
A NEW HEALTH PROFESSIONAL.. THE ORTHOPEDIC ASSISTANT

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The crisis in health care is an accepted fact. Dr. Dwight L. Wilbur, as president-elect of the American Medical Associa-

tion in 1968, said that the signs of the crisis included "long delays to see a physician for routine care; lengthy periods spent in the well-named 'waiting room,' then hurried and sometimes impersonal attention in a limited appointment time; difficulty in obtaining care on nights and weekends except through hospital emergency rooms; unavailability of beds in one hospital while some beds are empty in another; reduction of hospital services because of a lack of nurses; needless duplication of certain sophisticated services in the same community; uneven distribution of care, as indicated by the health statistics of the rural poor, urban ghetto dwellers, migrant workers, and other minority groups, which occasionally resemble the health statistics of a developing country; obsolete hospitals in our major cities; costs rising sharply from levels that already prohibit care for some and

create major financial burdens for many more"(1).

Wilbur's description graphically points up the many facets of the health care crisis. One facet can be identified as a gradually increasing population with rising social expectations who seek, nay demand, more and better health care. A second facet may be identified as the mercurial growth of biomedical knowledge, skills, techniques, and devices coupled with its relatively slow communication to the majority of the medical profession and its even still slower application to patients. A third factor may be identified as spiraling costs involving expanded and improved services, increased wages and salaries for health personnel, and what some hospital administrators refer to as the long tradition of underfinancing for services rendered to the indigent.

A fourth, and possibly most significant factor, is the acute



Demonstration of cast removal technique on a patient wearing a long leg cast (Photo by Ken Donohue, staff photographer, Staten Island Public Health Service Hospital)

shortage of health manpower. "There exists today a critical need for health manpower—the right numbers and kinds of people in the right places. Our needs for all kinds of health workers—professional and nonprofessional—exceed supply and present educational capacity"(2).

A survey by the Public Health Service and the American Hospital Association in 1966 revealed a shortage of more than 257,000 professional and technical workers (3). The survey also indicated that, assuming a 28 percent increase in the number of hospital beds by 1975, the number of workers required for optimal care would have to increase to approximately 700,000 more than those employed in 1966.

The increase in numbers would include approximately

200,000 more registered nurses, about 95,000 more licensed practical nurses, 10,000 additional surgical technicians, 7,000 more pharmacists, about 35,000 more therapists, 40,000 more medical technicians for various diagnostic services, 10,000 additional medical records librarians and technicians, and 14,000 more radiology assistants.

Despite the increased number of medical schools, nursing schools, and all other types of allied health training programs, the number of graduates still cannot fulfill the demands. At a time of increased programs, enrollees, and graduates, the question has been raised as to whether these increased numbers of allied health workers could alleviate the health care crisis. "In terms of numbers of

individuals in health occupations, the health labor force has grown from 1.2 percent of the total labor force in 1900 to a projected 4.3 percent in 1975"(4). During the decade ending in 1960, the number of health workers increased at a rate twice that of the population increase (4).

During the decade ending in 1970 the rate of increase in health workers was even greater (5). Moreover, the health occupations have grown in scope and diversity. "Numerous changes have taken place in health occupations . . . many jobs have changed in content, and new jobs have come into being as a result of scientific, technological, and other improvements and discoveries" (6). Why has the crisis continued?

The major part of the problem is that there are too few physicians—the primary care agent—to render care. "He is the agent of first contact who provides entry into the health system and serves as the primary medical resource and counselor to an individual or family in all their health needs. It is his responsibility to refer his patient when necessary and to followup on the recommended care" (7). Considering the cost and length of training of physicians, as well as the limited numbers the medical schools can graduate, there seems no foreseeable solution to either the number or maldistribution of physicians.

"The predictable increase in

population and removal of social and economic barriers to health care will cause rising demands for health services that will surpass any foreseeable gain in physician manpower. For example, to maintain the current physician-patient ratio for the increasing population of children, roughly one half of the graduates of all existing medical schools would need to enter pediatrics or general practice during the next decade to keep pace. This will certainly not occur, and similar arguments apply to care for the elderly and the poor" (8).

Not only the shortage but the maldistribution of physicians has been well documented. Physicians seem to congregate in big cities and their suburbs contiguous to university medical centers. This leaves the nation's rural areas severely lacking in physicians. As Wilbur has noted, the inner core neighborhoods of these same big cities have few physicians.

