Origins of the physician assistant movement in the United States

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The establishment of the physician assistant (PA) profession in the 1960s was a remarkable occurrence in American medicine: a voluntary sharing of privileges by one type of medical professional with another. In the 1960s, both the PA and the nurse practitioner (NP) were introduced, along with the revitalization of the nurse midwife. This represents a major transformation in American medical practice.

PREPARING THE GROUND

Paul Starr famously characterized medicine in the 20th century as a “sovereign profession.” Starr chronicled how in the late 19th to mid-20th centuries, US hospitals assumed greater size and prestige; their close association with the doctor grew proportionally. Linkages between physicians, hospitals, and medical education strengthened physicians’ power over health affairs. By the middle of the 20th century, doctors had cultural prominence, professional independence, and political influence over the health system.

The American Medical Association (AMA) protected the interests of physicians—their income and security as well as their professional stature. As such, the AMA was a dominant player in many critical decisions affecting health care. In the middle of the 20th century, allopathic physicians embraced discoveries in microbiology, surgery, and diagnostic imaging. The US public perceived that physicians controlled access to those exciting technologies. Medicine also grew more specialized.

ABSTRACT

The 1960s saw a rethinking of health care delivery in the United States. The physician assistant (PA) emerged from that reconceptualization, along with the nurse midwife (CNM) and the nurse practitioner (NP). The PA, CNM, and NP were the product of demand for greater health care access, especially for the nation’s poorer citizens. All three groups benefited from federal activism in health workforce policy. The PA had one characteristic not shared with the new nursing professionals: a connection in the public’s mind with returning Vietnam War veterans.

Several energetic trailblazers—notably Eugene Stead, Richard Smith, E. Harvey Estes, and Henry Silver—conceived and promoted their particular versions of the PA. The boosters of this new health professions movement worked through existing medical education programs and federal health care initiatives. Their efforts, sometimes informed by models of nonphysician health care abroad, received critical support from private philanthropy. Then, in 1969, the American Medical Association (AMA) rather unexpectedly gave its official approval to the concept of the PA.

As optimistic as the originators of the PA movement were, even they did not anticipate the critical role PAs would play in health care delivery well into the new century. US physician assistants also continue to influence medical providers in other areas of the world.

This paper re-examines the history of the physician assistant movement at the 50th anniversary of the concept. The authors use archival sources, policy analyses, interviews with principal figures, and secondary historical literature to explain the establishment of the PA movement in the 1960s and analyze its continuing influence.
No longer was it typical for urban physicians to assess the condition of patients, hospitalize them, provide anesthesia, and perform surgery; rather, each of those functions was within the purview of a specially trained medical expert.

Given the rise in the population of the United States in the late 1940s to mid-1950s, medical specialization led to another key development among US physicians—a shortage of general practitioners. By 1949, the number of full-time specialists had risen to 62,688 (almost doubling the number of specialists that existed in 1940), while the number of general practitioners and part-time specialists had dropped by nearly 10,000 from the 1940 level of 120,090.4 The self-shunting of physicians into specialties meant that access to general medical doctors was decreasing.5

One hope for encouraging general practice rested with legislative measures such as the Wagner-Murray-Dingell Bill of 1943. That proposal would have instituted a federal system of compulsory health insurance in the United States along the lines of Great Britain’s national health insurance scheme.6 Rather than pursuing such a course, the federal government instead adopted payment policies that rewarded medical specialist services at higher rates than generalist services. Medical care based in hospitals was especially privileged.

During the 1950s, the AMA insisted that the supply of physicians was adequate. From outside the medical community, however, came pressure to rectify a perceived shortage of primary care health providers. In 1953, the President’s Commission on the Health Needs of the Nation predicted a physician shortage of 59,000 by 1960. Influential studies such as the Bayne-Jones Report of 1958, the Bane Report of 1959, and the Millis Commission report of 1963 expressed concern about a physician shortage and recommended the establishment of new medical schools.7 In 1964, the AMA Committee on Medical Education recommended that a new specialty in family practice be established to address the shortage of primary care providers.8 Such concerns about a lack of doctors, especially in the general medical care setting, continued into the 1970s.9 These issues persist into the present decade.

