

This problem of continuing education being offered to less than the universe of practitioners is also evident in the voluntary, self-administered examinations that the American College of Physicians has offered to its members. (116) To date, about 11,000 of the organization's 15,000 members have requested that the examination be sent to them. Even if all of the 11,000 tests were returned -- an unlikely possibility, it may be that the 100 or 200 member-physicians who are most out-of-touch with current medical research will not even request the examination. The problem, essentially, is that there is insufficient incentive for these practitioners to become involved in continuing education.

The medical community is also offering rewards for voluntary participation in continuing education. The first, in 1968, was the American Medical Association's Physician Recognition Award, for which physicians have been honored for participation in 150 hours of continuing education during a continuous 3-year period.

Although Derbyshire writes that the "consensus among both educators and licensing authorities seems to be that postgraduate education should be on a voluntary basis and left to the conscience of the individual," (117) recent surveys indicate a growing trend in the direction of State licensing authorities requiring the continuing education of health professionals. In a 1969 mail questionnaire to each State board of medical examiners, Dr. M. H. Crabb, Secretary of the Federation of State Medical Boards, reported the following:

> One state had a board regulation requiring that a physician who had been licensed by examination in another state ten years or more prior to the time of his application for reciprocity would be required to present evidence of interim postgraduate medical education acceptable to the board. A second regulation in that state required that any physician who had permitted his license to lapse would also be required to present such evidence for reinstatement of his license.
>
> Seven additional states indicated that they were interested in the problem, and one had recently requested legislative authority to require postgraduate medical education as a requirement for periodic re-registration. (118)

Thirteen States presently require continuing education for relicensure of osteopathic physicians. In 1970, a nationwide survey of 52 dental examining boards found that four boards now make continuing education a prerequisite

for dental-license renewal and one State dental society makes it a prerequisite for society membership. At the time for the survey, enabling legislation to allow the State examining boards to set such requirements had been passed or was being sought in six States, and eleven boards were "studying the question." Two States also make continuing education a prerequisite for license renewal of dental hygienists. (119) At least 14 States have some requirement of continuing education for renewal of optometrists' licenses; three States, for veterinarians' licenses with three more considering like action; four States, for podiatrists' licenses; and two States, for pharmacists' licenses with more considering this requirement. Nursing-home administrators, whose licensure by the State is required by a 1968 amendment to the Social Security Act, (120) must satisfy a continuing-education requirement either stipulated in the practice act or administratively by the licensing boards in 24 States. Another eight States either will require this within the next few years or have the matter under discussion.

While urging States to explore the possibility of periodic relicensure of physicians and allied health professionals, the National Advisory Commission on Health Manpower cited a number of potential problems with relicensure. (121) Of the following obstacles, some have been discounted by the proponents of relicensure; others are not so handily dismissed:

1. Licensure can only be granted by a governmental agency, and the extension of government jurisdiction over professional activity should be undertaken only after careful planning for safeguards against abuse.

The Commission itself concluded, however, "There is no reason why subsequent relicensure should be any less professional in its orientation, or should offer any greater possibilities for abuse." (122)

2. Present licensure authorizes any health professional to perform all the various activities permitted to his profession. In actual practice, physicians, dentists and even nurses are moving rapidly toward specialization. It may be that licensure will some day be granted on the basis of specialty practice as well as general practice. However, with present licensure laws, continuing education or examination in a specialty could probably not serve as a basis for relicensure which permits practice outside the area examined.

Relicensing physicians and other health professionals who have entered into specialties presents the problem of what should be examined -- the broader field, as at the point of initial licensure, or only the specialty field. Even with many years of experience, the most skillful specialist may be poorly equipped to pass a new licensure examination in general medicine. Stevens, without

addressing this issue, assumes that such examinations will be given in the practitioner's specialty. (123) There may be some question, though, whether the practitioner who is examined for continuing proficiency in a specialty only should be licensed as a general practitioner.

3. Many existing programs of continuing education are totally inadequate, in both content and geographic distribution to serve as a basis for relicensure. New programs would have to be developed and presented in ways that are tailored to the location and time requirements of busy practitioners.

Forgotson and Roemer raise the related question as to "whether medical schools, already burdened with undergraduate medical education, graduate medical education, research, and community service, would accept this new responsibility." (124) New and innovative programs both in and outside of academic centers will have to be designed to perform this function.

4. Since continuing education would become a basis for relicensure, mechanisms would have to be developed to accredit these programs professionally, as is now done for health manpower schools.

5. The responsibilities of health professionals vary so widely that special provisions would have to be developed for those whose work did not permit reasonable participation in educational programs.

Recent regulations of the Kentucky Board of Dentistry require that dentists complete 20 points of continuing education in order to renew their license. The following activities will qualify as continuing education: (125)

Local Dental Meetings	2 points
State Dental Meetings	5 points
Regional and National Dental Meetings	5 points
Dental Specialty Meetings	5 points
Study Club Dental Meetings	2 points
Continuing Education (Courses or Seminars)	5 points per day
Hospital Staff Meetings (at which scientific sessions are held)	2 points.

6. The institution of a relicensure requirement might have to be prospective and applied only to those who enter professional schools after the start of the new requirement.

With regard to this last question, it would appear that the State could easily extend its basic licensing power to require a reexamination or other indication

of the individual's continuing education even to already licensed practitioners. As Derbyshire observes, "Even after a license has been granted it does not become a permanent property right. The impermanence of a license is emphasized by the fact most States require periodic registration ... many on an annual basis." (126)

There are also a number of pragmatic or operational difficulties with recertification or relicensure that were not considered by the National Advisory Commission. If continuing education is a prerequisite to the right to practice a profession, the organizations or groups responsible for certifying the acceptability of programs and for conducting programs of continuing education assume a new importance. At present, failure to enroll an individual in such programs carries no particular penalty; but it might if continuing education were compulsory. Moreover, what would occur if a significant number of practitioners, especially older persons, fail to qualify or choose not to apply for relicensure? Is the manpower system sufficiently strong to compensate for these potentially sizeable reductions? There are also questions of cost and logistics. Mandatory educational programs will require considerably more financial support and professional time -- for teaching, attending courses, and administering the program -- than are now committed. While some of the costs could easily be borne in the case of some professions, it may not be feasible for other relatively low-paid categories of health personnel.

A requirement for continuing education could also aggravate the problems of coverage for remote, underpopulated areas. Such a requirement would tend to influence the practitioner to remain conveniently near continuing-education facilities and programs, resulting, in effect, in a lifelong dependency on educational institutions. Practitioners in remote areas may be either unable or unwilling to effectuate such basic changes in their career styles. Modern communications technology should be utilized to block these undesirable possibilities.

Personnel qualifications may also be maintained by means other than relicensure or recertification. Hospital review boards, for example, provide the opportunity to ensure the quality of health services rendered by hospital personnel; at the same time, they exert a positive influence on health care. Inasmuch as the regulation of staff privileges "does not involve invocation of quasi-penal provisions such as those presented by cases involving alleged violations of licensure laws, supervision of practices can be more flexible, and procedural standards of proof of improper practices need not be as stringent." (127)

Another form of peer review is that of the professional standards review organization (PSRO), which is currently receiving considerable interest. The

PSRO-concept would place responsibility on the medical societies for assuring peer review within their jurisdiction. Although these approaches are obviously limited in their scope and applicability to the broad range of services in health care, they certainly have an important role in the larger matrix of maintaining personnel qualifications and competence.

In the final analysis, the issues treated in this chapter were mainly responses of a logistical nature as to how continuing education might be best implemented. Questions of an even more fundamental nature need clarification. What constitutes continuing education? In what settings does a health professional learn? Do examinations indicate knowledge, information, or the ability to use certain skills? How does one test the ability to give continuing, responsible, and sound care to patients? These are clearly the more crucial questions that require considerably more empirical research. Although a number of important steps have already been taken by the States and professional associations to encourage the maintenance of personnel qualifications in health care, a better understanding of continuing education as a concept will undoubtedly facilitate the development of more effective programs to prevent professional obsolescence in health manpower.

PART SIX

INSTITUTIONAL LICENSURE

CHAPTER X

SEVERAL APPROACHES TO INSTITUTIONAL LICENSURE

One of the most far-reaching proposals in recent years aimed at changing the present system of licensing health personnel is that of institutional licensure. Although there are several models bearing the label of institutional licensure, the common element underlying these approaches is that the State should license an institution providing health services rather than the individual practitioner working in the institution. The present system of personnel licensure specifies a given scope of practice beyond which the practitioner may not tread. This tends to provide a rigidity of structure and function that is not readily adaptable to rapid change -- an increasingly evident trend in health care. The institution providing health services, whether it be a hospital, clinic, neighborhood health center, or a health maintenance organization, may require frequent changes in its utilization of health personnel. Health-care institutions must have a great deal of flexibility in meeting the exigencies inherent in health services delivery. This flexibility is now seriously limited by the present system of personnel licensing.

The primary thrust of institutional licensure, then, is to replace the licensing of individual practitioners presently working in institutional settings with a single license to the institution. Specific implications of this approach with regard to practitioners who are unaffiliated with an institution are examined below. According to Forgotson and Roemer, institutional licensure would "provide a framework for developing innovations in the use of existing categories of personnel and for undertaking experimental programs to train and use new categories of health professionals." (128) Hershey proposes the following scheme to operationalize this form of licensure:

> The state hospital licensing agency could establish, with the advice of experts in the health care field, job descriptions for various hospital positions, and establish qualifications in terms of education and experience for individuals who would hold these spots. Administrators certainly recognize that although a professional nurse is licensed, her license does not automatically indicate which positions within the hospital she is qualified to fill. Individuals, because of their personal attainments, are selected to fill specific posts. Educational qualifications, based on both formal and inservice programs, along with prior job experience, determine if and how personnel should be employed. (129)

The dichotomous situation of licensed and unlicensed health personnel tends at times to label the unlicensed person performing duties within the scope of practice of a licensed health-practitioner as a layman. (130) Instead, this new approach would place primary consideration on the individual's

particular skills and experience for a particular position. The concept that individuals are qualified or unqualified, as opposed to their being licensed or not licensed, is closely related to the growing interest in proficiency and equivalency testing evident in many health fields. Where positions are assigned on the basis of skill, education, and inservice training -- and not based on title or license, institutional licensing provides more flexibility. An opportunity is presented to utilize certain personnel for tasks that presently could not be so deployed due to (a) the particular scope of practice defined in the licensure laws and (b) the formal qualifications requisite for licensure.

In addition, institutional licensure contains a built-in safeguard against professional obsolescence. As Hershey observes, under this system, health practitioners must satisfy the requisite skills for particular positions. "We would put an end to licensing a person for life, both because we know a particular individual may not remain qualified to be in a profession for life, and also because the profession may not exist in anything like the form it had when the particular individual received his license." (131)

> Thus, the professional nurse who returns to work after a hiatus of 10 or 15 years might be qualified for positions currently held only by practical nurses or nurse aides. As the nurse regained her skills and became familiar with professional and technological advances through inservice programs, she would be able to move on to a higher grade level, and to duties consistent with it. (132)

In a sense, the problems of obsolescence and of proficiency and equivalency are two sides of the same coin. On the one hand, the institution should continue to have the flexibility of removing a licensed practitioner, who has gotten out-of-touch, from his position on the hospital or clinic staff. By the same token, a practitioner who is not licensed or does not qualify for a license should not be barred from tasks that he is fully capable of carrying out.

Two questions are often raised with regard to institutional licensure: (1) Where do physicians and other private practitioners who are unaffiliated with a hospital or other health institution fit into this scheme? and (2) Does institutional licensure extend to all hospital personnel -- including physicians?

First, there are differing approaches concerning the status of the private practitioner under the system described above. According to Hershey, "regulating the practice of a physician in the public interest demands that the individual physician's office be recognized as a small health-care institution. ... Job descriptions and guides to the utilization of personnel could be prepared for the physician's office as an institution in much the same way as would be done by a licensing agency for currently recognized institutions." (133)

In its recent report, *Licensure of Health Occupations,* the Council on Health Manpower of the AMA took a different approach to this issue. In discussing the proposal for a system of institutional licensure, this report distinguishes between "independent practitioners such as physicians, osteopaths, podiatrists, and dentists to whom the public has direct access, and dependent practitioners such as nurses, practical nurses, physical therapists, medical technologists, and so forth." The latter category of personnel "would be unlicensed *per se,* but would be accountable to the employing institution or independent practitioner when working under their direction and supervision." The independent practitioners, however, would retain their present licensed status even under a system of institutional licensure but, would be accountable for personnel working under their supervision. (134)

This report clearly adopts a differently defined concept of institutional licensure than that espoused by Hershey. It also appears to be more limited in its definition of health institutions, relegating institutional licensure primarily to hospitals. According to the report:

> Problems may well arise ... in attempting to apply this concept to the not inconsiderable number of allied health personnel employed neither by a physician nor a hospital. Included in this group would be individuals working in industry, home health agencies, school health programs, rehabilitation centers, special camps, and the like, as well as those who are self-employed. (135)

Turning now to the second question as to whether institutional licensure extends to the physician working in an institution, Hershey takes the position that the hospital physician, too, would be included in this form of licensure. In fact, the situation proposed for health personnel working in an institutional setting has long been recognized and practiced with regard to the physician's status and position in hospitals.

> Although by law a licensed physician has an unlimited scope of practice, the area of practice permitted a physician in a hospital is related directly to his personal attainments. In according practice privileges within the hospital, the credentials committee of the staff reviews the physician's past practice and education, and recommends privileges in line with the competency he demonstrates. ... Furthermore, physicians tend to identify themselves as urologists, general surgeons, orthopedists, etc., recognizing that they have particular competencies based on education and experience... . (136)

In addition to the conceptual complexity of the several approaches or models of institutional licensure, a number of unresolved questions have been noted "concerning the qualifications and ability of any State agency to

undertake this licensure and surveillance responsibility." According to the AMA report, "a variation of this proposal would vest responsibility for approval of manpower utilization plans in voluntary rather than governmental State agencies, hopefully providing more flexibility in operation. Problems with this approach include the political feasibility of such a voluntary agency and the amount of authority it would be able to exert." (137)

Several operational difficulties with institutional licensure could be encountered. As each hospital sets up its own job classification system, a new obstacle to mobility is created. Under this system, an individual working in one hospital might be either unable to find a similar position in another hospital or be unqualified to perform in the same position in the second hospital. Each State might conceivably formulate its own set of criteria and standards for institutional licensure that would further fragment the credentialing of health personnel working in institutions -- a factor that may further inhibit geographic mobility. Physicians or other private practitioners who also treat patients in a hospital would be regulated by two different institutions; the requirements for each form of practice could conceivably be quite different.

