
HEALTH SYSTEMS

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DEPARTMENT OF PREVENTIVE MEDICINE AND BIOMETRICS

THE EVOLVING HEALTH CARE PROFESSIONAL

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Introduction

During the past 25 years, Americans have witnessed explosive growth in the health care industry and dramatic changes in the numbers and types of professionals employed in that sector. Evolving trends in healthcare financing and management along with growth and changes in the composition of the health profession workforce have profound consequences for health care delivery in the future. According to the April, 2002, edition of the Journal of the American Health Information Management Association, the number of people working in a health-related occupation in the U.S. increased 1,487% between the years 1920 and 1998 and currently represents nearly 11% of the total work force.

An explosion has also occurred in the variety of available health care occupations. While physicians and nurses have traditionally comprised the bulk of those employed, that trend is rapidly changing. Between 1920 to 1998, the relative proportion of physicians in health occupations decreased from 30% to 7.5%. The proportion of Nurses in the health care workforce fluctuated up and down, notably declining over the last half of the century to current estimates of 20.5%. During the same period, the proportion of allied health professionals increased from 1-2% of the health care workforce to greater than 50%. Although these figures span nearly a century, most growth and change has occurred in the past three decades.

The following discussion represents the cumulative opinions and experiences of group members as well as information obtained from a variety of academic and public sources. In exploring the various ways in which public, market, and technological forces are currently shaping several of the health care professions, we believe a better understanding of the ever changing landscape of health care in the U.S. can be obtained. We will look first at physicians and then turn to nursing, a discussion that will encompass the traditional role of registered nurses (RN) as well as the more recent evolution of Nurse Practitioners (NP).

Physicians- A Profession at the Crossroads

Although absolute numbers have continued to increase, physicians have steadily declined as a proportion of total healthcare workforce over the last several decades. During this period, perceptions of physician supply have alternated between shortage and surplus. Between 1970 and 1997 the U.S. experienced a 122% increase in supply of active physicians, resulting in approximately 270 physicians per 100,000 population. Several reports in the 1980s predicted a significant surplus in physicians in the year 2000. These numbers mask the relatively low proportion of physicians practicing primary care and choosing to do so in rural and poor urban areas. The number of graduating medical students choosing primary care decreased from 38.5 to 32.0 percent between 1980 and 2000, the same period that medical schools launched campaigns to promote primary care. At the same time, the proportion of medical school graduates entering medical specialties increased from 6.2% to 13.7% while surgical and other specialties remained relatively stable. The shortage of primary care physicians is exacerbated by increasing pressure from managed care organizations to provide health care through primary care "gate-keepers" as well as an increasing demand for continuity care providers to serve an ever aging population.

Why are those choosing medicine as a profession not choosing primary care for their careers? Possible answers to this question lie in many of the same arenas impacting

the organization and delivery of healthcare in the U.S. in the 21st century, namely, public and economic factors as well changes wrought by advancing medical technology. The American public possesses a significantly broader level of medical information than it did 50 years ago. The “information age” has demystified the medical field. “The doctor knows best” philosophy is outmoded as the public becomes an ever more sophisticated and skeptical consumer. Armed with information obtained on the Internet or the evening news, people often enter their doctor's office with a diagnosis and/or treatment in mind. Direct marketing of pharmaceutical and diagnostic products has added to the wealth of medical information available to the average consumer.

Mounting public interest and involvement with medicine was also inspired by dramatic advances in medical technology during the last half of the 20th century. Innovative, life-saving or life-prolonging procedures exist in nearly every field of medicine. At the same time, a growing sense of entitlement developed. Everyone wants to benefit from the latest technology. Primary care physicians find themselves engaged in an almost overwhelming process of continuing education to keep up on the latest medical journals as well as what is being written about and advertised in the mass media. As medical advances outpace what can be mastered and provided in a primary care setting, young doctors will likely continue to narrow the scope of their practices through specialization. As screening and diagnostic technology become more accurate, efficient, and easy to perform, the skill required to provide primary care will decrease, resulting in increasing job-dissatisfaction among primary care physicians.

Changing demographics also contribute to the drive towards specialization. As the baby-boomer generation ages, the proportion of elderly in the U.S. continues to rise, intensifying the need for comprehensive, long-term care for chronic illnesses. The demand for pulmonary, renal, cardiac, and endocrine specialists, to name a few, will only increase in proportion to the numbers of people living with end organ damage secondary to chronic illnesses. Managing these patients often exceeds the ability of a true generalist, forcing primary care physicians to function as “referral managers” or “gate-keepers” who coordinate, but do not themselves provide, specialized care.