THE BEGINNINGS OF THE PA PROFESSION

Some who sought to address the shortage of physicians envisioned a “physician extender” who would perform medical tasks that had previously been reserved only for physicians. Such an adjunct was intended to expand the capabilities of doctors in the delivery of primary care, particularly to medically underserved populations.10

One of the earliest suggestions to create this type of medical provider came in 1961 from Charles Hudson, then president of the National Board of Medical Examiners. Hudson put forth the notion of “externs” for physicians. The rationale for a new type of health care provider was grounded in changing hospital staffing demands and innovations in technology. Hudson planned for the extern to be directly responsible to a physician. He expected that nursing professionals would resist the creation of such a physician adjunct. While Hudson contended that the “goals of nursing would be redefined as part nursing and part medicine,” he predicted that nurse leaders would frown on “the proposal of a medicine-nursing hybrid.”11

It was Dr. Eugene A. Stead, Jr., Chairman of Medicine at Duke University, who transformed Hudson’s prophecy into reality by developing the first training program for persons who would assist physicians as medical providers. Stead had long been interested in breaking down barriers in medical education. While at Emory University, he worked with third- and fourth-year medical students as hospital staff at a time when the intern staff went from 15 to zero, a result in part of the WWII draft being extended to doctors in training. In spite of their limited training, these medical students gave “supurb medical care.”12 Stead envisioned a clinician who could be trained in a relatively short time to assist physicians in a broad range of practice settings.

Stead attempted to train nurses to function in the role of assistants to physicians. Thelma Ingles, a nursing leader at Duke who was interested in an advanced medical role for nurses, approached him. Ingles and Stead experimented with training approaches to expand the nursing role in generalist medical care delivery because Stead had great respect for nursing experience in patient care. After creating a prototype advanced medical training program for nurses at Duke, he concluded that nurses “…were very intelligent and they learned quickly, and at the end of a year we had produced a superb product, capable of doing more than any nurse I had ever met.”13

This program could have initiated the nurse practitioner movement.14 The National League of Nursing, however, refused to accredit the proposal on three occasions, with the judgment that delegating medical tasks to nurses was

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7 Stevens, p. 364.


inappropriate. In 1964, Stead, frustrated with his experience based on the model of the nurse, formulated a plan for the establishment of a program to train assistants to physicians. Increasingly, Stead and others employed the term physician assistant to describe the novel health care worker they envisioned.

The members of an ad hoc committee that Stead charged with developing a proposal for assistants were physician researchers who had worked with Navy hospital corpsmen in the course of their training at the National Institutes of Health and Bethesda Naval Hospital. Stead, the committee, and others wondered if corpsmen could serve as adjuncts to doctors. Holt contends that Stead considered Vietnam veterans to be ideal candidates to assist physicians because they had experience with “conflict and controversy.”

Richard Smith, who played a pivotal role in promoting the same concept through the MEDEX program, recalls reasoning why former military corpsmen and medics were considered ideal for these initiatives: “America could not slam the door on the corpsman”—a reference to their hero status and performance in the Vietnam war, which made them above reproach even if the PA concept was controversial.

Several ex-military personnel were working at Duke in hyperbaric medicine research. One of Stead’s assistants, James Mau, a former Navy fighter pilot, recalled that newly discharged corpsmen often had extensive battlefield medical experience. Some possessed advanced skills in care of acute injuries, laboratory medicine, x-ray capability, suturing, fracture stabilization, and ventilation therapy.

The roughly 6,000 returning medically trained veterans per year in the early 1970s were an ideal substrate for the health workforce experiments of Stead, Smith, Silver, and others. In the 1960s and 1970s, the corpsman/medic was associated with the PA in the minds of the public. Indeed this was the focus of an AMA promotion of the physician assistant concept. Historian and archivist Reginald Carter points out that an AMA advertisement in Life magazine’s July 30, 1971 issue depicted a young African American veteran washing windshields (Figure 1). The advertisement proposed that his training as a medic would be better utilized as a PA.

As the PA program began at Duke and the MEDEX program at the University of Washington caught on, the war in Vietnam produced a large pool of militarily trained medical personnel. That supply shrank as US involvement in the Vietnam War wound down in the early 1970s. By 1978, 42% of the 4,500 PAs in practice were ex-military medical corps members. In that same year, however, 51% of PAs had backgrounds as medical technicians or technologists rather than in military service. And despite the tendency to see PAs as male in the 1960s and 1970s, nearly one-quarter of PAs were nurses in 1978—and at the time, nursing was an overwhelmingly female profession.

THE DUKE PROGRAM

In 1965, Duke University inaugurated the first formal PA program, consisting of a curriculum based on the traditional medical education model of training but shorter. This plan of study was devised and implemented by Drs. Stead and E. Harvey Estes. The goal of the 2-year program was to “expose the student to the biology of humans and to learn how doctors rendered services.” On graduation, PAs had learned to perform many tasks previously performed only by licensed doctors and could serve a useful role in many types of practices.

The Duke prototype expanded rapidly. In 1969, Stead retired from active professional duties. Under Estes’ leadership, the Duke program increased its number of students, physical facilities, and scholarship, and it accepted women. The Duke program provided the curricular model for new programs at other institutions.
The audacity of this new program attracted immediate attention far beyond its size. Yet, if the idea of a PA movement was a gleam in the eye of its creators, its success also rested squarely on the shoulders of its first students. The first PA students recalled thinking that if any of them did poorly, it could be the early demise of the movement. Victor Germino, a graduate of the first class, had a background as a surgical technician and a corpsman. He practiced in the hyperbaric unit at Duke for 5 years. Afterward, he spent 3 years as a PA working in occupational medicine on the Alaska pipeline.