Moreover, if the decision-making mechanism for distribution of duties in the licensed institution is not adequately sensitive to the whole institution, the system could result in being a means of excluding properly qualified personnel rather than of utilizing them more effectively. The impact of unionism is also an important factor to consider with regard to the institution's flexibility in hiring and firing, as well as in reassigning tasks. One union has already contracted a study to develop career ladders and training of hospital employees. The career ladders will reflect job descriptions and performance standards. (138) Conceivably, these standards may be at variance with those formulated by the State institutional licensing board.

Notwithstanding these problems, the American Hospital Association's AMERIPLAN calls essentially for a system of institutional licensure:

> To alleviate personnel shortages, minimize educational costs by creating upward mobility for health personnel, and to maximize individual potential, Health Care Corporations require flexibility in the use of health manpower and control over the development of personnel. As AMERIPLAN phases in, with Health Care Corporations covering all geographic areas of each state, the present system of licensure of health personnel should be phased out and the Health Care Corporations made responsible for the competence of all their employees.
>
> The responsibility of the Health Care Corporations for the competency of all their health care personnel would also apply to physicians, dentists,

nurses, and pharmacists. Therefore national standards for the measurement of competency of these groups would be indispensable. These standards should include verification of professional education and national licensure for physicians, dentists, nurses, and pharmacists, with specialty training for physicians to be certified by specialty boards. The Health Care Corporation would rely on this national licensure as a guarantee of basic qualifications. (139)

Although national licensure, as proposed in AMERIPLAN, obviously raises constitutional and political questions of the first order, there is some justification offered for an expanded Federal role in the field of licensure by virtue of Medicare and other Federal programs. (140) However, as Somers pointed out, aside from States' rights arguments and several very real political difficulties, some groups will undoubtedly question "the feasibility on practical administrative grounds of establishing and enforcing a single national standard in a country as large and diversified as the United States. ... [And] others may say that there is little to be gained from such a transfer; that Medicare certification incorporates many of the weaknesses and rigidities of state licensing." (141)

A related recommendation that has been receiving increasing attention is the call for a moratorium on further licensure of health personnel. This moratorium would apply to all personnel categories that were not already statutorily defined by the State, including categories licensed in other States. The basic rationale underlying this approach is that many of the new categories of health practitioners are, at this time, ill-defined with little uniformity or accepted principles of either training content or future career development. (142) The moratorium itself is obviously not a panacea or even an effective means, in and of itself, of ameliorating some of the rigidities that have already been discussed in this report. It is essentially a stop-gap measure pending the formulation and development of (a) generally acceptable criteria defining those health occupations and tasks that require state regulation, and (b) the feasibility of alternatives to licensure as a means of ensuring high-quality health care.

Many of the same groups advocating institutional licensure are also recommending a national moratorium on further personnel licensure. Institutional licensure will, in effect, obviate the need for further licensure of those categories of health personnel presently functioning in institutions and, thus, shares a common objective with that of a moratorium.

An interesting variation on the theme of institutional licensure is the recent recommendation of the New Jersey Hospital Association's Board of Trustees calling for the repeal of present licensure statutes to be replaced by a

coordinated statute regulating the licensure of all health professionals. (143) Under this proposal, one license would be issued in each of six areas: medicine, dentistry, nursing, medical technology, medical therapy, and an institutional license. Institutional licenses under this scheme would only authorize the following professionals to practice: hospital administrators, nursing home administrators, medical records librarians, dieticians, and social workers. This is clearly a more restricted notion of the institutional licensure of health professionals than previously discussed in this section. It does indicate, however, an attempt to combine several categories, which are presently licensed, into a single category.

In sum, institutional licensure offers certain possible innovative concepts and approaches in the regulation and credentialing of health personnel. Considerably more study is needed, however, on the operational and practical aspects of this approach.

PART SEVEN

DEPARTMENTAL ACTIONS AND RECOMMENDATIONS

CHAPTER XI

DEPARTMENTAL ACTIONS AND RECOMMENDATIONS

Introduction

The need for certain improvements in the present system of health-manpower licensure, certification, and accreditation seems to be well documented in the literature and in practice. However, as discussed earlier in this report, the issues are complex; they have a direct and practical bearing upon many groups. Solutions, if they are to be real solutions, must be fashioned in such a way as not only to remedy the presently identifiable problems, but also to be responsive to future changes in the health system -- changes that cannot now be precisely identified. And, those solutions, as President Nixon pointed out in his Health Message, must not ignore those parts of the health system that have provided useful service.

There is a good deal of ferment in the country on health manpower credentialing matters; it is encouraging to note the increasing interest this subject is receiving from responsible individuals and groups throughout the Nation. A number of professional groups have already moved forward with important innovations. These groups are to be particularly commended, as are the State legislatures that have initiated action to strengthen and improve the credentialing system. The Department encourages others to consider adoption of many of these steps.

This Department has a definite role in the process of credentialing progress -- a role for catalytic action and support. While the Federal Government cannot solve these problems by itself, it is also apparent that meaningful solutions may not be forthcoming, on a timely basis, without a greater Federal interest. The needs in this field offer real opportunity for significant public-private cooperation.

Departmental Actions

The Department will, then, move forward within its present authorities in the following ways:

1. *Information base and consulting assistance.* Current issues and developments in licensure and other forms of credentialing must be considered in each of the States. To support these efforts and to encourage a reasonable degree of uniformity, the Department must undertake a continuing and systematic assessment of legislative, administrative, and organizational activity in this area. Where information already exists, it must be available on a current basis;

where no systematic data has yet been compiled, as is the case in numerous instances in this field, efforts shall be made in cooperation with all interested parties to collect the necessary data.

Such information gathering is justifiable only if it is the basis for action. Action, particularly in this field, will require coordination and, undoubtedly, a sustained effort over time. This role can be accomplished best by the establishment of a Departmental focal-point for policy coordination and implementation for health-personnel credentialing matters. By establishing such responsibility in the Office of the Secretary and including coordination with HEW Regional Offices, the Department will be in a position (a) to respond more effectively to requests from the States for consulting assistance, (b) to provide a direct two-way communication on these matters, and (c) to furnish a forum for continuing working relationships with professional groups. Only by these means, can forward progress be made in licensure, certification, and accreditation. More importantly, this step will result in more adequate information for the Congress on this matter and will assist the States in preparing legislation that will have a higher potential for enactment.

2. *Review of health services and training programs.* Departmental programs for health services and health manpower training shall be reviewed for the specific purpose of determining that these programs, and the regulations promulgated in connection with them, are serving as consistent and effective vehicles to achieve policy objectives in personnel standards, job opportunities, and career development. Administrative steps will be taken to see that this review is implemented on a regular and continuing basis.

3. *Accreditation study.* The Commissioner of Education shall undertake or initiate a formal review of the functions of accreditation, including an analysis of all alternatives that may have potential in maximizing the public accountability of those accrediting agencies that enjoy the nationally-recognized status conferred by the Commissioner. Among other alternatives, specific consideration shall be given to the possibility of establishing a Congressionally-chartered public corporation to promote the national coordination of accreditation. Special attention in the study shall be given to existing trends and particular problems in connection with the accreditation of educational programs for the health professions and occupations. The study shall also explore State participation and support. Consultation with the Council of State Governments and the Education Commission of the States will be undertaken on this matter.

4. *Determination of feasibility of national health professions certification.* The Assistant Secretary for Health and Scientific Affairs will undertake or initiate the development of a report exploring the feasibility of establishing a national system of certification for those categories of health personnel for which such certification would be appropriate. Should the development of such a system be considered feasible, the report shall include specific recommendations as to the organizational structure and composition of the body that will be assigned overall governing authority for the system. The report shall outline the steps to be taken to achieve most directly the implementation of the plan.

   There is a broad consensus that national standards would be useful at this time. The issues involved in designing and operating a system will require close working consultation between the professional groups and the Department. That work should begin at once.

Recommendations

1. *All States are urged to observe a two-year moratorium on the enactment of legislation that would establish new categories of health personnel with statutorily-defined scopes of functions. An interim report shall be prepared by the Secretary outlining licensure developments during the first year; the accumulated findings, along with other relevant circumstances, shall be reviewed at the end of the two years to determine whether or not the moratorium should be extended beyond that period.*

   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.

   It is important to clarify the intended scope of this proposal. The following points should be considered:

   It should apply to all unlicensed personnel categories in a given State, although that category is already licensed in other States.

It should preclude enactment only of licensure laws that would provide a statutorily-defined scope of functions. Legislation that authorizes an agency to approve functions for new categories in specific work settings would not be precluded.

It should not bar amendments to expand existing statutory definitions of scope of functions. State action in this direction is, in fact, encouraged. (See Recommendation 2 below.)

This recommendation is made with the expectation that the time limit set for the moratorium will allow for significant accomplishments -- particularly, with regard to gaining more insight into the tasks and functions of the newly established health occupations.

2. *All States are urged to take action that will expand the functional scopes of their health practice acts and that will extend broader delegational authority -- both of which will facilitate the assignment of additional tasks to qualified health personnel.*

   This recommendation represents a priority objective, as indicated in the President's Health Message. Such action should be accompanied by continuing efforts on the part of professional organizations, health care facilities, and others to develop guidelines for the delegation of tasks and appropriate mechanisms to regulate actions taken under these guidelines. Some States have recently provided for expanded functions of the practice acts; but, in some cases, the modifications still authorize less than those functions that careful studies have shown could be safely delegated. Thus, amendments must be drawn that will avoid unduly restrictive delegational authorizations.

   In addition, each State should make a determination as to whether any further steps are necessary or desirable for the regulation of experimental manpower programs.

3. *All States are encouraged to adopt and utilize, fully, national examinations for those categories of health personnel for which such examinations have been prepared. Support should be made available for the development, as soon as possible, of national examinations for the remaining categories of licensed health personnel where such examinations could contribute toward increased uniformity.*

Although the mechanism of national examinations is endorsed, the existent national examinations need on-going attention to assure that they adequately test the knowledge and skills actually required for the provision of high-quality health care. Among those States now using national examinations, serious consideration should be given to establishing a uniform pass/fail level.

As a first step, regional cooperation should be encouraged. For example, several States are now cooperating in establishing a "simultaneous" clinical examination for one category of health personnel.

4. *The Department encourages the development of meaningful equivalency and proficiency examinations in appropriate categories of health personnel for entry into educational programs and occupational positions. The States are called upon to assist in the implementation of this effort by amending licensing laws, where necessary, that will recognize such examinations for purposes of granting advanced educational or job placement. Educational institutions, accrediting agencies, and certifying bodies are asked to continue to formulate programs that accept alternatives to formal education for entry into career fields.*

When the validity of such examining can be established and proficiency more adequately assessed, reasons then exist to supplement the single formal-education approach with a multi-experience route. The formal-education option will undoubtedly continue to be desirable and, in some instances, preferred even though not always essential. For example, the availability of effective testing instruments will enable individuals who, due to their military training and experience, can demonstrate their competence to move directly into health service careers.

5. *State licensing boards are urged to take -- with the active support of the professional associations -- new steps that will strengthen the boards and that will allow them to play an active role in maintaining high-quality health services.*

Specifically, the Department advocates action that will:

increase coordination and liaison among the various health licensing boards and between such boards and other governmental

health agencies responsible for the planning and monitoring of health services; include representation of consumers, of more than one health profession, and of various types of health-delivery settings such as group practice, public institutions, and others in policy-making functions; and provide boards with the necessary funds and staff to discharge increased public responsibilities for high-quality care.

One State has recently passed legislation that calls for the joint promulgation between the medical board and the nursing board of regulations covering nurses in expanded-function settings. This is an encouraging step, as is the interest in some States to provide an overall licensing board or department to develop general policy and guidelines to assist occupational boards. The potential role for the State comprehensive health planning agencies in closer coordination between planning and regulation must also be explored in detail.

A determination of staffing needs and possible funding sources should be undertaken in each State. These determinations must be based on increased board duties for the regulation of new categories and the need for more board initiative to utilize existent authority to promulgate rules and regulations that clarify scope-of-practice problems and delegational standards without waiting for legislative action. Meaningful involvement in the regulatory aspects of quality control would mean, for most boards, a need for a larger and more highly qualified staff than these agencies now have.

6. *The professional organizations and States are urged to incorporate a specific requirement for the assurance of a continued level of practitioners' competence as one condition in the recredentialing process. Employers are encouraged to provide opportunity for participation in programs directed toward assuring continuing competence; participation should be a major criteria in employee evaluation and incentives. Additional studies of the best mechanisms to assure continued competence should be supported on a high-priority basis.*

A number of groups deserve recognition for the efforts being made to implement these objectives. Financing problems, difficulties that will be experienced by certain practitioners in allocating time for continuing education, and the possible effect of premature exclusion of older practitioners from patient care must be dealt with. The

problem of general-versus-specialty knowledge in connection with recredentialing requirements must be closely analyzed. Professional review organizations should be expected to make recommendations for action in continuing education; institutions, particularly those receiving Federal support, should provide equal access to continuing education programs for all health practitioners.

7. *The concept of extending institutional licensure -- to include the regulation of health personnel beyond the traditional facility licensure -- has important potential as a supplement or alternative to existing forms of individual licensure. Demonstration projects should be initiated as soon as practicable.*

Institutional licensure should not, at this time, be overstated as a panacea for present licensing problems. However, the significance of this approach is its recognition of the foreseeable trends in the organization of health delivery patterns. In addition, it encourages the health-team approach to the provision of services; and it would provide a regulatory framework for the systematic development of new kinds of personnel in organizational settings.

APPENDIXES

APPENDIX A

A SUMMARY OF CURRENT ACTIVITIES IN THE CREDENTIALING OF HEALTH PERSONNEL

A sampling of activities and of projects related to the substance of this report and sponsored by Federal agencies are provided in this appendix. Obviously, this compilation is not all-inclusive; the field, at this time, is far too dynamic. Comprehensive information systems, either within or outside the Federal Government, do not now exist. For those interested in further and more detailed information, this appendix should serve as an entree to the field.

In regard to the nature of information not listed, one example should be illustrative. The Health Services and Mental Health Administration (HSMHA) has several projects, which are no doubt similar to many supported by other Federal agencies and whose purpose is to motivate, recruit, hire, and train people from low-income, disadvantaged groups. Although related to the subject of career mobility, these projects are usually difficult to identify specifically with health personnel credentialing.

Two major HSMHA programs, however, have continuing involvement with the topics examined in this report. First, the Regional Medical Programs Service currently supports numerous identifiable project activities including many continuing education and training programs, ultimately for improving the quality of medical care, while they improve the quality of education for health personnel. Secondly, Comprehensive Health Planning (CHP) agencies, in most of the States, are active in the study of health personnel training and utilization; a recent review has indicated that nearly half of the States' CHP programs reflected some involvement in health personnel credentialing problems; that role should receive immediate and continuing attention.

In addition, there are a number of other important activities that should be cited.

1. Operation MEDIHC (Military Experience Directed Into Health Careers) is a cooperative program of this Department and the Department of Defense (DOD) to help individuals, trained in health skills while in the armed services, to capitalize on those skills when they return to civilian life. MEDIHC also assists veterans whose service experience was unrelated to health, but who wish to pursue civilian health careers.

