

The Training of Physician Assistants: Status and Issues

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The idea of having assistants for the physician is not new. The concept of the division of responsibilities and the stratification of functions among the various types of health professionals has been endorsed for many decades—in some instances, for centuries. Today heightened interest and concern about health and medical care in the nation are forcing a reexamination of interpretations of this concept by the medical community and the public. It is too early to seek a consensus about the descriptions and roles of such personnel in the United States. However, there is an identifiable interest in both the medical and the nonmedical sectors of US society. The goal is to develop means to make adequate health care available to more people. One consideration is the rational delegation of the physician's traditional functions to nonphysicians in the delivery of health care. If some of the physician's responsibilities and duties are to be delegated to others, should they be delegated to existing health workers who can be retrained, or should they be assigned to a new type of

health worker with a new job description and a new title? How would either or both of these approaches be affecting the health manpower situation in 20 years?

Few will argue that in the broad interpretation of what is actually done in any system that provides medical care, the efforts of the team member are collaborative; in any setting where a physician functions, all others "on the staff" assist the physician in some manner. However, many physicians, within their office settings, have been highly successful in training persons to perform specific functions previously associated solely with the physician's role. In many instances these assistants exercise some medical judgment. They are in some respects a civilian counterpart to the military corpsmen. It is this form of ancillary assistance, specifically tailored to the physician's pattern of performance, that is seen as a key to relieving the present shortage of physician services. This interpretation of the title "physician's assistant" is the primary focus of this review.

Perhaps the oldest type of phy-

sician's assistant functioning today is the Russian feldsher.^{1,2} A continuation of a profession introduced into Russia in 1700, the feldsher (from the German word meaning *field*) is a member of the cadre of personnel whom the Soviets call "medical workers," lying midway between physicians and auxiliaries. Nurses, midwives, pharmacists, and laboratory technicians belong to the same general group of personnel; the feldsher's status is high relative to others in this group. The feldsher in urban areas works as an assistant to the physician, usually under close supervision by the physician, and generally performs technical duties. The feldsher in rural areas has a primary responsibility for preventive medicine and environmental control, but often serves as a primary-care physician in the feldsher-midwife stations.

The feldsher's training consists of 2½ years of academic and practical work in a "middle-medical school" if he has completed the full 11 years of secondary school, and 3½ years if he has only completed eight years of secondary school. Feldsher training is purposely broad, with considerable basic education, and does not limit the feldsher to a specific type of work after graduation. Continuing education is stressed; many feldshers later en-

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ter the medical institutes and become physicians.

A second well-known example of the physician's assistant is the "assistant medical officer,"³ a medical auxiliary created in several "developing countries." The assistant medical officer is at present the "doctor" to millions of persons throughout the world. His practice at times resembles that of a general practitioner in the Western world. His facilities, although limited, are adequate for his type of practice. He works closely with other auxiliaries in the field, eg, midwives and sanitarians, whom he supervises with varying degrees of competence. In the countries where they are, or were, in practice, they perform a definite service, although it must be reported that they are not always accepted with enthusiasm.

Assistant medical officer students are usually recruited from the indigenous population. Because of the disparity in educational backgrounds of students, the early phases of training are devoted to bringing students up to standard. This early training can require from one to three years in some countries. Beyond that, a full year of the basic medical sciences is offered, followed by two or three years in intensive clinical training. Those schools requiring a third year provide training in the more essential specialties. Most schools have some sort of internship following graduation. It varies from three months to a full year.

Movement in the United States

In the June 10, 1961, issue of THE JOURNAL (Vol 176, No. 10), Charles L. Hudson, MD,⁴ a member of the American Medical Association's Council on Medical Service, stated:

The subject of this paper is a suggestion to create one or two new groups of assistants to doctors from nonmedical, nonnursing personnel. The discussion

is arbitrarily limited to this particular solution to the problem of shortage of medical-professional personnel in the hospital, although no preference for this method is implied. The purpose is not to offer a final solution so much as to be speculative, exploratory, and hopefully provocative of studies which will lead to a solution.

Dr. Hudson proposed the development of two new types of medical assistants:

(1) An advanced technician, to evolve from existing technical health workers whose skills could be upgraded to extend their usefulness to medical and surgical in-patients, to the operating suite, and to the emergency room. This assistant would not be expected to exercise medical judgment, but might well develop considerable technical skill.