The Alaska pipeline project contributed to the acceptance of PAs among the public. During the mid-to late 1970s, more than 200 PAs accepted pipeline positions. The jobs were based in Fairbanks, Alaska, but the practices were located hundreds of miles distant, from north near Prudhoe Bay to south at Port Valdez. In such a setting, the PA was the only medical provider. Although the conditions were rugged, the pay was very good. More importantly, these PAs seemed to thrive under circumstances of little to no direct physician supervision and endeared themselves to a whole generation of laborers. Many PAs traveled to Alaska to serve 6- to 9-month stints, returned to the contiguous 48 states for a time, and then engaged for another period of remote practice.

**SMITH AND THE MEDEX PROGRAM**

Richard A. “Dick” Smith ranks alongside Stead, Estes, and Silver as a pioneer in the PA movement. The MEDEX program, started by Smith at the University of Washington, was an innovative approach to health professions education. A strong sense of social purpose guided Smith’s vision of medical education. His interest in medicine was stimulated in 1951 during a college summer work camp in Cuba in the cane fields, where he observed a nurse running a rural clinic. He decided that much like this nurse, he wanted to become a medical missionary and train people to provide basic health services in underserved areas.

Smith attended medical school at Howard University and completed a residency in public health and preventive medicine at the University of Washington. In 1960, he asked his church mission board to send him overseas as a trainer of church mission boards to send him overseas as a trainer of new health care providers. Undaunted when the request was declined, he turned to public health.

When Smith joined the US Public Health Service, he was assigned to the Indian Health Service in Arizona in the early 1960s. This was followed by 2 years in the Peace Corps in Nigeria. Some of his ideas were revised as a result of visiting medical missionary Albert Schweitzer at Lambaréné Hospital in Gabon, West Africa. Upon returning to the United States, Smith worked in the Surgeon General’s office from 1965 to 1968 as the Director of the Office of Planning for International Health (and representing the United States in the World Health Organization). While in the Surgeon General’s office, Smith, an African American, was assigned to lead the effort to desegregate hospitals in the South. This exposure to rural and medically underserved populations also shaped his ideas of expanding physician labor.

In the 1960s, Smith became acquainted with Dr. Amos Johnson from Garland, NC. Johnson employed an assistant, Buddy Treadwell, who figured prominently in the development of the PA profession. Stead specifically cited Treadwell’s ability to take care of routine medical and surgical tasks with minimum supervision and to keep the practice open while Johnson attended medical seminars and meetings as reasons for training a “new type of clinical support personnel for physicians.” Without Treadwell, Johnson would not have been in a position to lead the American Academy of General Practitioners during watershed moments or to champion the establishment of family medicine as a specialty. Johnson also introduced Dick Smith to the leadership in the AMA.

Smith created the MEDEX concept (a contraction of the words MEdicine and EXtension). It was a collaborative model of health care development that actively involved health professions schools, local and national medical organizations, rural and urban communities, and overworked practicing doctors. MEDEX aimed to deploy clinicians to rural and remote areas. Smith wanted MEDEX to be more than a demonstration project that was underwritten by the federal government and then forgotten a few years later. He had earned his master’s in public health at the University of Washington and relocated there after leaving the Surgeon General’s office, trusting that his familiarity with local medicine and politics would be an advantage.

In 1968, the MEDEX Demonstration Project was jointly sponsored by the University of Washington and the Washington State Medical Association and funded by the National Center for Health Services Research. One year later, the first MEDEX class of 15 former military medical veterans began their training; they graduated in 1970 (Figure 2). Initially, the program was 1 year long and consisted of 3 months of intensive didactic work in basic and clinical sciences at the university medical center, followed...

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The term physician assistant, however, with its different connotations, prevailed—perhaps because “feldshermism” was too closely associated with leftist regimes or because physician assistant resonated with physicians.

**PHYSICIAN SUPPORT FOR THE PA CONCEPT**

The PA concept may not have germinated and become successful had it not received the overt support of major physician groups. The notion that physicians were able to directly control the activities of the newly created physician assistant was to a large degree responsible for their acceptance. The AMA contributed substantially by confirming legitimacy along with acceptance of the concept and played a strong role in the establishment of standards for PA educational program accreditation. The earliest correspondence with the AMA related to the physician assistant involved Stead and Estes, who convinced organized medicine that PAs would provide benefit to physicians.