The MEDIHC program comprises three basic components: (a) identification, (b) counseling, and (c) referral and placement. As part of the DOD TRANSITION program, military installations are given rosters of health-trained personnel from 3 to 6 months before discharge. Those individuals who indicate an interest in health careers are briefed by their TRANSITION Counselor concerning participation in MEDIHC and are urged to complete a Qualification/Referral form that reflects their training, experience, job interest, and educational ambitions. The Counselor appraises the individual's qualifications, aptitudes, and interests; based on these criteria, the individual's opportunities are then described.

After screening the Qualifications/Referral forms are sent to the Department's Regional Offices and, from there, directly to the MEDIHC Coordinator in the State designated by the veteran. The State Coordinator assumes responsibility for continued counseling and referral to educational institutions or health-service facilities for which the veteran qualifies. From this point, each individual negotiates directly with an institution on specific terms such as salary, advancement opportunities, tuition, cost of training, and any other details.

In common with other health manpower programs, Operation MEDIHC has two goals: (a) to provide persons with employment that has adequate opportunities for career development, and (b) to provide, at least cost, the manpower resources needed by the health-service industry. Experience with the MEDIHC program has demonstrated a need for (a) acceptable methods by which former military corpsmen can receive equivalency or proficiency credit for training and experience obtained in military service and (b) health-service wage structures that are competitive with those in other fields.

2. The U.S. Civil Service Commission has recently promulgated job-classification regulations for physician assistants; and Federal agencies, such as the Veterans Administration, are already employing such personnel.

   As described in somewhat more detail in Appendix B of this report and fully in the reference cited, programs for training physician assistants have greatly proliferated within very recent years. About 80 different programs have been reported. At least 45 of these are now operational; about 750 students are in training, and there have been more than 300 graduates. The remaining programs are in a pilot testing-stage or in an advanced planning-stage with assurance of financial support and operational status within a year.

Other programs for training extended-function nurses have been emerging recently, but over an even longer period of time. Some early efforts included training for dialysis and coronary-care units. Most recently, out-of-hospital roles for nurses are being extended by special training efforts. About 50 different programs have been reported, and at least 25 of these are operational.

3. Although the medical-specialty-board procedures have not been covered in this report, many of the professional organizations are conducting studies of these procedures.

4. Many of the professional organizations are also developing self-assessment programs by which participants can accurately measure their own progress as compared with advances in their medical field. These self-assessment programs can help practitioners determine the areas in which they are deficient and can assist them in designing a continuing-education program that matches their individual needs.

5. The Department is presently submitting a report to the Congress entitled "Proficiency Testing and Educational Equivalency Mechanisms for Use in Determining the Qualifications of Laboratory Personnel under the Medicare Program," as required by the Committee on Ways and Means in its Report to accompany H.R. 17550, Social Security Amendments of 1970, (91st Congress, 2nd Session).

6. The Health Insurance Association of America has appointed a study committee that is currently evaluating the issues of licensure and certification of health personnel and health facilities.

7. The Association of Schools of Allied Health Professions has joined with the Council on Medical Education of the American Medical Association and the National Commission on Accrediting in sponsoring the Study of Accreditation of Selected Health Educational Programs, which is funded by the Commonwealth Fund. This comprehensive, public-policy oriented study is not only examining the accountability, structure, expansion, and financing of accreditation as well as the relationships of accreditation with licensure and certification; but also seeking an indication of needed research.

8. To reduce difficulties related to interstate reciprocity and endorsement, an Interstate Reporting Service has been established in the fields of physical therapy, psychology, veterinary medicine, and nursing home administration -- as described in Chapter VI of this report.

9. In October 1969, the Council on Manpower and Education of the American Hospital Association voted to appoint a special committee "to recommend changes in licensure systems for health personnel." That committee has held several meetings and is working closely with the American Medical Association on the issues of licensure, certification, and registration. These two organizations are currently discussing with representatives of the Association of Schools of Allied Health Professions the feasibility of sponsoring jointly a national task force to study licensure problems, in depth, over the next two years.

10. To foster increased output of dental personnel, the Division of Dental Health began, in 1961, to support programs in dental schools that train dental students to utilize auxiliaries efficiently. This effort, known as the Dental Auxiliary Utilization (DAU) Program, has successfully initiated programs in all 52 dental schools for training dental students in the effective use of well-trained, full-time chairside-assistants, a practice frequently referred to as "four-handed dentistry."

    During the same decade of support, it was also shown that the role of auxiliaries could be expanded further; and that auxiliaries, working under supervision, could carry out certain intra-oral procedures of high quality. In 1971, therefore, a new program, called Training in Expanded Auxiliary Management (TEAM) was launched as part of the continuing evolution of the auxiliary-utilization concept in the wider provision of dental services. The TEAM program is actually a successor to the DAU program for which grant support is being phased out. TEAM will seek to train dental students to work with, manage, and supervise a total dental-health team that will include various types of auxiliaries trained in expanded functions. During this first year, TEAM grants have been awarded to nine schools of dentistry.

    The Indian Health Service is conducting a four-year study, which began in 1969, to evaluate the quality and quantity of dental services when provided by expanded-function dental auxiliaries. An additional phase of the study is assessing cost benefits of the utilization of these new health personnel.

11. The Department's Office of New Careers (ONC) was established in July 1969 to provide a focal point of leadership in the Office of the Secretary to assist the program agencies within and outside the Department to realize the full potential of the new-careers concept as a vehicle to ease unemployment as well as to upgrade employment.

ONC has published a recent document that, among other areas of interest, contains very current information on new-careers activities in health personnel training. *A Summary: Paraprofessional Training In Colleges And Universities, 1970-1971,* may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

The activities listed in the following compilation are chiefly supported by two agencies -- the Bureau of Health Manpower Education of the National Institutes of Health (NIH) and the National Center for Health Services Research and Development of the Health Services and Mental Health Administration (HSMHA).

NEW OCCUPATIONS AND TASKS

TITLE	SUPPORT SOURCE	ORGANIZATION	DESCRIPTION OF OBJECTIVES
Comparing Physician's Assistant Training Programs	NIH	Duke Univ. Graduate School of Business Administration Durham, N.C.	Correlate the results of several separate evaluations to conduct a critical review and comparison of the several programs; indicate modifications in existing programs to capitalize on their respective strengths; assess the desirability and feasibility of conducting additional studies that would be explicitly comparative by utilizing standardized methods.
Explore New Role in Nursing	NIH	Association of the Rancho Los Amigos Hospital Downey, Calif.	Describe and define the role of the nursing-care consultant to identify ways of using qualified professional nurses more effectively in the face of personnel shortages.
Preparation of Cardiovascular Nursing Specialists	NIH	St. Louis University St. Louis, Mo.	Design the improvement and expansion of a graduate program to prepare more cardiovascular nurse-specialists to meet the nursing-services needs of a broader geographical area.
Policeman/ Fireman to Professional Nurses	NIH	Hunter College of the City University of New York New York, N.Y.	An experimental nursing education program designed to prepare New York City policemen and firemen to become professional nurses; the 2½-year program will be offered during their last few years before retirement, so that they may enter nursing as a second career at the approximate age of 40.

NEW OCCUPATIONS AND TASKS (Continued)

TITLE	SUPPORT SOURCE	ORGANIZATION	DESCRIPTION OF OBJECTIVES
Preparation of Family Nurse Practitioner	NIH	University of California School of Public Health Berkeley, Calif.	Prepare experienced public-health nurses to assume more responsibility for health assessment, diagnosis and treatment of frequently occurring illnesses, by utilizing their background of nursing knowledge and skills.
Experimental Training Program	NIH	Yale University School of Nursing New Haven, Conn.	Plan and conduct an experimental training and demonstration program to prepare nurse practitioners in the clinical specialties of pediatrics and general medicine and document the knowledge gained for use in preparing a new advanced-nursing curriculum in the Yale School of Nursing.
Expanded Role of Nurse Midwifery	NIH	University of Mississippi Medical Center Jackson, Miss.	Promote and prepare nurses for an expanded role in prenatal care; management of normal labor and delivery; postpartum care including family-planning services; well-baby care; preventive medicine for mothers and infants in such areas as nutrition, home economics, hygiene, early cancer-detection, immunization, and health education with particular emphasis on the special health needs indigenous to low-socioeconomic groups in rural areas; maternal and infant nursing care; and the practice of nurse-midwifery.

NEW OCCUPATIONS AND TASKS (Continued)

TITLE	SUPPORT SOURCE	ORGANIZATION	DESCRIPTION OF OBJECTIVES
Develop New Anesthesiology Personnel	NIH	Emory University Atlanta, Ga.	Study of (a) task analysis of anesthesiology services; (b) identification of factors to be considered in the development of curricula for new types of anesthesiology personnel; and (c) development and testing of patient monitoring equipment as an adjunct in utilizing new types of personnel.
Expanded Functions for Dental Hygienists	NIH	Forsyth Dental Center Boston, Mass.	Determine the feasibility of increasing the duties of dental hygienists in restorative dentistry by developing a protocol, designing a curriculum, and studying the facility requirements for training the 2-year dental-hygiene graduate.
Periodontal Therapist	NIH	Univ. of Pennsylvania Philadelphia, Pa.	Demonstrate the utilization of dental hygienists in performing expanded functions in the treatment of periodontal disease.
Development and Evaluation of Educational Programs in Bio-Medical Equipment Technology	OE	Technical Education Research Center, Inc. Waco, Texas	A 2-year associate-degree curriculum for biomedical equipment technicians will be developed, tested, and evaluated in two pilot schools.

NEW OCCUPATIONS AND TASKS (Continued)

TITLE	SUPPORT SOURCE	ORGANIZATION	DESCRIPTION OF OBJECTIVES
New Curriculum in Physical Therapy	NIH	Stanford University Stanford, Calif.	Development of 2-year Master's degree curriculum to meet the expanding functions of physical therapists in administration, teaching, and community health. Preparation of students for development of new programs for physical-therapy assistants in community colleges.
Dental Restorative Technician	NIH	San Diego Community College San Diego, Calif.	Conduct a feasibility study to determine the employment needs for a dental restorative technician and to clarify the legal and professional implications of this innovation in dental-care personnel. To develop suitable guidelines and a 2-year community college curriculum by determining the basic knowledge, skills, and experience needed for employment as a dental restorative technician.
Urologic Assistant	NIH	Cincinnati Technical Institute Cincinnati, Ohio	Develop a 2-year associate degree training program for urologic assistants.

NEW OCCUPATIONS AND TASKS (Continued)

TITLE	SUPPORT SOURCE	ORGANIZATION	DESCRIPTION OF OBJECTIVES
Orthopedic Assistant Training and Certification Program	NIH	City College San Francisco San Francisco, Calif.	Develop a 2-year community college curriculum to train a new category of professional assistant for orthopedic surgeons to assist in the operating room, cast room, emergency room, and private office as well as to assemble and care for orthopedic and traction apparatus.
Curriculum in Community Practice of Occupational Therapy	NIH	University of Alabama Birmingham, Ala.	Develop and implement a program to educate occupational therapists to understand community needs and to function in this environment as a consultant, educator, and therapist.
Nuclear Medical Technology Development	NIH	Univ. of Iowa Iowa City, Iowa	Develop an academic training program to train nuclear medical-technologists.
Speech and Hearing Technologists	NIH	Univ. of Southern Florida Tampa, Fla.	Develop a demonstration training-program for speech and hearing technologists who will later function in a supportive role to speech pathologists and audiologists.
Physical Therapist Assistant Program	NIH	St. Mary's Junior College Minneapolis, Minn.	Develop teaching materials for the physical therapy assistant program and to initiate community education activities relating to this new physical therapy technician.

NEW OCCUPATIONS AND TASKS (Continued)

TITLE	SUPPORT SOURCE	ORGANIZATION	DESCRIPTION OF OBJECTIVES
Pilot Physical Therapy Assistant Program	NIH	St. Petersburg Junior College St. Petersburg, Fla.	Establish both a pilot program for training physical therapy assistants by using the core approach and a series of continuing education courses for area physical therapists to promote the team concept in utilization of technicians.
Specialists in Radio-pharmaceuticals	NIH	Univ. of Southern California Los Angeles, Calif.	Develop a curriculum to train a radiopharmacist capable of supporting a nuclear-medicine program as well as participating in the development of new radiopharmaceuticals.
Hospital Pharmacy Technicians	NIH	Univ. of Cincinnati Cincinnati, Ohio	Determine the type of education and system of controls necessary for pharmacy technicians to carry out delegated functions, which will have been predetermined.
Model-Therapist Delivery of Dental Care to Indigents	HSMHA	University of Alabama Birmingham, Ala.	Develop a model to demonstrate the effectiveness of a new type of auxiliary to supply dental care to a disadvantaged group.
Project to Improve Utilization of Radiologic Manpower	HSMHA	University of Kentucky Lexington, Ky.	Demonstrate a method to improve utilization of radiologic manpower by developing a program that will train selected, highly motivated, registered radiologic-technologists to assume certain duties that are currently the sole responsibility of physician radiologists.

NEW OCCUPATIONS AND TASKS (Continued)

TITLE	SUPPORT SOURCE	ORGANIZATION	DESCRIPTION OF OBJECTIVES
Research to Increase Health Services to Children	HSMHA	University of Colorado Denver, Colo.	Provide increased health services to children through development and utilization of a new type of health professional for children, the "child health associate," who will be qualified to provide diagnostic, preventative, and therapeutic services.
School Nurse Practitioner Program	HSMHA	University of Colorado Denver, Colo.	Establish a new education program in child-health care for school nurses and prepare these nurses to assume new and expanded role in providing health services to children in a school setting.
National Uniform Manpower Evaluation	HSMHA	American Institutes for Research Pittsburgh, Pa.	Design and test a reliable means of early assessment of the values of physician-extender projects. A national information/ surveillance system is being developed into which the total range of observations and experiences of all large-scale demonstrations of such manpower projects will be fed. An evaluation tool is being created that can be used to systematize both analysis of the elements of each project and measurement of its strengths and weaknesses.
National Uniform Manpower Evaluation	HSMHA	Systematics General Corporation McLean, Va.	
National Uniform Manpower Evaluation	HSMHA	Technomics, Inc. McLean, Va.	
National Uniform Manpower Evaluation	HSMHA	The Urban Institute Washington, D. C.	