Economic pressures provide yet more disincentives for primary care. Primary care physicians have long received the least reimbursement for their services. Lacking high-reimbursement procedures, their earning potential is severely limited. Preventive care and office visits facilitating continuity of care are poorly reimbursed and increasingly viewed as an inefficient use of physician resources. This trend is not limited to under-served areas and has significantly increased with the advent of managed care.

Interestingly, reported patient satisfaction with primary care provided by allied health professionals, primarily NPs, is often higher than with physician visits. This likely reflects a growing belief that physicians have become increasingly competent providers of “technical medicine” while nurses, and by extension NPs, continue to be viewed as more caring and sensitive to individual needs. Time pressures placed on physician office visits for cost-efficiency measures also, undeniably, contribute to growing dissatisfaction among patients and physicians alike within the primary care arena.

Physicians are, therefore, at a significant crossroad. In a nation in short supply of primary care providers, those who have traditionally provided that service are increasingly opting to specialize their medical practices. With this increase in specialization, the deficit of primary care providers, particularly in rural and poor urban

areas, may rise. Market and public forces, however, while contributing to physician specialization, are also providing a solution to the resulting inequalities in supply. The changing face of physician-provided care in the U.S. is paralleled by changing roles and new professional development opportunities for nurses.

Nursing—An Evolving Profession

Nurses comprise the largest group of licensed health care providers in the US and are also undergoing a period of transformation against the backdrop of an evolving healthcare delivery system. As with the physicians, nursing availability has fluctuated significantly. Starting in the early 1990s, a shortage of registered nurses affected hospitals nationally. By 1994, however, the shortage had disappeared and the perception was one of a nursing surplus. The pendulum swung again and by 1998 new reports of hospital registered nurse (RN) shortages broke out. These shortages continue and have broadened. According to an article in the May/June, 2000, edition of *Nursing Economics*, nearly 60% of the current RN workforce is over 40 years of age; and the percentage of RNs under age 30 has fallen by nearly 40% since 1980. The actual number of RNs is projected to shrink after 2010, likely resulting in shortages across the profession when the large baby-boom generation of RNs starts to retire.

Some of these trends may be accounted for by changes in training programs. These have recently evolved from “diploma” programs that consist of two or three-years of training to the now predominant four-year “degree” programs. Throughout the 1990's, the annual number of nursing degree graduates steadily declined with early projections for the year 2000 at a 25% decrease from 1996 figures. Graduates of the degree programs tend to be older (five years on average) than their diploma counterparts, thus contributing fewer potential work years to the overall labor force. Some have speculated that the trend towards four-year training represents a barrier contributing to declining nursing school enrollment.

Although the nursing shortage, to some degree, may be accounted for by decreasing numbers of new graduates, already licensed nurses appear to be leaving the profession in record numbers. According to a University of Pennsylvania study, in the year 2000 nearly 120,000 RNs were either not working or chose to work in other fields. A 22% surplus of nurses noted in the 1980's dwindled to a shortage of 110,700 by the year 2000. There is no clear data describing why trained nurses choose not to work in their profession.

Although shifting RN responsibilities to LPNs and other allied health professionals may mitigate this shortage somewhat, changing nursing demographics are likely to have significant impact in areas where complex nursing skills are required, younger RNs have been attracted, and differing educational exposures direct participation. An article in the May/June, 2000, issue of *Nursing Economics* discusses this issue and identifies areas most likely to be impacted: intensive care units, oncology services, operating rooms, and other peri-operative services.

While nursing is clearly still attractive to many, including both single providers and secondary wage earners, it faces the dual challenge of recruiting and retention. Poor compensation for training and skills, lack of childcare, and increasing demands due to the overall shortage in labor force outweigh and have often eliminated traditional benefits like flexible work schedules. Other factors contributing to declining interest in nursing are, in many ways, similar to the forces effecting change in the physician arena. The

advent of managed care, a movement away from inpatient into ambulatory care settings, and increasingly sophisticated medical technologies have all impacted the way nursing care is delivered and how nursing defines itself.

Unlike physicians, nurses work in shifts and were salaried employees long before the advent of managed care. This often translated into mandatory 12-hour shifts in understaffed wards or emergency rooms. Staffing and funding shortages have steadily increased the number of patients a nurse must care for during a shift. There has been a concurrent rise in acuity in the inpatient setting, creating not only an undesirable work environment for nurses, but poorer outcomes for patients as well. Nursing shortages and economic pressures have encouraged hospitals to employ increasing numbers of less-skilled workers (licensed practice nurses, nursing technicians, and nursing aids) to do much of patient care, relegating RNs to supervisory and administrative roles. Individuals who sought a profession in nursing because they enjoyed patient care find themselves increasingly tasked with completing the mounds of patient tracking paperwork now required in most clinical settings. These factors each contribute to decreasing job satisfaction among RNs working in traditional nursing roles.