A critical event in the survival of the PA concept was the endorsement given by the AMA in 1969. Stead and several of his colleagues introduced a resolution in the AMA House of Delegates to encourage state medical boards to amend medical practice acts to sanction PA practice. Support for the development of the PA profession also came from the American College of Surgeons, the American Academy of Family Physicians, the American Academy of Pediatrics, and other medical groups. Such organizations were involved in the formation of two critical systems that were vital parts of the young profession: PA program accreditation and the national certifying examination.

In 1971, the AMA assumed a major role in establishing the program accreditation structure through its Subcommittee of the Council on Medical Education’s Advisory Committee on Education for Allied Health Professions and Services. The Joint Review Committee (JRC) of the AMA was the organization that developed the *Essentials of an Accredited Educational Program for the Assistant to the Primary Care Physician*, the accreditation standards document. The JRC also conducted on-site evaluation visits to programs seeking accreditation status. A similar structure of substantial physician organization involvement was seen in the development of the certifying examination and the certification agency.

Holt contends that the major health professions groups—the AMA and the ANA—played a relatively small role in the earliest conceptual days of the PA profession, from 1961 through 1965. She notes, however, that there was a good deal of debate about the PA—particularly within the

28. Smith, op. cit.
29. Besides 20th century models abroad, some historical examples of physician assistants existed. The officer de santé and the lobbist boys were medical assistants in 19th century France and England, respectively.
32. Stead and Estes correspondence. AMA. Duke University archives.
34. Holt, p. 252.
ANA, which denounced the creation of the PA primarily because it was proposed by medicine. Yet once the PA initiative began at Duke, the University of Washington, and the University of Colorado, with the resultant spread to other educational institutions, the need to involve and gain approval from the AMA was key.

CONCLUSION
The physician assistant movement in the United States came about in the 1960s because of a convergence of circumstances: increased specialization of doctors, the demise of the general practitioner, advancing technology, returning veterans with medical training, the war on poverty and other federal policies, and charismatic leaders who understood the processes of education and apprenticeship. Some lay people accepted the PA concept because doctors sanctioned it; other members of the public found that PAs improved access to care in rural and isolated locales or in underserved urban areas. Many doctors seemed comfortable with the idea because PAs were trained in the medical model and because the AMA had offered its stamp of approval.

Had the physician assistant movement been launched in the 1950s, there may not have been adequate support on any front. Nor would there have been such effective prototypes as the corpsman. Considerably more resistance to the efforts of African American medical leaders such as Richard Smith would have been seen during the 1950s than occurred just after the passage of the Civil Rights Act of 1964.36 Had impetus for development of the PA begun in the 1970s, the family physician and nurse practitioner movements might have eclipsed the PA.

In the 1960s, the fledgling PA profession took on tasks from the once sovereign domain of medicine.37 The empowerment of PAs was facilitated, in part, by relative animosity between organized medicine and organized nursing. The failure of these two powerful groups to work together to solve the problem of access to health care in the post-WWII decades advanced the concept of an assistant to the physician. Those who envisioned the physician assistant as a force in United States medicine were wise in certain specific strategies they employed: initially utilizing veterans; not taking other professionals out of their roles in the health care workforce; and creating a dependent practice framework that allowed PAs to function in concert with physicians rather than in competition with them. This construct, termed negotiated performance autonomy by one medical sociologist, marks the major difference between PAs and NPs, who seek a more independent stance in practice from physicians.38

In the 1960s, the originators believed that the PA would supplement the generalist physician’s work. At the half-century mark, however, PA specialization has become the norm. Another ironic recent development in the physician assistant movement, especially given the early association between Vietnam-era corpsmen and the PA, is the increasing prominence of women in the field.39

The time is appropriate, then, to examine the physician assistant in historical context for reasons that are policy-related and biographical. Historians of medicine cannot help noticing that PAs in the early 21st century are tending toward specialization, just as physicians did beginning in the mid-20th century.40 Another way in which history is repeating itself with regard to the PA is the continuing link between the United States and medicine abroad.41 Unlike when the PA concept began, however, this country is not so much taking inspiration from the international variations of “assistant medical officers” as conveying the PA concept to other nations.42

36. Historians of nursing generally have done a better job of incorporating issues of race into their accounts of the nursing profession than have scholars interested in the PA profession. See, for example, D’Antonio P. Revisiting and rethinking the rewriting of nursing history. Bull Hist Med. 1999;73:268-290. E.H. Estes, personal communication, May 2010.
39. The most recent study on this development is by a Canadian sociologist: Lindsay S. The feminization of the physician assistant profession. Women and Health. 2005;45:137-60. Lindsay provides a useful bibliography, including several citations to data available from the American Academy of Physician Assistants and the US Department of Health and Human Services.
40. Some PAs worry that their profession has become co-opted by a profit motive. See, for example, Catinella AP. Heritage of service: the physician assistant profession and the threat of commercialism. Perspective on Physician Assistant Education. 2001;12:192-196.