NEW OCCUPATIONS AND TASKS (Continued)

TITLE	SUPPORT SOURCE	ORGANIZATION	DESCRIPTION OF OBJECTIVES
Family Nurse Practitioners (PRIMEX)	HSMHA	Cornell University New York, N. Y.	Help meet needs for family services by upgrading skills of nurses to enable them to provide a greater proportion of primary care under the general supervision of a physician.
Family Nurse Practitioners (PRIMEX)	HSMHA	University of North Carolina Chapel Hill, N. C.	
Development of an Emergency Room Medical Team	HSMHA	University of Southern California Los Angeles, Calif.	To improve emergency medical care in community hospitals by giving special training to a team of physicians and medical corpsmen.
A New Manpower Model of Rural-Urban Linkage for Improved Health Services	HSMHA	University of New Mexico Albuquerque, N. M.	Demonstrate a model system for delivery of health services to a rural population by using a nurse specially trained to provide family health-services in a clinic remote from, but linked to, a medical center by telephonic instruments.
Demonstrating the Dentist-Dental Hygienist Team	HSMHA	Howard University College of Dentistry Washington, D. C.	Develop a program of instruction and test an expanded role for the dental hygienist.
Evaluation of Nurse Practitioner in Health Care	HSMHA	Kaiser Foundation Research Institute Oakiand, Calif.	Evaluate the effectiveness of pediatric nurse-practitioners (PNP's) in a large pediatric group-practice; and study the impact of PNP's on pediatricians, other nurses, patients, and on the PNP's, themselves, in terms of job satisfaction and changing relationships with patients.

CREDENTIALING REQUIREMENTS AND PROCESSES

TITLE	SUPPORT SOURCE	ORGANIZATION	DESCRIPTION OF OBJECTIVES
Allied Health Training Programs in Junior Colleges	NIH	American Association of Junior Colleges Washington, D. C.	Collection of information about allied health training programs sponsored or conducted by junior colleges to develop a glossary of relevant terms used among junior colleges to describe health occupations, educational institutions, programs, curriculums, methods, and activities, as well as to prepare inventories for publication in a directory.
Allied Health Educational Program Inventory	NIH	Association of Schools of Allied Health Professions Washington, D. C.	Collection of information and publication in a national inventory of allied health education programs in 4-year colleges and universities.
State Dental Practice Acts Analysis	NIH	BHME, NIH Bethesda, Md.	Maintenance of a current inventory of State dental practice acts for periodical analysis of trends in the provisions of the acts, particularly as they relate to the utilization of expanded-function auxiliaries and to licensure reciprocity.
Assist Nurses to Qualify for Licensure	NIH	Texas Nurses Association San Antonio, Texas	Develop a mechanism to assist nurses educated within or outside the U. S. who are not currently licensed to practice as professional nurses in Texas.

CREDENTIALING REQUIREMENTS AND PROCESSES (Continued)

TITLE	SUPPORT SOURCE	ORGANIZATION	DESCRIPTION OF OBJECTIVES
A Conference on Certification of Allied Health Manpower	NIH	Association of Schools of Allied Health Professions Washington, D. C.	Based on recommendations developed at an invitational conference, obtain cooperation of various associations of allied health professionals to prepare a proposal and a study plan of the certification process.
National Study for Accreditation of Vocational-Technical Education	OE	American Vocational Association Washington, D. C.	Develop basic evaluative criteria common to vocational and technical education programs at all levels as well as guidelines for accreditation of these programs.

THE FOREIGN GRADUATE

TITLE	SUPPORT SOURCE	ORGANIZATION	DESCRIPTION OF OBJECTIVES
Mcnograph on Foreign Medical Graduates	NIH	Yale University School of Medicine New Haven, Conn.	Analysis of the developing, current, and potential future situation of the place of the foreign medical graduate in American medicine in terms of their status and functions as well as policy implications. The paper will include an appropriate bibliography, relevant statistical tables, and a statement of further research needs.

GEOGRAPHICAL MOBILITY

TITLE	SUPPORT SOURCE	ORGANIZATION	DESCRIPTION OF OBJECTIVES
Area Assessment of Dental Practitioner Resources	NIH	BHME, NIH Bethesda, Md.	Identification of U. S. geographical areas with a shortage of practicing dentists and the possible causative factors such as level of population's income, age and productivity of practitioners, low utilization of auxiliaries, and inadequate dental-school capacity.
Factors Influencing Dentist Location	NIH	BHME, NIH Bethesda, Md.	Refining regional projections of dentist manpower by developing estimates of migration and considering school-based estimates of location by dental-school graduates. Analysis will be based on data collected in national survey of licensed dentists.
Internal Migration of Physicians to United States	NIH	University of Texas at Austin Austin, Texas	A descriptive analysis of the net gains and losses of physicians by State over a given time-span. An attempt will be made to account for the migratory patterns observed.

CAREER MOBILITY

TITLE	SUPPORT SOURCE	ORGANIZATION	DESCRIPTION OF OBJECTIVES
Practical Nurses to Registered Nurses	NIH	Providence Hospital School of Nursing Southfield, Mich.	Development of criteria for selection and placement of candidates who demonstrate high potential for success in diploma program by identifying and evaluating nursing competencies. Concomitant selection of curriculum content to permit the student to meet diploma-program requirements in a shorter period of time.
Practical Nurses to Registered Nurses	NIH	Hunter College of the City University of New York New York, N. Y.	By offering an experimental 17-month work-study program, determine a method to prepare L.P.N.'s to qualify as registered nurses. Working a 20-hour week in New York City's Department of Hospitals, students will participate in educational program and will receive their normal salary.
Survey of Problems and Expenses of the New Careers Approach in Development of Allied Health Manpower	HSMHA	Johns Hopkins University Baltimore, Md.	Develop information that will provide a basis for planning "new careers" development in the allied health field by evaluating several representative programs to determine their development strategies; methods of assessing accomplishments; and effectiveness in meeting problems of certification, intra- and inter-institutional complexities, union or professional-association involvements, horizontal and vertical mobility; and exchange of information with other similar efforts.

CAREER MOBILITY (Continued)

TITLE	SUPPORT SOURCE	ORGANIZATION	DESCRIPTION OF OBJECTIVES
Health Careers Research	HSMHA	New York University New York, N. Y.	Evaluate the effectiveness of new career development systems through a design for which eight requirements are proposed: (a) entry level positions in which worker(s) can be immediately productive to the employing agency; (b) training programs integrally connected to entry positions; (c) a visible career-ladder between entry positions and higher positions; (d) training for higher positions directly through the job with portions of the training provided during the working day; (e) a close link between training and formal education; (f) assigning responsibility to the employer for packaging this training and making it available to the worker; (g) upgrading new workers as well as presently employed personnel; and, (h) joint training of professionals and nonprofessionals.

TASK ANALYSIS

TITLE	SUPPORT SOURCE	ORGANIZATION	DESCRIPTION OF OBJECTIVES
Occupational Therapy, Job Description and Curricula	NIH	Ohio State University Research Foundation Columbus, Ohio	Two-year study of occupational therapy for purposes of: defining tasks and organization of these tasks into position descriptions; development of curriculum guide for educational program to train individuals in each position; establishment of specifications for selection of trainees.
Analysis of Dental Tasks	NIH	University of Pittsburgh Pittsburgh, Pa.	Test the feasibility of conducting a national task-analysis of total dental practice.
Analysis of Dental Job Knowledge	NIH	University of Florida Gainesville, Fla.	Study the possibility and feasibility of reassignment to auxiliaries of certain dental tasks based upon the relationship of knowledge to task performance.
Development of Occupational Therapy Job Descriptions and Curricula Through Task Analysis	NIH	The Ohio State University Research Foundation Columbus, Ohio	Develop and apply a method for improving patient care through the alleviation of allied-health personnel shortages by approaching the problem in terms of both effectiveness of training and effective utilization of personnel.

TASK ANALYSIS (Continued)

TITLE	SUPPORT SOURCE	ORGANIZATION	DESCRIPTION OF OBJECTIVES
Health Services Mobility Study	OEO, DOL, DHEW	Research Foundation City University of New York, New York, N. Y.	Develop a method of job analysis that can be used by an employer to utilize his existing staff to fill expanding or new requirements. A system of continuous upgrading/training is being designed to minimize training time and provide efficient use of training resources.
Allied Health Professions Project	OE	University of Calif. Los Angeles, Calif.	Create curricula and instructional materials for those allied health functions that can be taught through the associate-degree level. The basic methodology underlying the activities involves task analysis.
A Functional Analysis of Paramedical Occupations as a Foundation for Curriculum Development	OE	Arizona Health Services Education Association Phoenix, Ariz.	Develop procedures for deriving behavioral specifications to be used in improving school curricula and in-service training to upgrade medical-laboratory personnel.
Hospital Career Development Program	OE, DOL	American Federation of State, County, and Municipal Employees, AFL-CIO New York, N. Y.	Examine occupational tasks performed by employees in the dietary, housekeeping, paramedical, and nursing departments for the purpose of identification and development of career ladders; and design specialized curricula to facilitate the upgrading of employees by means of a systematic training program.

TASK ANALYSIS (Continued)

TITLE	SUPPORT SOURCE	ORGANIZATION	DESCRIPTION OF OBJECTIVES
A Study of Task Analysis of Social Welfare Jobs	SRS	Batelle Memorial Institute Columbus, Ohio	Develop a conceptual framework for relating the work content of social welfare tasks to the goals of the health service delivery-system as well as a research methodology for collecting and analyzing data to measure tasks.
Task Analysis at PHS Hospital, Staten Island, New York	DOL, NIH	PHS Hospital Staten Island, N. Y.	Test the applicability of Department of Labor job analysis techniques to health occupations.

COMMON-CORE CURRICULA

TITLE	SUPPORT SOURCE	ORGANIZATION	DESCRIPTION OF OBJECTIVES
New Curriculum and Training Methods for Optometric Technicians and Technologists	NIH	Southern College of Optometry Memphis, Tenn.	Develop effective operation of a stair-step, optometric assistant/technician/technologist program utilizing a common-core curriculum of general college courses to provide vision-care professions with three levels of ancillary technical personnel.
Improving Nursing Curricula Core Concepts	NIH	University of Colorado Denver, Colo.	Select and integrate core concepts into the curricula of associate-degree, baccalaureate, and graduate nursing programs in thirteen Western States.
Identifying Nursing Curriculum Core Content	NIH	San Jose State College San Jose, Calif.	Verify the nursing curriculum by the consistent use of the core-content approach, and promote student application of core concepts in a variety of nursing settings.

COMMON-CORE CURRICULA (Continued)

TITLE	SUPPORT SOURCE	ORGANIZATION	DESCRIPTION OF OBJECTIVES
Development of Career Opportunities for Technicians in the Nuclear Medical Field	OE	Technical Education Research Center, Inc. Waco, Texas	Develop a common-core curriculum for nuclear medical technicians and nuclear medical research technicians. Identification and quantitative estimates of emerging employment opportunities for these technicians to determine the knowledge and skill requirements by including job and task analysis.
Training of Respiratory Therapists	NIH	Georgia State College Atlanta, Ga.	Increase the number of respiratory therapists by: (a) developing an expanded 2-year program leading to an associate degree; (b) increasing the supply of potential instructors and practitioners who require higher educational levels by developing a 4-year baccalaureate program; and (c) providing an educational "career ladder" by articulating the two programs.
Inter-Related Curriculum for Dental Auxiliary Training	NIH	Junior College District of St. Louis Mo.	Identify those auxiliary functions common to both dental hygiene and dental assisting in order to incorporate related subject matter of common functions in core courses.
Curriculum Ladder: Medical Record Science Program	NIH	Providence Hospital Seattle, Wash.	Design and implement a curriculum for medical-record personnel that would provide logical progression from the associate-degree medical record technician program to the baccalaureate medical record librarian program.

CIVILIAN USE OF MILITARY CORPSMEN

TITLE	SUPPORT SOURCE	ORGANIZATION	DESCRIPTION OF OBJECTIVES
Work-Study Program for Vietnam Veterans	NIH	Hospital Education and Research Foundation of Pennsylvania Camp Hill, Pa.	To demonstrate that veterans can be recruited into the health occupations through immediate employment that is coupled with related educational programs and to investigate the feasibility of supervised work experience as serving the clinical training component for some health occupations.
Associate Degree Nursing for Veterans	NIH	El Centro College of Dallas County Junior College Dallas, Texas	Identification of common terminal objectives within medical corpsman schools and an associate-degree nursing program. The data will be utilized in the construction of tests, appropriate learning strategies, and individualization of curriculum to the student in an existing multi-media approach to associate degree nursing.

CIVILIAN USE OF MILITARY CORPSMEN (Continued)

TITLE	SUPPORT SOURCE	ORGANIZATION	DESCRIPTION OF OBJECTIVES
MEDEX Demonstration Program	HSMHA	University of Washington Seattle, Wash.	Program proposes: (a) to demonstrate the feasibility of utilizing former military corpsmen (MEDEX), leading to a numerically significant input of skilled health manpower into the medical-care delivery system in a relatively short time; (b) to determine the most effective methods of selection, training, and deployment of this new health worker; (c) to eliminate legal and liability barriers to delegation of specified tasks heretofore performed only by physicians in civilian practice; (d) to determine the most effective MEDEX utilization-patterns and their impact on the organization of certain elements of medical care; and (e) to develop a model training-site at which unresolved problems and implications of this innovation can be studied and resolved.
MEDEX Demonstration Program	HSMHA	University of North Dakota Grand Forks, N.D.	
MEDEX Demonstration Program Northern New England	HSMHA	Dartmouth College Hanover, N. H.	
Los Angeles MEDEX Demonstration Program	HSMHA	Charles R. Drew Postgraduate Medical School Los Angeles, California	
MEDEX Demonstration Program Southeastern Region	HSMHA	University of Alabama Birmingham, Ala.	
Utah MEDEX Demonstration Program	HSMHA	University of Utah Salt Lake City, Utah	

PROFICIENCY AND EQUIVALENCY TESTING

TITLE	SUPPORT SOURCE	ORGANIZATION	DESCRIPTION OF OBJECTIVES
Equivalency Examinations in Medical Technology	NIH	Educational Testing Service Princeton, N. J.	Develop equivalency tests and procedures to give returning veterans appropriate credit or recognition for knowledge and skills in the medical-laboratory field acquired during their service. The tests shall emphasize laboratory experience.
Veterans in Dental Laboratory Technology Programs	NIH	Loma Linda University Loma Linda, Calif.	Develop and evaluate an equivalency examination to test the level of dental laboratory technology training in the Armed Forces to facilitate placement of veterans in advanced positions in 2-year, civilian training programs.
Credit Allotment Licensed Practical Nurses	NIH	Northeastern University Boston, Mass.	By a 3-year, work-study, associate-degree program, plan, implement, and evaluate a shortened curriculum that will give advanced credit to selected practical nurses who wish to become registered nurses.
Physical Therapy Proficiency Examination	HSMHA	Community Health Services HSMHA Rockville, Md.	Administration of a proficiency examination, developed under contract, for physical therapists who were licensed under grandfather clauses and who, therefore, lacked the education qualifications required by Title XVIII regulations.
Proficiency Examinations Project	DOL	National Committee for Careers in the Medical Laboratory Bethesda, Md.	To develop and administer a battery of proficiency examinations in clinical laboratory fields to provide advanced job placement based on previous experience and education.