(2) An advanced medical assistant with special training, intermediate between that of the technician and that of the doctor, who could not only handle many technical procedures but could also take some degree of medical responsibility. [Dr. Hudson used the term "externe" to identify this type of assistant.]

Since the publication of that article, a variety of proposals have been made and a number of informal and some formal methods have been used to train health workers to perform certain functions which were formerly performed only by physicians. These methods have been tried in physicians' offices, clinics, group practices, hospitals, and other health agencies. They have ranged from preparation for performance of technical procedures to the more general functions of the physician, including the medical interview and the conduct of the screening physician examination.

Information about 20 programs in the United States which might fall within the broadly defined category of "physician assistant" was available for this review. None of these programs can be described in terms other than "experimental" or "developmental." At present there

are no generally acceptable standards and accreditation for such training programs. The programs in development are highly individualistic, each responsive to the physician's needs for assistance as perceived by the staff of each sponsoring institution.

Summary of Current Programs

The 20 programs under way are at 14 locations in 11 states. About one half of them are currently training students, ie, are "operational." However, one is "conditionally operational," pending funds for continuation, and four are only a few weeks to a few months old. The educational settings vary widely and include medical schools and medical centers, public and private hospitals, clinics, two-year and four-year colleges.

Trainees.—Requirements for admission to the "operational" programs are varied. More than half, however, require previous experience in the health field. Nurses and medical corpsmen are identified more often than others as trainees.

Training.—The period of training among the "operational" programs varies from about 14 weeks to 5 years. Generally, those that require the shorter training time are designed to extend the knowledge and skills of health personnel already qualified in a health occupational area, eg, nurses and medical corpsmen.

Awards.—Among the "operational" programs, five of the sponsoring institutions award certificates, two award the baccalaureate, one awards the associate degree, and two offer no award after training is completed.

Functions After Training.—On completion of training, students currently enrolled in the ten "operational" programs will be prepared to assist practicing physicians in general, pediatric, and

Programs in Development

Title of Program	Institution	Stage of Development
Physician's Assistant	Foothill College 12345 El Monte Rd Los Altos Hills, Calif	Planning
The Orthopedic Assistant	City College of San Francisco 50 Phelan Ave San Francisco	Operational
Child Health (Pediatric) Associate	University of Colorado School of Medicine 4200 E Ninth Ave Denver	Operational
Pediatric Nurse-Practitioner Program	University of Colorado School of Medicine 4200 E Ninth Ave Denver	Operational
A Study of Anesthesiology Manpower Problems for the Development of New Types of Allied Health Personnel	Emory University School of Medicine Atlanta	Research phase
The Clinical Associate	Albert B. Chandler Medical Center School of Allied Health Professions University of Kentucky Lexington, Ky	Planning
The Nurse Physician Associate	Albert Einstein College of Medicine 1300 Morris Park Ave Bronx, NY	Operational
The Triage or Screening Professional	Albert Einstein College of Medicine 1300 Morris Park Ave Bronx, NY	Planning
The Patient-Care Expeditor	Albert Einstein College of Medicine 1300 Morris Park Ave Bronx, NY	Planning
Purser-Pharmacist Mate Course	Purser-Pharmacist Mate School Public Health Service Hospital Staten Island, NY	Operational
Orthopedic Assistant	US Public Health Service Hospital Staten Island, NY	Planning
Social Worker Aide	US Public Health Service Hospital Staten Island, NY	Planning
The Physician's Assistant Program	Duke University Medical Center Durham, NC	Operational
Physician Assistant Training Program	Bowman Gray School of Medicine Wake Forest University Division of Allied Health Programs Winston-Salem, NC	Operational
The Corpsman	Cleveland Clinic Hospital 2050 E 93rd St Cleveland	Operational
The Clinical Associate	University of Texas Medical Branch School of Medicine Galveston, Tex	Operational
"Medex"	Department of Preventive Medicine School of Medicine University of Washington Seattle	Operational
Physician's Assistant Program	Alderson-Broaddus College and Broaddus Hospital Philippi, WVA	Operational
The Physician Assistant-Surgical	Marshfield Clinic Marshfield, Wis	Operational
The Physician Assistant: (with competencies in diabetes, oncology, gastroenterology, pediatrics, ophthalmology, neurosurgery, and general surgery)	Marshfield Clinic Marshfield, Wis	Planning

orthopedic practices, and to serve as specialists in emergency medical care and as surgical technician specialists. Programs in the planning stage are aimed at preparing "assistants" to the anesthesiologist, internist, orthopedist, and pediatrician; one program is planning to prepare "physician assistants" to have special competencies in diabetes, oncology, gastroenterology, pediatrics, ophthalmology, neurosurgery, general surgery; others are focusing on preparation of special assistants for clinics, emergency rooms, and other health center admission offices to provide traffic control services and to help patients and their families make the necessary and most appropriate contacts to meet their needs for care and services.