With the evolution of managed care systems, however, nurses have found increasing opportunities for professional development and autonomy in the ambulatory setting. As HMOs seek to provide cost-effective primary, comprehensive care to large populations of people, RNs are increasingly becoming a viable supplement, if not alternative, to the primary care physician. Opportunities for specialized training are rapidly emerging. RNs may now become clinical nurse specialists, NPs, nurse anesthetists, and nurse clinicians. Each of these roles allows them greater decision-making capacity across a variety of settings, both inpatient and outpatient. Through the advent of the NP degree in particular, RNs are rapidly transforming their traditional roles and emerging as key players in the provision of primary care.

While this trend opens the doors for nursing-trained providers to greatly expand their training and employment opportunities, the loss of practicing RNs will only exacerbate the challenges facing nursing in general. Primary nursing care may, in fact, be undergoing a shift similar to that observed in the provision of primary medical care. The opportunities for nurses to obtain advanced training are increasing at the same time that, whether by necessity or plan, less-skilled and more cheaply hired laborers are replacing them in their traditional roles.

Nurse Practitioners- A New Approach to Primary Care

Nurse Practitioners are RNs who obtain an additional two years of training, usually a master's degree, and pass a licensing exam that allows them to function semi-independently as care providers. During their training, NPs usually choose to specialize in areas such as neonatal, pediatric, adult/family, occupational, psychiatric, anesthesia, or geriatric care. NPs are able to autonomously perform physical examinations, assess health status, formulate and manage care regimens for both acute and chronically ill patients, and provide health education. Most often, they work in conjunction with a MD as a salaried employee, although the degree to which this is necessary varies by state and region.

Insurance payments for their services are often linked to the employing physician. Annual salaries range between \$40,000-\$70,000, thereby providing understaffed group practices and HMOs a cost effective alternative to hiring additional physician providers

for some services. One physician could supervise several NPs. This significantly increases the number of patients seen while decreasing the average cost per patient encounter. While NPs are, in most states, required to work in conjunction with a physician, the association may be as indirect as phone-line communication/consultation from disparate geographic sites. Increasing numbers of NPs are providing primary care services to historically under-served rural areas through such arrangements. Prescription writing privileges are limited but also variable by state.

In 1995, there were an estimated 60,000 NPs working in the US. By 2005 that number is expected to increase to 110,000. Not all of the expected near doubling in this sector of the work force rests in the ambulatory care/managed care sector. Many subspecialty inpatient services hire NPs to help manage their patients across the entire spectrum of care provided. Typically, they perform pre-operative/procedure medical histories, coordinate procedures and office visits, manage inpatient care in conjunction with the attending physician, and provide follow-up care in the clinic setting. In this manner, continuity of care is greatly enhanced while minimizing provider costs. This model is particularly successful in settings where no residency programs exist or when the available residents are inadequate to staff all of the inpatient services.

As outlined above, the opportunity for NPs to become an increasingly important part of health care delivery can be understood, in part, through economic and managed care perspectives. However, patients themselves have, in a sense, demanded their evolution by consistently voicing satisfaction with NPs in a primary care role; often going so far as to prefer them over physicians for routine care. This reflects the long-held perception that nurses are, in general, more caring and compassionate than their physician counterparts. By extension, these qualities are attributed to NPs as well. Because of the differences in their primary training, nurses and NPs are often better equipped, and more willing, to manage the psychological and social concerns that frequently prompt primary care visits. This trend also reflects, however, the public's changing view of physicians themselves. As the public continues to expect increasing levels of technical sophistication from their medical care, and as doctors themselves seek out those skills, the door is wide open for the emergence of an entirely new way of providing primary care.

Conclusion

Changes in health care delivery professions are as varied and complex as the ever-evolving healthcare system. This paper illustrated the general trends impacting change across three key professions: physicians, nurses, and nurse practitioners. We have also sought to show the interdependence these professions have on one another and the way in which economic changes, technological advances, and public expectations similarly impact them. As the business model more thoroughly ingrains itself in the psyche of healthcare delivery in the U.S., these professionals will increasingly work together in a healthcare team model- relying on one another to provide the full spectrum of sophisticated and continuous care demanded by our ever growing, and increasingly complex, population of healthcare consumers.