CONTINUING EDUCATION

TITLE	SUPPORT SOURCE	ORGANIZATION	DESCRIPTION OF OBJECTIVES
Physician Practice in Medical Education	NIH	University of Wisconsin Madison, Wisc.	Expand participation of physicians in an individually tailored program of continuing medical education for practicing Wisconsin physicians; this program relies heavily upon the use of physician practice profiling techniques. A computerized test bank is being developed as an ancillary activity under terms of this contract.
Combined Preceptorship/ Home-Study Programs	NIH	University of Utah College of Medicine Salt Lake City, Utah	To analyze and evaluate the effectiveness of combined preceptorship/home-study education for general practitioners in anesthesiology, resuscitation, and intensive care. As applicable, the contractor will attempt to develop findings into a model package of guidelines, instructional materials, and procedures for use in other localities and to other medical specialties.
Midwest Continuing Professional Nursing Education (MCPNE)	NIH	St. Louis University St. Louis, Mo.	In a continuing-education project in eight Midwestern States (Illinois, Iowa, Kansas, Kentucky, Missouri, Nebraska, Oklahoma, and South Dakota), catalog existing programs, identify new needs, and develop guidelines and models for future programs; identify funding sources; and perfect organizational plans for MCPNE as a continuing regional coordinating body.

CONTINUING EDUCATION (Continued)

TITLE	SUPPORT SOURCE	ORGANIZATION	DESCRIPTION OF OBJECTIVES
Continuing Education in Chairside Utilization	NIH	University of Maryland School of Dentistry Baltimore, Md.	Develop a course to teach practicing dentists who have not had dental auxiliary utilization training to adjust their methods of operation to the use of a full-time chairside assistant and how the utilization of the chairside assistant can provide increased dental services.
Prototype Statewide Continuing Dental Education (CDE) System	NIH	Boise State College Boise, Idaho	By following a prepared operational plan, implement, and conduct a prototype of a Statewide continuing dental education system in a selected pilot area as well as prepare an operational plan for an expanded system.
Prototype Regional CDE System	NIH	University of Minnesota Minneapolis, Minn.	Establish a system for simultaneous television broadcasting of continuing dental education in a five-State region. Design and implement a plan for participation by the area's dental schools and organizations in operation of the system. Programing will be initiated on a pilot basis; and effectiveness to target audience, evaluated.

APPENDIX B

THE PHYSICIAN ASSISTANT

Introduction

In the past few years, there has been a growing interest in a broad array of health personnel who perform certain substantive medical care tasks that were formerly limited to physicians or other health practitioners. This type of personnel is generally referred to as the physician assistant. President Nixon, in his Health Message to the Congress, on February 18, 1971, stated:

> One of the most promising ways to expand the supply of medical care and to reduce its costs is through a greater use of allied health personnel, especially those who work as physician's and dentist's 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 allows him to treat many additional patients. (144)

The current interest in physician assistants is related to a number of important developments affecting this Nation's health policy. These include: (a) the increasing demands for health services; (b) the scientific and technological advances facilitating the more effective delivery of health services; (c) the recognition of health as a right of all citizens regardless of social and economic status; (d) the shortage and maldistribution of physicians to render the health care that is needed; (e) the rapid rise in the costs of medical care; and (f) the evidence based on demonstrations, particularly by medical personnel in the armed forces, that certain health services can be provided adequately and safely by persons with substantially less training than the physician. Therefore, the development of the physician assistant as a new mid-level practitioner is viewed in some quarters as a principal means of bringing about greater access to health care in this country.

Perhaps the oldest type of physician assistant functioning today is the Russian "feldsher," an extension of a profession introduced into Russia in the 1700's. Feldshers are members of a group of personnel whom the Soviets call "medical workers" and whose responsibilities are somewhere between those of physicians and auxiliary health-personnel. The feldsher's status is high, relative to others in this group, which includes nurses, midwives, pharmacists, and laboratory technicians. In urban areas, the feldsher works as an assistant to the physician -- usually under close supervision by the physician -- and generally performs technical duties. In rural areas, the feldsher has a primary responsibility for preventive medicine and environmental control, but often performs a primary-care role.

In a number of developing nations, a second form of contemporary physician assistant is the "assistant medical officer," a medical auxiliary who functions as a physician. The assistant medical officer's practice often resembles that of the general practitioner in this country. He works closely with other auxiliaries in the field; i.e., midwives and sanitarians, whom he supervises with varying degrees of competence.

Duties and Functions of Physician Assistants

While the title "physician assistant" is beyond doubt the term most generally applied to this new type of personnel, other nomenclature currently in use includes the "physician's associate," the "medical specialty assistant," and "MEDEX." In addition, there are numerous other designations for health personnel with expanded roles. Moreover, there is considerable difference of opinion about the duties, functions, and responsibilities that can, and should, be delegated to physician assistants. While no definitions or approaches are generally accepted at this time, there is considerable interest in preserving the necessary latitude for modification based on experience with physician assistants.

There appears to be growing interest in a uniform terminology for specified categories of physician assistants. Such uniformity would allow for lateral mobility between medical specialties and types of practice. A recent report by the National Academy of Sciences (NAS) delineates three types of physician assistants "primarily by the nature of the service each is best equipped to render by virtue of the depth and breadth of their medical knowledge and experience:

The Type A assistant. This type is capable of approaching the patient; collecting historical and physical data; organizing these data; and presenting them in such a way that the physician can visualize the medical problem and determine appropriate diagnostic or therapeutic procedures; and coordinating the roles of other, more technical, assistants. While he functions under the general supervision and responsibility of the physician, he might, under special circumstances and under defined rules, perform without the immediate surveillance of the physician. He is, thus, distinguished by his ability to integrate and interpret findings on the basis of general medical knowledge and to exercise a degree of independent judgment.

The Type B assistant. While not equipped with general knowledge and skills relative to the whole range of medical care, this type possesses exceptional skill in one clinical specialty or, more commonly, in certain procedures within such a specialty. In his area of specialty, he has a degree of skill beyond that normally possessed by a Type A assistant and perhaps beyond

that normally possessed by physicians who are not engaged in the specialty. Because his knowledge and skill are limited to a particular specialty, he is less qualified for independent action. An example of this type of assistant might be one who is highly skilled in the physician's functions associated with a renal dialysis unit and who is capable of performing these functions as required.

The Type C Assistant. This assistant is capable of performing a variety of tasks over the whole range of medical care under the supervision of a physician, although he does not possess the level of medical knowledge necessary to integrate and interpret findings. He is similar to a Type A assistant in the number of areas in which he can perform, but he cannot exercise the degree of independent synthesis and judgment of which Type A is capable. This type of assistant would be to medicine what the practical nurse is to nursing. (145)

The NAS report further notes that while the Type A assistants are new to the American scene, the Types B and C assistants have been functioning in this country, in one form or another, for some time.

Organizational Interest in Physician Assistants

Many medical specialties have considered establishing a physician assistant category; and several have already done so including orthopedic surgery, pediatrics, obstetrics, and urology. Pediatrics and orthopedic surgery have provided definitions of job duties and training-program requirements. In the case of pediatrics and obstetrics, agreement between the nursing and medical professions on the roles and preparation of pediatric nurse-practitioners and nurse midwives has been achieved. Other types of programs include the physician assistant's role in geriatrics, certain chronic diseases, anesthesiology, surgery, ophthamology, radiology, emergency care, coronary care, and nuclear medicine.

The attitudes of physicians (146) concerning the delegation of elements of their practice to trained assistants under supervision indicates a high degree of acceptance of the concept of the physician assistant and a willingness to share elements of practice that have been traditionally the prerogative of the physician. In a survey of 3,425 internists active in patient care, the American Society of Internal Medicine found that internists believed many elements of their practice could and should be delegated to an allied health worker. (147) These included recording elements of the history (60 percent willing to delegate), home visits (65 percent), patient instruction (70 percent), nursing-home visits (43 percent), and performance of Pap smears (34 percent). The American Academy of Pediatrics, in a survey of 5,799 pediatricians, found that over 70 percent favored delegation of such activities as recording elements of the history and counseling on child care, feeding, and development. (148)

More than half felt that an allied health worker should make home visits in follow-up of cases of acute illness and chronic disease; and this assistant should provide medical advice on minor medical matters. A smaller, but significant, number favored delegating well-child examinations (25 percent); sick-child examinations (20 percent); and newborn visits to maternity hospitals (32 percent).

In both of these studies, as well as that performed in the field of obstetrics, (149) there is a wide gulf between what the physician feels he could and should delegate and what he actually does. More than half the pediatricians feel that lack of trained workers is a very serious obstacle to delegation of tasks. The internists indicated that they were equally willing to have patient-care tasks, traditionally restricted to the physician, carried out by a professional nurse or a physician assistant; there was a slight preference for the physician assistant in physical examination and patient follow-up and for the nurse in therapeutic activities. Despite the professed willingness to entrust such activities to the nurse, such delegation is rarely done in the 40 percent of internists' offices that have a professional nurse.

Coy and Hansen (150) queried 1,345 Wisconsin physicians about their attitudes toward the physician assistant and found a high percentage who indicated a need for such an individual -- 55 percent of family practitioners, 66 percent of pediatricians, 64 percent of internists -- and willingness to use them in their practices -- 42 percent of family practitioners; 41 percent of pediatricians; and 44 percent of internists. Forty-one percent of pediatricians indicated that they would hire a full-time allied health worker (type not specified), if available.

Acceptance of the physician assistant by both patients and physicians is reported to be good in studies conducted at Duke University; least acceptance was demonstrated by patients in the lowest-income and educational levels. (151) Ninety-four percent of parents expressed satisfaction with the combined care provided jointly by a pediatrician and a pediatric nurse-practitioner; 57 percent found joint care better than that received from a physician alone. (152)

Current Training Programs

At present, there are about 80 programs in various stages of development involving the training or use of physician assistants in addition to about 50 programs that extend nursing roles. (153) A number of additional programs are in the early stages of planning. The training period of most existing programs ranges from four months to three years. The short-term programs enroll highly trained, experienced students and give them a new orientation,

some didactic training, and new clinical skills. The short training-period means that the corpsmen entering MEDEX or the nurses entering a nurse-practitioner program must be, initially, highly qualified. The longer programs accept applicants with much less training (two years of premedical college credit or some practical experience as a corpsman or licensed practical nurse) and provide generally one year of didactics, one year of clinical training, and one year of internship -- in consecutive order.

Several training programs are described below to furnish some indication of the range of programs related to physician assistants:

Duke University: Physician Assistant Program. (154) Applicants should have a high-school education including some science and three years of medical experience such as that of medical corpsman or licensed practical nurse. The course comprises nine months of didactic work followed by fifteen months of clinical practice. The student is trained to assist a specific physician and to carry out some of his more routine tasks as requested. He may be trained as either a generalist or a specialist. The first class graduated in 1970.

University of Colorado: Child Health Associate. (155) Applicants who must have two years of undergraduate work at an approved college take a two-year course with the first year devoted to the basic sciences; and the second, to clinical experience. After a baccalaureate in science is awarded, graduates must serve a year of internship. The associate is trained to provide nearly all of the care of well children and to treat most mild diseases. Within established limits, the associate is qualified to diagnose, counsel, and prescribe. The first class will graduate in 1971.

University of Washington: MEDEX. (156) The program accepts only highly skilled, independent duty, ex-medical corpsmen for a three-month course of intensive training that is followed by a one-year internship with the future employer. Employers are rural physicians who have agreed in advance to hire the MEDEX at $8,000 to $12,000 per year after the internship. During the 15-month program, the student is paid $500 a month. The MEDEX is allowed to perform all physician functions, except those requiring a very high degree of skill and judgment. The first class graduated in August 1970. (157)

Bowman Gray University: Physician Assistant. (158) Applicants must have either two years of approved premedical college credit or corpsman experience. The 24-month program includes one year of didactic training and one of clinical experience. The first six months are part of a core curriculum, common to other allied health students. The program began in September 1970.

University of Colorado: Pediatric Nurse Practitioner. (159) Applicants must have a B.S. degree in nursing. The course consists of four months of intensive theory and practice in pediatrics with emphasis on nursing management of children and the nurse's role in community settings. Upon graduation, some of the pediatric nurse practitioners (PNP) have operated "solo" in field stations and in low-income, rural areas where they give total care to both well children and to approximately half the ill children; the remaining ill children are referred to a conventional clinic. Other PNP's work in private offices with pediatricians where they provide almost complete well care and participate in the care of the sick child. The first class graduated in April 1970.

Massachusetts General Hospital: Pediatric Nurse Practitioner. (160) Applicants must be registered nurses currently working in either a private office or public clinic with an employer interested in cooperating with the program. The course consists of didactic work one and one-half days a week for 16 weeks, while the applicant simultaneously receives on-the-job practice in the new techniques. In addition to assisting the physician, the PNP will assume most of the responsibility for well-child care, as well as make house and hospital calls. The first class graduated in June 1970.

The Federal Government is currently sponsoring many of the existing physician assistant projects. The Department has assumed a major share of this support in the following agencies: (a) HSMHA -- physician assistant projects are primarily located in the National Center for Health Services Research and Development, but other programs involved in some training include Regional Medical Program Services, Indian Health Service, and Federal Health Programs Service; (b) NIH -- Bureau of Health Manpower Education; and (c) the Office of Education. Additional funding is provided by the Office of Economic Opportunity and the Manpower Administration of the Department of Labor.

Legal Issues

The legal issues regarding physician assistants are complex and have evoked much controversy. Of major concern are problems such as liability, malpractice, and the legality of delegating tasks to nonphysicians. Inasmuch as medical practice acts in all States prohibit the practice of medicine without a license, many tasks currently being considered for physician assistants -- without amendments to medical practice acts -- would constitute the illegal practice of medicine. The results of a series of conferences on the legal implications of the Duke physician assistant program are summarized in the report of the Conference on Legislative Proposals for Physician's Assistants. (161) Conference delegates agreed that State medical practice acts should be amended rather than replaced through the enactment of new laws for physician assistants. This consensus was predicated, in large measure, on the view that

licensure laws on physician assistants would limit change and introduce rigidity into a system that is changing rapidly. Several States, have amended the medical practice acts to give the physician the widest possible latitude in delegating tasks to an assistant. Typical of these is the Oklahoma statute:

> (N)othing in this article shall be so construed as to prohibit ... service rendered by a physician's trained assistant, a registered nurse, or a licensed practical nurse if such service be rendered under the direct supervision and control of a licensed physician. (162)

One proposal would modify this wording so that the "act, task, or function is performed in accordance with such rules and regulations as may be promulgated by the Board of Medical Examiners." (163) A more strict proposal would have the Board of Medical Examiners specify what training is necessary for specified roles and tasks. (164) A third proposal would have the Board of Medical Examiners consider a petition by an individual physician or institution that specifies the training of a particular employee and the tasks he will perform. (165) These proposals differ as to the amount of responsibility given to the physician and as to who shall judge a candidate's qualifications or performance.