It is mainly for these reasons and in this milieu that the concept of the need for a new type of health professional has taken place. Medical educators and public health experts have expounded that the M.D. degree was unessential for many of the routine or basic health care tasks rendered to patients. However, the idea was really not new—merely its formalization. Not only had the idea been adopted in other countries; for example, the *feldsher* in Russia, the medical assist-

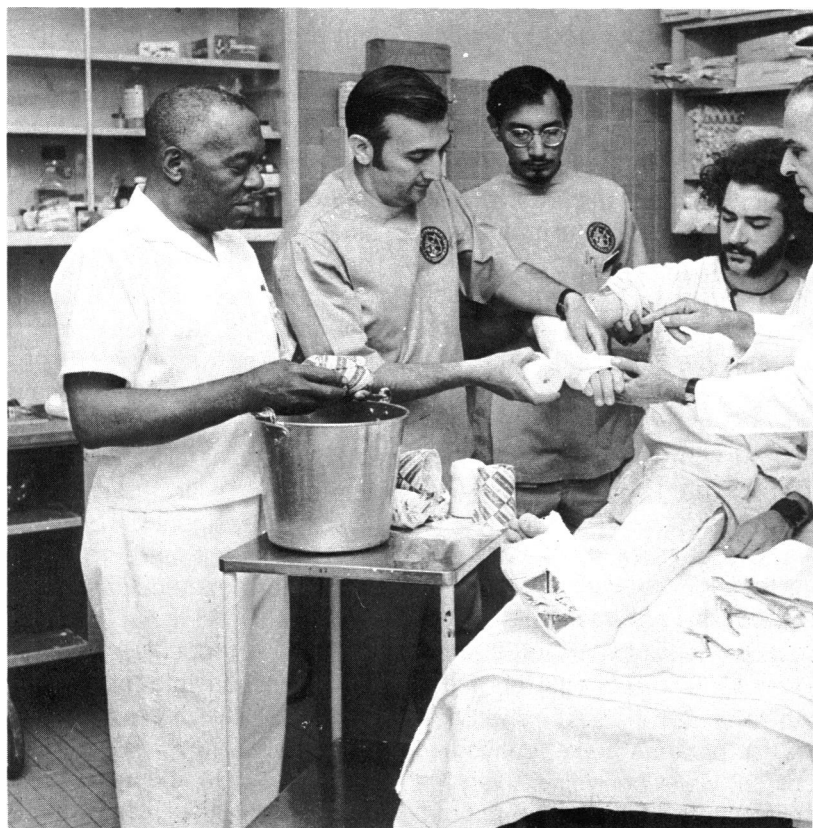
ant in Algeria, health assistant in Burma, and *auxiliares de enfermeria* in Venezuela, but was actually being practiced in the United States in the form of public health nurses, midwives, surgical technicians, and military medical and dental corpsmen.

Early proposals to educate and train the new health professional—ultimately named "physicians' assistant"—included some form of abbreviated medical training based on the needs of general practice. Others included more specific training for specialty practice. "Dr. Harvey Scutter, former chief of the Health Manpower Section of the Public Health Service Division of Community Health Services, believed that more mileage could be realized from use of assistants whose duties do not encompass the

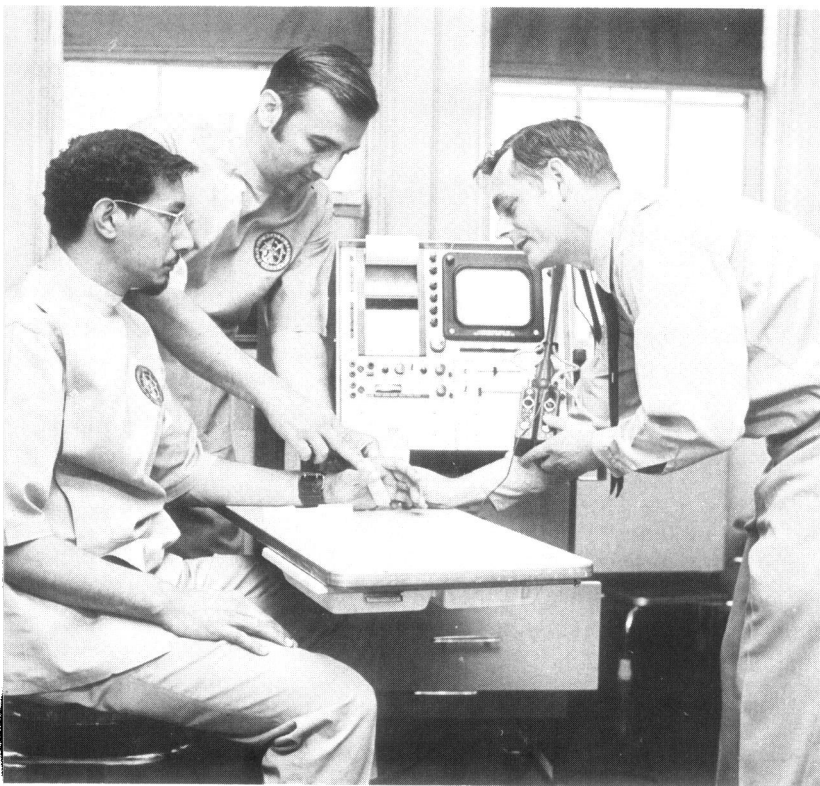
broad scope of medicine" (9).

In 1962 the American Academy of Orthopaedic Surgeons charged its executive committee with determining the feasibility of developing a new category of health professional to assist the orthopedic surgeon in patient care. The first order of business was to determine the status of the practice of orthopedics.