Graduates.—Based on informal reports, five programs have graduated a total of about 160 students since the programs began. Of those students, about 90 were graduated from the Purser-Pharmacist Mate School, Public Health Service Hospital, Staten Island, New York. Of the five other "operational" programs, four have not yet graduated any students and information is not available for one.

Considerations for Program Development

Observations of current programs, their problems, and the issues associated with the development of "physician assistants" in general indicate that no appreciable number of this new type of health worker can be trained in a short time. Careful consideration of the issues is needed now to ensure the development of training programs that will be responsive to the long-range manpower needs for assistants to physicians.

Issues

1. Determination of duties, functions, and responsibilities which

for physician assistant programs are the following:

a. *Discharged medical corpsmen from the Armed Forces.*—Those discharged corpsmen who have had both training for and experience in independent duty are a valuable pool. Independent duty consists of assignment on small naval craft or on military stations which do not warrant the immediate presence of a physician. Ex-military corpsmen, other than those trained for independent duty, are also a reservoir for candidates as physician assistants.

Duke University, which has for the past three years conducted a program for training of "physician assistants," received 500 applications in one year from military corpsmen (not necessarily independent duty corpsmen) for ten student places. Yet, an effort in Pennsylvania to recruit military service discharges who had health-related occupations during their service or who were trained as health workers, produced 17 placements out of 1,337 contacts with discharges. On the basis of these experiences, ex-military corpsmen could serve as recruits for these programs, but attention should be directed to, among other things, recruiting practices, number of discharges, employment interests, and unique training needs of the services.

b. *Registered nurses.*—By virtue of their educational backgrounds, registered nurses could be trained to engage in specialized programs as physician assistants. However, in view of the present demand for nursing services this potential resource must be carefully evaluated.

c. *Students in allied and other health professions.*—With the expansion of allied health programs, many common courses are taken by all students in the health professions. The core curriculum concept,

now receiving considerable attention, would allow students to change their occupational goals during the time of training, without any great loss of credits.

7. *Relationship to costs of medical care.*—Since the time and costs for the education and training of physician assistants are considerably less than those for the training of physicians, it is presumed that the use of physician assistants will lower the cost of medical care. However, no known studies of cost-benefit analysis in medicine exist that can support this presumption. Studies in the field of dentistry firmly support the use of dental assistants, hygienists, and laboratory technicians in enabling the dentist to be more productive. Physician assistants have already established an organization, and, like other workers, it is assumed that they will become concerned with salaries and related benefits. Questions of economics related to the establishment of new occupational categories need to be considered.

8. *Professional and consumer acceptability.*—The development of physician assistants will need acceptance by physicians themselves. This acceptance will require a variety of educational efforts directed to medical students, interns, residents, and physicians in practice. Dental students who work with dental assistants and dental hygienists provide an example of a pattern that may be emulated in preparing professionals to work with assistants.

The consumer may show resistance to the use of physician assistants for many reasons, the most important perhaps being a concern about receiving care of inferior quality. The quality of care rendered when physician assistants are involved must be studied, and educational efforts will have to be exerted to attain consumer acceptance.

9. *Legal implications.*—The legal implications regarding physician assistants are complex. Of significant concern are physician liability and malpractice. The physician assistant himself may be subject to lawsuit, particularly if he is licensed. Some studies of the legal issues have been made in West Virginia and Colorado. This question needs further study, and model legislation should be developed and implemented in each state.

Suggested Sequence for Program Development

Sufficient experience and exchanges of current thinking have occurred in this field to suggest a logical sequence for the development of program elements. Critics of the early programs pointed to the relatively unplanned and unstructured approach and the illogical sequence of efforts displayed when the curriculum content and training methods were designed before the specific role and functions that the trainee would assume as a physician's assistant were carefully determined. Within the past year, general agreement has emerged that this sequence for the evolution of a program is proper:

1. Operations research/task analysis
2. Classification of levels of professional knowledge and technical skill required
3. Development of training requirements and curricula
4. Development of faculty and training facilities
5. Criteria for selection of trainees
6. Pilot training phase (feasibility)
7. Evaluation and critique
8. Modification

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