Several professional organizations support proposals that would give wide scope to the physician and allow for "growth in the delegation of duties to ancillary health workers." (166) To date, State legislatures have taken a wide range of approaches. As mentioned above, several States have adopted delegatory authorizations. Colorado has enacted a highly detailed licensure law for "child-health associates," defining and regulating their activities comprehensively. California recently enacted a law that requires the physician to petition the Board of Medical Examiners to certify a particular applicant to perform specified duties. An additional 20 or more States are considering a variety of legislative proposals relating to the physician assistant.

Conclusion

Rising needs and expectations for medical care require expanding numbers and expanded roles of existing health personnel as well as the development of new types of health manpower. The need to increase health services is handicapped by problems associated with the preparation of more physicians, but the further development of appropriate physician assistants may assist in meeting the future health needs of the population in a more efficient way.

The development of new types of health practitioners will undoubtedly engender problems of professional status and competition, professional and public acceptance, methods of training and utilization, remuneration, and legality. Notwithstanding these problems, the physician assistant as a manpower resource may provide new avenues of access to health services that cannot be provided under present manpower supply, utilization, and cost arrangements.

APPENDIX C – PART I

INFORMATION ON SELECTED HEALTH OCCUPATIONS

Dental assistant

Dental hygienist

Dental laboratory technician

Dietitian

Dietetic technician-assistant

Inhalation therapist-technician

Medical record librarian

Medical record technician

Medical technologist

Occupational therapist

Occupational therapy assistant

Physical therapist

Physical therapy assistant

Radiologic technologist-technician

Sanitarian

Sanitarian technician

*Prepared in the Division of Allied Health Manpower, Bureau of Health Manpower Education, National Institutes of Health. See *Accreditation and Certification in Relation to Allied Health Manpower* (NIH Pub. No. 71-192).

DENTAL ASSISTANT

Manpower

Between 90,000 and 95,000 employed in 1970.

Professional Association

American Dental Assistants Association, Chicago, Ill.;
Founded in 1924;
About 14,100 members in 1970, of whom an estimated 11,900 are professionally active.

Certification or Registration of Individuals by Nongovernment Agency

Certifying Board of the American Dental Assistants Association;
Program initiated by ADAA in 1948;
Requirements for certification adopted by the American Dental Association in 1960;
Designation of Certified Dental Assistant -- C.D.A.;
Since 1960, 11,553 certified; 5,607 certified in 1970;
Basic requirement of graduation from a training program for dental assistants accredited by the American Dental Association; ADAA membership not required;
Written and practical examination administered by the certifying board;
Examination results last year: 2,509 examined, 1,904 passed;
An annual fee and evidence of continuing education are required for renewal of certification.

Accreditation of Educational Programs

Council on Dental Education of the American Dental Association, Chicago, Ill.;
Standards adopted in 1960; latest revision in 1969;
As of October 1969, 154 programs for dental assistants;
In the first year, 4,972 student capacity;
In 1969-70, 5,074 students enrolled in 1- and 2-year programs; 4,188, in first year; and 886, in second year;
In 1969, 2,175 graduates awarded certificate or associate degree.

State Licensure or Registration of Individuals

Licensure of dental assistants not required;
A policy of registration of dental assistants who perform expanded functions was recently adopted in one State.

DENTAL HYGIENIST

Manpower

About 16,000 employed in 1970.

Professional Association

American Dental Hygienists' Association, Chicago, Ill.;
Founded in 1923;
About 9,100 members in 1970, a large proportion of whom are professionally active;
Only licensed dental hygienists are eligible for membership.

Certification or Registration of Individuals by Nongovernment Agency

None.

Accreditation of Educational Programs

Council on Dental Education of the American Dental Association, Chicago, Ill.;
Standards adopted in 1947; latest revision in 1965;
As of October 1969, 100 programs for dental hygienists;
In first year, 3,517 student capacity;
In 1969-70, 5,931 students enrolled in 2- and 4-year programs; 3,301, in first year; and 2,630, in second year of dental hygiene program;
In 1969, 2,231 graduates; includes 424 baccalaureate degrees and 1,807 certificates or associate degrees.

State Licensure or Registration of Individuals

License required to practice in all States and the District of Columbia;
To qualify for licensure, dental-hygiene graduates must pass both a written and a clinical examination administered by a State Board of Dental Examiners;
46 States accept the written examination given by the National Board of Dental Examiners in lieu of the State's own written examination; however, each State still examines the clinical skills of the candidate.

DENTAL LABORATORY TECHNICIAN

Manpower

About 32,000 employed in 1970.

Professional Association

No national organization of dental laboratory-technicians;
Dental laboratories may hold membership in National Association of Certified Dental Laboratories.

Certification or Registration of Individuals by Nongovernment Agency

National Board for Certification in Dental Laboratory Technology, Alexandria, Va.;
Requirements for certification established by the American Dental Association in 1957;
Program initiated in 1958;
Designation of Certified Dental Technician -- C.D.T.;
In 1970, 6,300 certified and active;
Candidates for certification must have completed high school and be a citizen of the United States or Canada. Persons who have satisfactorily completed an accredited 2-year dental technology education program and 3 years of employment experience, or who have fulfilled experience requirements in lieu of the formal training, may be certified after passing written and practical examinations given by the National Board for Certification in Dental Laboratory Technology;
Written and practical examination administered by the Psychological Corporation, New York, N.Y.;
Examination results in 1970 -- 380 examined, 315 passed;
Annual fee and participation in continuing education required for recertification.

Accreditation of Educational Programs

Council on Dental Education of the American Dental Association, Chicago, Ill.;
Standards adopted in 1948; latest revision in 1967;
As of October 1969, 23 programs for dental laboratory technicians;
In first year, 620 estimated student capacity;
In 1969-70, 965 students enrolled in 2-year programs; 596, in first year and 369, in second year;
In 1969, 357 graduates awarded certificate or associate degree.

State Licensure or Registration of Individuals

Licensure of dental laboratory technicians not required;
Dental laboratory technicians registered annually in one State.

DENTAL LABORATORY TECHNICIAN (Continued)

Dental Laboratories

Of the 9,000 dental laboratories, 2,300 hold membership in the National Association of Certified Dental Laboratories, Inc., Alexandria, Va.;

Of the total, 463 dental laboratories are accredited by the Joint Commission on Accreditation of Dental Laboratories, Chicago, Ill.;

Annual registration of dental laboratories required in one State, and dental laboratories must annually file for permit in another State.

DIETITIAN

Manpower

More than 30,000 dietitians and nutritionists employed in 1970.

Professional Association

American Dietetic Association, Chicago, Ill.;
Founded in 1917;
In fall 1970, an estimated 16,000 of 21,900 members were professionally active.

Certification or Registration of Individuals by Nongovernment Agency

ADA Interim Committee on Professional Registration;
Program initiated June 1, 1969; "grandfather clause" expired Sept. 1, 1969;
Designation of Registered Dietitian -- R.D.;
In fall 1970, nearly 16,000 of 20,190 registered members were professionally active.
Basic requirement of ADA membership;
Written examination administered by Psychological Corporation of New York;
Results of first examination: 799 examined, of whom 733 passed;
Annual renewal of registration via payment of additional fees to ADA;
Continuing education within 5 years required for renewal of registration.

Accreditation of Educational Programs

Institutional accreditation of colleges and universities with home economics programs (1,101 baccalaureates in home economics with majors in foods and nutrition and/or institutional management in 1967-68);
Institutional accreditation of colleges and universities with nutrition programs (20 baccalaureates in 1967-68);
Sixty-five dietetic internship programs approved by ADA; 848 interns in 1969.

State Licensure or Registration of Individuals

None.

DIETETIC TECHNICIAN-ASSISTANT

Manpower

About 25,000 to 30,000 dietetic technicians and assistants employed in 1970, estimated by American Dietetic Association, with technician considered as mid-management, under the dietitian and over the assistant. About 18,100 dietary services personnel were reported as dietary technicians (including food service supervisors) in the 1969 hospital manpower survey.

Professional Association

Hospital, Institution, and Educational Food Service Society within the structure of American Dietetic Association;
Founded in 1960;
In fall 1970, 2,390 members professionally active.

Certification or Registration of Individuals by Nongovernment Agency

None.

Accreditation of Educational Programs

Institutional accreditation of junior and senior colleges with food service programs;
Curriculum guide developed by ADA requires registered dietitian as program director and supervised work experience;
ADA correspondence course completed by 1,734 food service supervisors since 1960; 530 enrolled in 1969.

State Licensure or Registration of Individuals

None.

INHALATION THERAPIST-TECHNICIAN

Manpower

Between 12,000 and 14,000 employed in 1970; about 14,600 inhalation therapists and aides were reported in the 1969 hospital manpower survey.

Professional Association

American Association for Inhalation Therapy, Riverside, Calif.;
Founded in 1947;
In fall 1970, about 8,000 members of whom 7,300 are professionally active.

Certification or Registration of Individuals by Nongovernment Agency

1) American Registry of Inhalation Therapists, Rochester, N.Y. sponsored by American Society of Anesthesiologists (ASA), American College of Chest Physicians (ACCP), and American Association for Inhalation Therapy (AAIT);
Founded in 1961;
Designation of Registered Inhalation Therapist -- A.R.I.T.;
Since 1961, 1,278 registered; about 1,200 professionally active in fall 1970;
Basic requirement of graduation from approved program in inhalation therapy plus 1 year of supervised experience in inhalation therapy; also associate degree;
Written and oral examination administered by the Registry;
Examination results 1969: written -- 1,287 examined, 554 passed;
oral -- 617 examined, 336 passed;
Annual dues payable to Registry;
Continuing education not required for renewal of registration.

2) AAIT Technician Certification Board;
Program initiated in November 1969;
Designation as Certified Inhalation Therapy Technician;
Basic requirement of graduation from approved program in inhalation therapy at associate degree level, or high school education plus 2 years' supervised experience in inhalation therapy; also AAIT membership;
Written examination administered by the Board;
Examination in September 1970: 1,600 examined, 1,314 passed;
Annual renewal of certification via payment of fees to AAIT;
Continuing education not required for renewal of certification.

INHALATION THERAPIST-TECHNICIAN (Continued)

Accreditation of Educational Programs

AMA Council on Medical Education in collaboration with Joint Review Committee for Inhalation Therapy Education -- ASA, ACCP, AAIT;

Standards adopted in 1962; latest revision in 1967;

As of August 15, 1970, 56 programs in inhalation therapy; 82 as of October 28, 1970. Includes two 4-year and 29 2-year programs with college affiliation;

Student capacity of 800;

In 1969-70, 795 students enrolled in final 2 years of 4-year program or in 2-year program;

In 1970, 254 graduated.

State Licensure or Registration of Individuals

License required to practice in Arkansas.

MEDICAL RECORD LIBRARIAN

Manpower

About 13,000 employed in 1970.

Professional Association

American Medical Record Association, Chicago, Ill. (formerly American Association of Medical Record Librarians);
Founded in 1928;
10,000 members; 3,500 RRL's, 3,000 ART's, and 3,500 other medical record personnel and interested persons.

Certification or Registration of Individuals by Nongovernment Agency

AMRA Committee on Education and Registration;
Program initiated in 1932;
Designation of Registered Record Librarian -- RRL;
Since 1932, 6,400 registered; 4,100 registered in fall 1970, nearly all of whom are professionally active;
Basic requirement of graduation from AMA-AMRA-approved program with baccalaureate in medical record administration;
Written examination administered by Psychological Corporation of New York;
Examination results in 1970: 250 examined, of whom 238 passed;
Registration retained regardless of membership in AMRA;
Continuing education provision under consideration for renewal of registration.

Accreditation of Education Programs

AMA Council on Medical Education in collaboration with AMRA; Standards adopted in 1943; 1967 version in process of revision;
As of August 1970, 26 programs in medical record librarianship;
In final year, 300 student-capacity;
In 1969-70, 256 students enrolled in final year of specialized training (after 2nd or 3rd year of college or 12 months postbaccalaureate)
In 1970, 235 graduated.

State Licensure or Registration of Individuals

None.

MEDICAL RECORD TECHNICIAN

Manpower

About 5,000 medical record technicians employed in 1970. Includes 3,000 ART's and about 2,000 persons currently taking the AMRA correspondence course. As many as 7,000 records personnel were reported as technicians in the 1969 hospital manpower survey.

Professional Association

American Medical Record Association, Chicago, Ill. (formerly American Association of Medical Record Librarians);
Founded in 1928;
10,000 members; 3,500 RRL's, 3,000 ART's, and 3,500 other medical record personnel and interested persons.

Certification or Registration of Individuals by Nongovernment Agency

AMRA Committee on Education and Registration;
Program initiated in 1955;
Designation of Accredited Record Technician -- ART;
Since 1955, 4,400 registered; 3,100 registered in fall 1970, nearly all of whom are professionally active;
Basic requirement of graduation from AMA-AMRA-approved program with AA degree in medical record technology or successful completion of 25-lesson AMRA independent home-study course;
Written examination administered by Psychological Corporation of New York;
Examination results in 1970: 949 examined, of whom 863 passed;
Accreditation retained regardless of membership in AMRA;
Continuing education provision under consideration for renewal of accreditation.

Accreditation of Educational Programs

AMA Council on Medical Education in collaboration with AMRA;
Standards adopted in 1953; 1965 version in process of revision;
As of August 1970, 18 programs in medical record technology;
In final year, 250 student capacity;
In 1969-70, 219 students enrolled in final year of 1- or 2-year program;
In 1970, 204 graduated.

State Licensure or Registration of Individuals

None.

MEDICAL TECHNOLOGIST

Manpower

About 45,000 to 50,000 employed in 1970.

Professional Association

American Society of Medical Technologists, Houston, Texas;
Founded in 1932;
Open to MT(ASCP)'s and scientifically-related college graduates;
In November 1970, about 21,000 members of whom an estimated 19,000 are professionally active.

Certification or Registration of Individuals by Nongovernment Agency

Board of Registry of Medical Technologists of the American Society of Clinical Pathologists, Chicago, Ill., in conjunction with ASMT;
Founded in 1928;
Designation of MT(ASCP);
General certification as medical technologist; also specialty certification in blood banking, chemistry, microbiology, and nuclear medicine;
Since 1928, 81,000 registered; in fall 1970, 56,000 registered of whom an estimated 42,000 are employed;
Basic requirement of graduation from approved program in medical technology or baccalaureate in science plus 5 years' experience in accredited clinical laboratory; after July 1971, baccalaureate required of all;
Written examination administered by the Registry;
Examination results last year: 5,653 examined, of whom 4,692 passed;
Annual dues payable to Registry;
Continuing education not required for renewal of registration.