Using health statistics reported in surveys by the American Hospital Association and the Public Health Service, the academy reported that 8 percent of the infirm population had orthopedic abnormalities and that 10 percent of the beds in short-term hospitals were used by patients with motor-skeletal problems, whereas only 3 percent of all physicians were orthopedists (10). The academy also reported that of



Students help apply long arm cast on patient with bone graft for nonunion fracture of the humerus (Photo by Ken Donohue, staff photographer, Staten Island Public Health Service Hospital)



Physical therapist demonstrates proper method for recording an electro-myogram (Photo by Ken Donohue, staff photographer, Staten Island Public Health Service Hospital)

hospital, clinic, or private office" (11). In detailing the tasks within the purview of the orthopedic assistant, the academy listed cast and traction application, application of orthotics and prosthetics, serving as surgical technician and assistant in the operating room, and assisting patients in walking with crutches and simple exercises.

The next task was to implement the concept. A pilot training program was initiated in 1969 at the Presbyterian Medical Center in San Francisco. In conjunction with San Francisco Junior College, the pilot program developed a job description, task analysis, and curriculum pattern and has graduated 15 persons. As a result of this program the academy voted to continue training orthopedic assistants, to establish standards for training, to participate with the American Medical Association in accreditation of programs, and to support the development of a national registry for certification.

The primary purpose of the Workshop on the Orthopaedic Assistant held by the academy in May 1969 was to implement the development of additional training programs. It was fairly well established that the training and education of this new health professional should be a joint college-hospital effort. "The junior college is necessary for academic and laboratory aspects of the training program" (10a). However, since the orthopedic assistant program is considered a clinical

the 8,000 orthopedists currently in practice, 1,500 would die or retire by 1980, leaving 6,500 still in practice.

Residency programs throughout the country produce about 400-450 orthopedists per year which could result in a total of about 11,000 orthopedists. Having previously estimated that because of the increased demand more than 13,000 orthopedists would be needed by 1980, the total number expected to be in practice as compared with the number needed represented a deficit of 3,000 orthopedists (10).

The increased demand for orthopedic services was predicated on the fact that about 1.8 percent of the total population visits orthopedic surgeons in any given year and that these patients make an average of 3.2 visits per year. Given the estimated increase in popula-

tion, "it is estimated that the average use rate of 1.8 percent will probably rise to 2.5 percent in 10 years," according to a letter of May 29, 1969, from N. J. Galluzzi, director, U.S. Public Health Service Hospital, Staten Island, N.Y., to Prof. James L. G. Fitzpatrick, Staten Island Community College. It was the academy's position, therefore, "that there was a need for the development of a new category of Allied Health personnel to assist the orthopedic surgeon" (10a). This new type of health professional was given the designation of orthopedic assistant and, more recently, orthopedic physician's assistant.

"The orthopedic assistant will be responsible to and work under the direction of the orthopedic surgeon. The assistant will aid in the care of orthopedic surgical cases in the

discipline, the training program must be under competent medical direction.

In establishing the program at the Public Health Service Hospital at Staten Island, Vaso M. Purlia, M.D., chief, orthopedics, was named clinical director. Purlia and his corps of orthopedic surgeons will be responsible for the instruction and supervision of the 800 hours of clinical practice. It is in this clinical setting that the students will develop skills and techniques.

The hospital has a mock cast room for the initial demonstration of and practicing application of casts and their removal. Other clinical experiences will be acquired in the operating room, emergency room, physical therapy department, and the orthopedic ward.

James H. Hensley, director of training for the Staten Island Public Health Service Hospital, is overall director of the orthopedic assistant program, while Prof. Norma B. Chernok, of the Staten Island Community College of the City University of New York, will direct the 50-hour academic portion. At the completion of the 2-year program, the college will award the associate in applied science degree. The degree is in addition to the certificate to be awarded by the hospital.

The program is an offshoot of the marine physician assistant training program at the hospital which has produced 140 physicians' assistants since its inception in 1966. This number represents more than half of the physicians' assistants to complete recognized training under various programs in the United States.

The orthopedic assistant program at the Staten Island hospital is scheduled to begin in September 1971 with 33 students. Seventy percent of the initial class will be ex-service corpsmen with the remainder underemployed, disadvantaged persons from the community. It is anticipated that additional new students will enter the program each year. This will be the fourth such recognized program to begin training orthopedic assistants. Other programs are located at Kirkwood Community College in Cedar Rapids, Iowa, San Francisco City College in San Francisco

Calif., and Foothill College in Los Altos, Calif. Thus far some 40 students have completed these programs for physician assistants.

This program is aimed directly at alleviating the health manpower shortage so manifest in the United States. The use of assistants in orthopedic practice will increase the number of patients who can be treated. Past studies "point up the fact that physicians with assistants can see more patients each day—and spend 40 percent less time per patient—than doctors who manage without assistants" (12).

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