Accreditation of Education Programs

AMA Council on Medical Education in collaboration with ASCP and ASMT through the Board of Schools of Medical Technology (ASCP);
Standards adopted in 1936; latest revision in 1968;
As of August 1970, 788 programs in medical technology;
Student capacity of 8,587;
In 1969-70, 5,008 students enrolled in final year of specialized training, after 3 or 4 years of college;
In 1970; 4,408 graduated; more than half also received baccalaureate.

State Licensure or Registration of Individuals

License or registration required to practice in the following 10 States: Alabama, California, Connecticut, Florida, Hawaii, Illinois, Maryland, Nevada, Pennsylvania, and Tennessee; also, New York City and Puerto Rico.
Written examination developed by Professional Examination Service.

OCCUPATIONAL THERAPIST

Manpower

More than 7,000 employed in 1970.

Professional Association

American Occupational Therapy Association, New York, N. Y.;
Founded in 1917;
Open to O.T.R.'s and C.O.T.A.'s with single fee for annual membership and registration renewal;
11,100 members including 9,600 O.T.R.'s, of whom approximately 7,000 are professionally active.

Certification or Registration of Individuals by Nongovernment Agency

AOTA Committee on Registration and Certification;
Program initiated in 1931; by examination since 1945;
Designation of Registered Occupational Therapist -- O.T.R.;
Since 1931, 13,900 registered; 9,600 registered in fall 1970, of whom approximately 7,000 are professionally active;
Basic requirement of graduation from AMA-AOTA-approved program in occupational therapy plus 6 months' supervised clinical practice;
Written examination administered by AOTA; no practical examination;
Examination results last year: 719 examined, of whom 638 passed;
Continuing education not required for renewal of registration.

Accreditation of Educational Programs

AMA Council on Medical Education in collaboration with AOTA;
Standards adopted in 1935; latest revision in 1965;
As of August 1970, 36 colleges with approved programs;
Student capacity of 900;
In 1969-70, 778 students enrolled in 4th year of O.T. program and 5th and 6th year for students with degree in other than O.T.; 563 students enrolled in clinical practice required for professional registration;
In 1969, 692 graduated.

State Licensure or Registration of Individuals

License required to practice in Puerto Rico but not in any of 50 States or D.C.

OCCUPATIONAL THERAPY ASSISTANT

Manpower

Approximately 1,500 em[illegible]oyed in 1970; about 5,100 occupational therapy personnel were reported as assistants and aides in the 1969 hospital manpower survey.

Professional Association

American Occupational Therapy Association, New York, N.Y.;
Founded in 1917;
Open to O.T.R.'s and C.O.T.A.'s, with single fee for annual membership and certification renewal;
Members total 11,100 including 1,500 C.O.T.A.'s, nearly all of whom are professionally active.

Certification or Registration of Individuals by Nongovernment Agency

AOTA Committee on Registration and Certification;
Program initiated in 1959;
Designation of Certified Occupational Therapy Assistant -- C.O.T.A.;
Since 1959, 2,300 certified (including 781 via grandfather clause); 1,500 certified in fall 1970, nearly all of whom are profe[illegible]e;
Basic requirement of graduation from AOTA appr[illegible]
No examination at present time; eligible to ap[illegible]ert[illegible]n upon recommendation of educational program directo[illegible]
Continuing education not required for renewal of certification.

Accreditation of Educational Programs

AOTA Accreditation Committee;
Standards adopted in 1958; latest revision in 1967;
As of October 1969, 26 approved programs; includes 9 Associate-Degree programs (an additional 5 pending approval for fall 1970);
About 700-student capacity; 600 students enrolled in 1969-70;
In 1969, 344 graduated.

State Licensure or Registration of Individuals

License required to practice in Puerto Rico but not in any of 50 States or D.C.

PHYSICAL THERAPIST

Manpower

About 15,000 employed in 1970.

Professional Association

American Physical Therapy Association, Washington, D.C.;
Founded in 1921;
Open only to graduates of AMA-APTA approved programs for physical therapists;
In fall 1970, members totaled 14,723 of whom about 12,000 were professionally active.

Certification or Registration of Individuals by Nongovernment Agency

American Registry of Physical Therapists, Chicago, Ill., sponsored by American Congress of Rehabilitation Medicine;
Founded in 1935; in process of closing, with no new members after Dec. 1971;
Designation of Registered Physical Therapist -- P.T. (ARPT);
In fall 1970, 7,500 registered of whom 6,500 are professionally active;
Basic requirement of graduation from AMA-APTA-approved program in physical therapy;
Written examination administered by the Registry;
Examination results last year: 200 examined, of whom 186 passed;
Annual dues payable to Registry;
Continuing education not required for renewal of registration.

Accreditation of Educational Programs

AMA Council on Medical Education in collaboration with APTA;
Standards adopted in 1936; latest revision in 1955;
As of August 1970, 52 colleges with approved programs;
In final academic year only, 1,475 student capacity;
In 1969-70, 1,449 students enrolled in 4th year of P.T. program, 5th year for post-baccalaureate students, 6th year for students in master's degree program for initial professional preparation;
In 1969, 1,362 graduated.

State Licensure or Registration of Individuals

License required to practice in 49 States, District of Columbia, Puerto Rico, and Virgin Islands. (Exception is Texas.)
Written examination developed by Professional Examination Service of the American Public Health Association, New York, N.Y. in cooperation with APTA.

PHYSICAL THERAPY ASSISTANT

Manpower

About 100 employed in 1970; based on graduates in 1970. About 8,700 physical therapy personnel were reported as assistants and aides in the 1969 hospital manpower survey.

Professional Association

Temporary affiliate membership category within structure of American Physical Therapy Association;

Open to graduates of APTA-approved programs for physical therapy assistant.

Certification or Registration of Individuals by Nongovernment Agency

None.

Accreditation of Educational Programs

APTA in process of surveying programs for purpose of accreditation; none approved as of Nov. 1970;

About 10 programs operational in 1969-70, with approximately 100 graduates in 1970;

About 19 programs operational in 1970-71, with more than 700 students enrolled.

State Licensure or Registration of Individuals

License required to practice in 8 States;

Written examination developed by Professional Examination Service of the American Public Health Association, New York, N.Y., in cooperation with APTA.

RADIOLOGIC TECHNOLOGIST-TECHNICIAN

Manpower

Between 75,000 and 100,000 employed in 1970.

Professional Association

American Society of Radiologic Technologists, Chicago, Ill.; formerly American Society of X-ray Technicians;
Founded in 1920;
Open only to R.T. (ARRT)'s;
About 10,000 members in fall 1970, of whom an estimated 9,000 are professionally active.

Certification or Registration of Individuals by Nongovernment Agency

1) American Registry of Radiologic Technologists, Minneapolis, Minn., formerly American Registry of X-ray Technicians, sponsored by American College of Radiology and American Society of Radiologic Technologists;
Founded in 1922;
Designation of Registered Radiologic Technologist -- R.T. (ARRT);
Since 1922, 71,692 registered; 60,980 (includes 990 also certified in nuclear medicine and 359 also certified in radiation therapy) registered in fall 1970, of whom about two-thirds (40,000) are professionally active;
Basic requirement of graduation from AMA approved program in radiologic technology;
Written examination administered by the Registry;
Examination results last year: 6,875 examined, of whom 4,875 passed;
Annual dues payable to Registry;
Continuing education not required for renewal of registration.

2) American Registry of Clinical Radiography Technologists, Enid, Okla.; also known as American Radiography Technologists;
Founded in 1955;
Designation of Registered Radiologic Technologist -- R.T. (ART);
As of Jan. 1, 1970, 5,991 registered; number professionally active not reported although employment status requested on annual-renewal form;
Basic requirement of completion of 2-year training program in radiologic technology;
List of acceptable programs not available;
Written examination prepared by ART committee and administered by ART personnel qualified as proctors. No regularly scheduled examinations;

RADIOLOGIC TECHNOLOGIST-TECHNICIAN (Continued)

Certification or Registration of Individuals by Nongovernment Agency (Continued)

Examination results last year: about 500 examined, of whom 90 percent passed;

Annual dues payable to Registry;

Provision for continuing education passed at October 1970 ART Meeting; attendance will be required at one educational seminar per year, when ART annual meeting is held in area.

Accreditation of Educational Programs

AMA Council on Medical Education in collaboration with American College of Radiology and American Society of Radiologic Technologists;

Standards adopted in 1944; 1970 revision in process;

As of August 1970, 1,177 programs in radiologic technology; includes about 375 2-year and 85 3- or 4-year programs with college affiliation;

Student capacity of 18,511;

In 1969-70, 11,387 students enrolled in 2-year programs or in last 2 years of 3- or 4-year programs;

In 1970, 5,188 graduated; the number who received baccalaureate is not available.

State Licensure or Registration of Individuals

License or certification required to practice in California, New Jersey, New York, Puerto Rico.

SANITARIAN

Manpower

Nearly 15,000 employed in 1970.

Professional Associations

1) National Environmental Health Association (NEHA), Denver, Colo.; formerly National Association of Sanitarians;
   Founded in 1930;
   In fall 1970, about 6,200 members including some 6,000 sanitarians, nearly all of whom are professionally active;
2) International Association of Milk, Food, and Environmental Sanitarians; formerly International Association of Milk and Food Sanitarians;
   Founded in 1911;
   About 3,000 members.

Certification or Registration of Individuals by Nongovernment Agency

American Intersociety Academy for Certification of Sanitarians, Rockville, Md., sponsored by American Public Health Association; formed from International Association of Milk, Food, and Environmental Sanitarians and National Environmental Health Association;
Founded in 1966;
Certification as a diplomate of the Academy;
In fall 1970, 313 persons certified;
Basic requirement of Master's degree and State registration, if available;
Written and oral examination administered by the Academy;
Examination results last year: 14 examined, of whom 13 passed;
Biennial dues payable to Academy;
Continuing education not required for renewal of certification.

Accreditation of Educational Programs

National Accreditation Council for Environmental Health Curriculums, Denver, Colo., sponsored by NEHA;
Founded in 1967;
Standards adopted in 1967;
As of October 1970, 36 programs in environmental-health science;
Student capacity of 1,500;
In 1969-70, 500 students enrolled in last 2 years of 4-year program;
In 1969, 150 graduated.

State Licensure or Registration of Individuals

License required to practice in 35 States;
Model registration act developed in 1960 by Sanitarians Joint Council;
Written examination developed by Professional Examination Service of the American Public Health Association, New York, N. Y.

SANITARIAN TECHNICIAN

Manpower

About 80,000 environmental technicians and assistants employed in 1970; excludes about 100,000 environmental aides.

Professional Association

National Environmental Health Association (NEHA), Denver, Colo.; formerly National Association of Sanitarians;
Founded in 1930;
In fall 1970, about 6,200 members including 200 sanitarian technician associate-members.

Certification or Registration of Individuals by Nongovernment Agency

None.

Accreditation of Educational Programs

National Accreditation Council for Environmental Health Curriculums, Denver, Colo., sponsored by NEHA (to be effective in 1971);
Technician standards adopted in 1970;
As of October 1970, 8 programs in environmental health technology;
Student capacity of 400;
In 1969-70, 300 students enrolled in final year of 1- or 2-year program;
In 1969, 50 graduated; about half received AA degree.

State Licensure or Registration of Individuals

License required to practice in South Carolina.

SOURCES

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American Dental Association, Council on Dental Education. Annual Report on Dental Auxiliary Education, 1969-70.

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APPENDIX C

Part II

Information on Licensure, Accreditation, and Certification

TABLES

*Prepared in the Division of Allied Health Manpower, Bureau of Health Manpower Education, National Institutes of Health. See *Accreditation and Certification in Relation to Allied Health Manpower* (NIH Pub. No. 71-192).

TABLE 1. HEALTH OCCUPATIONS LICENSED IN EACH STATE

STATE	NUMBER OF OCCUPATIONS LICENSED[1]	ADMINISTRATOR[2] OF NURSING HOME	CHIROPRACTOR	CLINICAL LABORATORY PERSONNEL: DIRECTOR	CLINICAL LABORATORY PERSONNEL: MEDICAL TECHNOLOGIST	CLINICAL LABORATORY PERSONNEL: DENTAL LABORATORY TECHNICIAN	INHALATION THERAPIST	MIDWIFE	NATUROPATH	OPTICIAN	OPTICIAL TECHNICIAN	PHYSICAL THERAPY ASSISTANT	PHYSICIAN ASSISTANT	PSYCHIATRIC ATTENDANT	PSYCHOLOGIST	RADIOLOGIC TECHNOLOGIST	SANITARIAN	SANITARIAN TECHNICIAN	SOCIAL WORKER	STATE
TOTAL	890	49	49	13	10	1	1	23	8	17	2	10	1	3	43	3	35	1	7	TOTAL
ALA.	18	X	X		X							X			X		X			ALA.
ALASKA	14		X												X					ALASKA
ARIZ.	18		X					(3)	X	X		X	(4)		X					ARIZ.
ARK.	18	X	X				X							X	X		X			ARK.
CALIF.	25	X	X	X	X			(3)	(3)	X			(4)	X	X	X	X		X	CALIF.
COLO.	18	X	X					(3)					X		X		X			COLO.
CONN.	21	X	X	X				(3)	X	X	X				X		X			CONN.
DEL.	17	X	X	X				X							X					DEL.
D.C.	16	X	X					X							X					D.C.
FLA.	22	X	X	X	X			X	(3)	X		X	(4)		X		X			FLA.
GA.	18	X	X					X		X					X		X			GA.
HAWAII	21	X	X	X	X			X	X	X					X		X			HAWAII
IDAHO	16	X	X												X		X			IDAHO
ILL.	20	X	X					(3)							X		X		X	ILL.
IND.	17	X	X					X				X			X		X			IND.
IOWA	14	X	X																	IOWA
KANS.	15	X	X										(4)		X					KANS.
KY.	19	X	X					X		X		X			X		X			KY.
LA.	16	X						X							X		X			LA.
MAINE	15	X	X												X					MAINE
MD.	19	X	X	X	X			X							X		X			MD.
MASS.	16	X	X							X							X			MASS.
MICH.	17	X	X											X	X		X			MICH.
MINN.	17	X[2]	X					X							X					MINN.
MISS.	15	X													X		X			MISS.
MO.	14	X	X																	MO.
MONT.	15	X	X														X			MONT.
NEBR.	16	X	X												X		X			NEBR.
NEV.	19	X	X	X	X					X					X		X			NEV.
N.H.	15	X	X												X					N.H.
N.J.	23	X[2]	X	X	X			X		X	X				X	X	X			N.J.
N. MEX.	17	X	X					X							X		X			N. MEX.
N.Y.	19	X	X	X						X					X	X			X	N.Y.
N.C.	19	X	X					X		X		X	(4)		X		X			N.C.
N. DAK.	15	X	X												X					N. DAK.
OHIO	15	X	X					X												OHIO
OKLA.	18	X	X									X	(4)		X		X		X	OKLA.
OREG.	18	X	X						X			X			X		X			OREG.
PA.	16	X	X	X	X															PA.
R.I.	19	X	X	X						X					X		X		X	R.I.
S.C.	20	X	X			X				X					X		X	X	X	S.C.
S. DAK.	15	X	X														X			S. DAK.
TENN.	19	X	X	X	X					X					X		X			TENN.
TEX.	15	X	X									X			X		X			TEX.
UTAH.	17	X	X						X						X		X			UTAH.
VT.	14	X	X																	VT.
VA.	20	X	X					X		X		X			X		X		X	VA.
WASH.	19	X	X					X	X	X					X		X			WASH.
W. VA.	17	X	X					X							X		X			W. VA.
WIS.	16	X	X												X		X			WIS.
WYO.	16	X	X					X							X					WYO.

[1] FOR THE FOLLOWING 12 PROFESSIONS A LICENSE IS REQUIRED TO PRACTICE IN ALL STATES AND THE DISTRICT OF COLUMBIA: DENTAL HYGIENIST, DENTIST, ENGINEER (PROFESSIONAL), NURSE (PRACTICAL), NURSE (PROFESSIONAL), OPTOMETRIST, PHARMACIST, PHYSICIAN (M.D.), PHYSICIAN (O.D.), PODIATRIST, VETERINARIAN, AND PHYSICAL THERAPIST.

[2] ALSO HEALTH DEPARTMENT ADMINISTRATOR IN NEW JERSEY AND HOSPITAL ADMINISTRATOR IN MINNESOTA.

[3] NEW LICENSES ARE NO LONGER ISSUED, ALTHOUGH THOSE IN EXISTENCE MAY BE RENEWED.

[4] STATUTES AUTHORIZE DELEGATION OF FUNCTIONS TO BE PERFORMED UNDER SUPERVISION OF A PHYSICIAN.

SOURCE: PENNELL, M. Y., AND STEWART, P. A. *STATE LICENSING OF HEALTH OCCUPATIONS.* PUBLIC HEALTH SERVICE PUB. NO. 1758. WASHINGTON: U.S. GOVERNMENT PRINTING OFFICE, 1968, UPDATED.

Table 2. LIST OF ASSOCIATIONS RECOGNIZED FOR THEIR SPECIALIZED ACCREDITATION OF HEALTH EDUCATIONAL PROGRAMS

ALLIED MEDICAL HEALTH EDUCATION

(medical laboratory technician education)

Accrediting Bureau for Medical Laboratory Schools
Philip Lewis, Administrator
166 East Superior Street,
Chicago, Illinois 60611
(programs for medical technologist, occupational therapist, physical therapist, medical record librarian, medical record technician, and radiologic technologist-technician)

American Medical Association, Council on Medical Education
C. H. William Ruhe, Secretary
535 North Dearborn Street,
Chicago, Illinois 60610

ANESTHESIOLOGY

(professional schools)

American Association of Nurse Anesthetists
Bernice O. Baum, Executive Director
111 East Wacker Drive,
Chicago, Illinois 60601

DENTISTRY

(programs leading to DDS or DMD degrees; and programs for dental hygienist, dental assistant, and dental laboratory technician)

American Dental Association
John M. Coady, Secretary
Council on Dental Education
211 East Chicago Avenue,
Chicago, Illinois 60611

HOSPITAL ADMINISTRATION

(graduate-degree programs in hospital administration)

Accrediting Commission on Graduate Programs in Hospital Administration
Gary L. Filerman, Executive Director
One Dupont Circle, N.W., Suite 420,
Washington, D.C. 20036

MEDICINE

(programs leading to M.D. degree)

Liaison Committee on Medical Education representing the Council on Medical Education, AMA, and the Executive Council, AAMC
(In even numbered years)
C. H. William Ruhe, Secretary Council on Medical Education
American Medical Association
535 Dearborn Street,
Chicago, Illinois 60610
(In odd numbered years)
Robert E. Berson, Executive Director
Association of American Medical Colleges
One Dupont Circle, N.W., Suite 200,
Washington, D.C. 20036

NURSING

(professional and practical nurse programs)

National League for Nursing, Inc.
Margaret E. Walsh, General Director and Secretary
10 Columbus Circle,
New York, New York 10019
(practical nurse programs)

National Association for Practical Nurse Education and Service, Inc.
Rose G. Martin, Executive Director
1465 Broadway,
New York, New York 10036

OPTOMETRY

(professional schools)

American Optometric Association
Charles G. Lile, Executive Secretary
Council on Optometric Education
7000 Chippewa St.
St. Louis, Missouri 63119

OSTEOPATHIC MEDICINE

(programs leading to D.O. degree)

American Osteopathic Association
Lawrence W. Mills, Director
Office of Education
212 East Ohio Street
Chicago, Illinois 60611

Table 2. LIST OF ASSOCIATIONS RECOGNIZED FOR THEIR SPECIALIZED ACCREDITATION OF HEALTH EDUCATIONAL PROGRAMS (Continued)

PHARMACY
(professional schools)
American Council on Pharmaceutical Education
Fred T. Mahaffey, Secretary
77 West Washington Street
Chicago, Illinois 60602

PODIATRY
(baccalaureate and graduate-degree programs)
American Podiatry Association
John L. Bennett, Director
Council on Podiatry Education
20 Chevy Chase Circle, N.W.
Washington, D.C. 20015

PSYCHOLOGY
(doctoral programs in clinical and counseling psychology)
American Psychological Association
William L. Simmons, Acting Administrative Officer for Educational Affairs
1200 17th Street, N.W.
Washington, D. C. 20036

PUBLIC HEALTH
(master's degree programs in community health education and graduate professional schools of public health)
American Public Health Association, Inc.
Director of Professional Education
Committee on Professional Education
1740 Broadway
New York, New York 10019

SOCIAL WORK
(graduate professional schools)
Council on Social Work Education
Frank M. Loewenberg, Director
Division of Education Standards and Accreditation
345 East 46th Street
New York, New York 10017

SPEECH PATHOLOGY AND AUDIOLOGY
(master's degree programs)
American Speech and Hearing Association
Stanley Ainsworth, Chairman
Education and Training Board
American Boards of Examiners in Speech Pathology and Audiology
9030 Old Georgetown Road
Bethesda, Md. 20014

VETERINARY MEDICINE
(programs leading to DVM and VMD degrees)
American Veterinary Medical Association
W. M. Decker, Director of Scientific Activities
Department of Education and Licensure
600 South Michigan Avenue
Chicago, Illinois 60605

Source: U.S. Department of Health, Education, and Welfare; Office of Education, Bureau of Higher Education, Accreditation and Institutional Eligibility Staff, December 1970.

Table 3. DESIGNATION OF CERTIFICATION OR REGISTRATION OF HEALTH MANPOWER BY NONGOVERNMENT AGENCIES

HEALTH FIELD AND OCCUPATION	DESIGNATION	AGENCY
CLINICAL LABORATORY SERVICES		
Clinical Chemist	Diplomate	American Board of Clinical Chemistry
Microbiologist	"	American Board of Microbiology
Medical Technologist[1]	MT(ASCP)	Board of Registry of Medical Technologist of the American Society of Clinical Pathologists
Cytotechnologist	CT(ASCP)	"
Histologic Technician	HT(ASCP)	"
Certified Laboratory Assistant	CLA (ASCP)	"
Medical Laboratory Technician	MLT(ASCP)	"
DENTISTRY AND ALLIED SERVICES		
Dentist	Diplomate	8 specialty boards recognized by American Dental Association
Certified Dental Assistant[1]	C.D.A.	American Dental Assistants Association Certifying Board
Certified Dental Technician	C.D.T.	National Board for Certification in Dental Laboratory Technology
DIETETIC AND NUTRITIONAL SERVICES		
Registered Dietitian	R.D.	American Dietetic Association
ENVIRONMENTAL CONTROL		
Environmental Engineer[2]	Diplomate	American Academy of Environmental Engineers
Sanitarian	"	American Intersociety Academy for Certification of Sanitarians
Health Physicist		American Board of Health Physics
Industrial Hygienist		American Academy of Industrial Hygiene
LIBRARY SERVICES		
Medical Librarian[3]	Certified	Medical Library Association
MEDICAL RECORDS		
Registered Record Librarian	RRL	American Medical Record Association
Accredited Record Technician	ART	"

Table 3. DESIGNATION OF CERTIFICATION OR REGISTRATION OF HEALTH MANPOWER BY NONGOVERNMENT AGENCIES (Continued)

HEALTH FIELD AND OCCUPATION	DESIGNATION	AGENCY
MEDICINE AND OSTEOPATHIC MEDICINE		
Physician	Diplomate	20 primary specialty boards recognized by American Medical Association
Osteopathic Physician	"	12 specialty boards recognized by American Osteopathic Association
OCCUPATIONAL THERAPY		
Registered Occupational Therapist	O.T.R.	American Occupational Therapy Association
Certified Occupational Therapy Assistant[3]	C.O.T.A.	"
OPTOMETRY, OPTICIANRY, AND OTHER OCCULAR SERVICES[4]		
Orthoptist	Certified	American Orthoptic Council
ORTHOTIC AND PROSTHETIC TECHNOLOGY		
Orthotist	Diplomate	American Board of Certification in Orthotics and Prosthetics
Prosthetist	"	"
PHYSICAL THERAPY		
Registered Physical Therapist	P.T.(ARPT)	American Registry of Physical Therapists
RADIOLOGIC TECHNOLOGY		
Registered Radiologic Technologist[5]	R.T.(ARRT) R.T.(ART) R.T.(ART)	American Registry of Radiologic Technologists American Registry of Clinical Radiography Technologists
SECRETARIAL AND OFFICE SERVICES		
Medical Office Assistant	Certified	American Association of Medical Assistants
SOCIAL WORK		
Social Worker[3]	Certified	Academy of Certified Social Workers

Table 3. DESIGNATION OF CERTIFICATION OR REGISTRATION OF HEALTH MANPOWER BY NONGOVERNMENT AGENCIES (Continued)

HEALTH FIELD AND OCCUPATION	DESIGNATION	AGENCY
SPECIALIZED REHABILITATION SERVICES[6]		
Certified Corrective Therapist	C.C.T.	American Board for Certification of Corrective Therapists
Registered Music Therapist[3]	R.M.T.	National Association for Music Therapy
SPEECH PATHOLOGY AND AUDIOLOGY		
Speech Pathologist	Certified	American Speech and Hearing Association
Audiologist	"	"
VETERINARY MEDICINE		
Veterinarian	Diplomate	7 specialty boards recognized by American Veterinary Medical Association
MISCELLANEOUS HEALTH SERVICES		
Registered Inhalation Therapist	A.R.I.T.	American Registry of Inhalation Therapists
Certified Inhalation Therapy Technician	Certified	American Association for Inhalation Therapy Certification Board
Registered Electroencephalographic Technologist	R.EEG T.	American Board of Registration of Electroencephalographic Technologists
Certified Operating Room Technician	C.O.R.T.	Association of Operating Room Technicians Certification Board

[1]Specialty certification as technologists in blood banking, chemistry, microbiology, and nuclear medicine. See also National Registry in Clinical Chemistry and National Registry of Microbiologists.

[2]Four subspecialties: air pollution control, industrial hygiene, radiation and hazard control, and sanitary engineering.

[3]No certifying examination required.

[4]For ophthalmic assistant, the American Registry of Ophthalmic Medical Assistants is more like a professional society than a true registry.

[5]Specialty certification as technologists in diagnostic radiology, nuclear medicine, and radiation therapy.

[6]For recreation therapist, the National Therapeutic Recreation Society maintains a "registry" of persons so employed.

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(16) G. C. Burton, and V. Z. Darham. "Education and/or Licensure in Inhalation Therapy," *Inhalation Therapy,* 15 (October 1970), 143-149.

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(125) Memorandum from William H. Fields, D.M.D., Secretary-Treasurer, Kentucky Board of Dentistry, August 3, 1970.

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(127) Edward H. Forgotson and John L. Cook, "Innovations and Experiments in Uses of Health Manpower -- The Effect of Licensure Laws," *Law and Contemporary Problems,* 32 (Autumn 1967), 737.

(128) Forgotson and Roemer, *op. cit.,* p. 352.

(129) Nathan Hershey, "An Alternative to Mandatory Licensure of Health Professionals," *Hospital Progress,* 50 (March 1969), 73. See also Forgotson and Roemer, *op. cit.,* pp. 352-353.

(130) Hershey, *op. cit.,* p. 72.

(131) Nathan Hershey, "The Inhibiting Effect upon Innovation of the Prevailing Licensure System," *Annals of the New York Academy of Sciences,* 166 (December 1969), 955.

(132) Hershey, "An Alternative to Mandatory Licensure," p. 74.

(133) *Ibid.* See also Ruth Roemer, "Licensing and Regulation of Medical and Medical-related Practitioners in Health Service Teams." *Medical Care,* 9 (January-February 1971), 50-51.

(134) *AMA Report on Licensure,* pp. 4-5.

(135) *Ibid.*

(136) Hershey, "An Alternative to Mandatory Licensing," p. 74.

(137) *AMA Report on Licensure,* p.5.

(138) See Egelston, *op. cit.,* p. 43.

(139) American Hospital Association, AMERIPLAN -- *A Proposal for the Delivery and Financing of Health Services in the United States,* Chicago, 1970, p. 25.

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(141) Sorners, *op. cit.*, pp. 122-123.

(142) William J. Curran, "New Paramedical Personnel -- to License or Not to License?" *New England Journal of Medicine,* 282 (May 7, 1970), 1085-1086.

(143) John S. Lloyd, "The Future of Licensure of Health Professions and Occupations in the State of New Jersey," mimeo., August 1969, p. 1, and Appendix A.

(144) *The President's Health Message,* 1971, p. 9.

(145) National Academy of Sciences, *New Members of the Physician's Health Team: Physician's Assistants,* 1970, pp. 3-4. These definitions are almost identical to those of the Association of American Medical Colleges. See "Report of the AAMC Task Force on Physician's Assistant Programs," mimeo., February, 1970, pp. 2-3.

(146) The following section on attitudes toward physician assistants is based on a report, "The Physician's Assistant," April 13, 1971, prepared by a task force of representatives from the American Academy of Family Physicians, American Academy of Pediatrics, American College of Physicians, and American Society of Internal Medicine for presentation to the American Medical Association.

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(153) U.S. Department of Health, Education, and Welfare, National Institutes of Health, *Selected Training Programs for Physician Support Personnel,* 1971.

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(157) Five other MEDEX programs are currently in operation in North Dakota, New Hampshire, Alabama, California, and Utah.

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(162) "Model Legislation Project for Physician's Assistants, *op. cit.,* p. 23.

(163) *Ibid.,* p. 38.

(164) *Ibid.,* pp. 37-38.

(165) *Ibid.,* p. 41.

(166) Cited in Curran, "New Paramedical Personnel -- to License or Not to License?" *loc. cit.*

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