Aging, Primary Care, and Self-Sufficiency: Health Care Workforce Challenges Ahead

Fitzhugh Mullan, Seble Frehywot, and Laura J. Jolley

Health care depends on people. It is the health workforce — doctors, nurses, pharmacists, lab technicians, and nursing assistants, to mention a few — that, in large measure, determine the quality and effectiveness of any health enterprise. The nature of the health workforce was integral to the health care reform debates of the early 1990s and will surely be central in proposals to improve the quality, accessibility, and cost of U.S. health care in the future. Therefore, as we enter a new period of health reform deliberations and as we face the inevitability of an aging population, it is important to consider the problems and potential remediation necessary for the health workforce of the future. This article focuses particularly on physicians and nurses while recognizing the importance and frequently parallel concerns that arise across all health care disciplines. Understanding how the composition, capacity, and activities of a health care workforce must change as part of health reform requires an understanding of the context in which health professionals practice. What are the factors that govern health care today, and what are their impact on the health workforce?

"Environmental Factors" and the Health Workforce

The environment that surrounds health workers has a number of specific and evolving characteristics that need to be taken into account in analyzing the workforce itself. The disparity of income and wealth in the United States is one such longstanding, large, and increasing environmental factor.[1] Income disparity governs a great deal of what happens in health care in America, since the delivery system is primarily private and those with higher incomes are more likely to be insured or have the wherewithal to pay for care. Consequently, the health care workforce is largely geared toward the insured sector. The clinicians and institutions in various communities who struggle to cover the uninsured are often referred to as "safety net" providers. Safety net institutions must recruit physicians, nurses, and others to settings that are often less technologically advanced and present geographic

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and security problems. They frequently offer salaries that are less competitive, and staffing the safety net is a major workforce challenge.

America is an aging society. Beginning in 2012, nearly 10,000 Americans will turn 65 every day; by 2030 the number of these older Americans is expected to reach 71 million, or roughly 20% of the United States population.[2] (Sixty-five is traditionally seen as the beginning of old age since workers become eligible for full Social Security benefits at that age.) Americans' life expectancy has continued to increase, making it likely that a substantial percentage of the "baby boomers" now in their 40s and 50s will see their 85th birthdays and beyond. Americans over the age of 65 today are only 13% of the population but account for half of physician visits and half of all hospital stays.[3]

The percentage of the nation's elderly who are minorities will grow from 16.5% in 2000 to 23% in 2020 and 46% in 2050.[4] Historically, minorities have been significantly underrepresented in the U.S. health workforce, comprising more than 25% of the population but, for example, making up only 10% of the country's physicians.[5] The health workforce is also aging rapidly. Large numbers of health professionals will be retiring, and at the same time a demand for health care will be on the rise. For example, physicians are among the oldest health professionals with 30% age 55 and older.[6] In many professions, such as nursing, the median age is rising as new workers enter the profession at older ages than they had previously.

The growth of technology over the latter half of the 20th century greatly increased the need for health personnel at all levels.[7] At the outset, many technological innovations require technicians to manage them and specialist physicians to perform procedures and interpret the results. While technologies tend to simplify over time, technological developments have resulted in growing levels of specialization in medicine and other health disciplines. Thus, the provision of primary care has become more problematic as salaries and technology have both favored a specialty orientation of physicians and other health professionals.

A recently emergent factor in medicine has been the preference for what are being called "lifestyle" specialties that feature more controlled work hours and better pay.[8] Examples of these are radiology, ophthalmology, anesthesiology, and dermatology. Since primary care is viewed as having a relatively "uncontrolled" life style, this trend has exacerbated the problems in the primary care sector. During this same period, the health professions have become rapidly feminized.[9] Most health professional schools are graduating at least 50% women at the present time. However, women work fewer weeks per year and fewer years in a career, effectively increasing the numbers of health professionals needed to meet any given demand.[10]

The epidemiology of disease is changing as well. Chronic diseases such as diabetes, heart disease, and Alzheimer's predominate among the elderly and are responsible for the greater demands on the health care workforce.[11] Obesity is a relatively new epidemic which now affects 16% of America's children and 33% of the country's adults.[12] The full impact of these levels of obesity has yet to be felt by the system but vast increases in diabetes, cardiovascular disease, orthopedic problems, and other chronic conditions caused by this epidemic will make new demands on the health workforce for the foreseeable future.[13]

This combination of the above environmental factors that has impacted the health workforce in recent years has lead to the demand for more health professionals. New technologies requiring specialists and technicians, a feminization of the health professions, the preference for time-limited work hours, and the general preference for specialized work all point towards the need for a larger workforce. While there is important research showing that higher physician density does not correlate with better population health,[14] many observers argue that major increases

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Special Health Workforce Challenges

The options available to augment the numbers, modify the practice patterns, and enhance the skills of health professionals to deal with the growth and aging of the U.S. population will require policy discussion and development if they are to have maximum rapid impact. There will be many special challenges in undertaking these reforms, some of which are the following.

The Primary Care Challenge

The provision of broad-based, comprehensive, and continuous health services to patients — and especially the elderly — will be a major test for the nation. Currently, specialty and sub-specialty modes of care enjoy a technological appeal and, frequently, commercial support that has made primary practice less appealing to young physicians and more difficult to sustain. In recent years, working conditions for primary care physicians have deteriorated with salaries among the lowest and work hours among the longest of all physicians.[16] This combination has resulted in a significant decrease in the number of U.S. medical graduates selecting careers in family medicine and general internal medicine. International medical graduates, as well as nurse practitioners and physician assistants, have filled some of the gaps in the primary care base. The new and important concept of "the medical home" advocated by a number of organizations gives promise to a re-conceptualization of primary care.[17] Nonetheless, a quality health care system that is affordable will not exist without a robust primary care base that is trained for the job and competitively compensated for the work.

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The Geriatric Care Challenge

The aging population of the U.S. will have special diagnostic and treatment needs but also will require overall management of care. Currently, geriatric medicine training programs are few in number and focused primarily in academic practices. Building geriatric training into education programs for all primary care clinicians and creating career tracks that will entice them to provide dedicated care to the elderly will be important to managing the burgeoning needs of this population.[18] These issues are closely related to the training of staff for nursing home and home care for the growing ranks of the elderly.

The Data Challenge

Our national ability to count, track, and make projections about the health workforce is extremely limited. The public investment in this area has been minimal in recent years. We are neither active at the federal level in conducting analytical studies of the health workforce nor do we invest in "extramural" centers to do similar work. The principal census of physicians is maintained not by the government but by the American Medical Association, and the federal effort to characterize the nursing workforce is limited to a sample survey every four years. Data are essential for informed policy discussions which, in turn, are necessary precursors to developing legislation. To be intelligent in our construction of the health workforce of the future, we simply need better data.

Strategic Options for Workforce Growth

Given this challenging picture of the immediate future of the population and the health workforce to care for it, what are the options available to policymakers and educators as they consider strategies to develop the capacities and capabilities necessary to address future need? It should be noted that circumstances and possible remedies vary from profession to profession, but debate in all instances is bracketed by those who advocate for increased production and those who argue for the more efficient use of those already trained. We will limit our discussion to medicine and nursing as examples of the debate and options for growth.

Currently in the United States, 24% of physicians, 15% of nurses, and 16% of pharmacists are graduates of schools abroad, indicating that we have become

reliant on other countries to educate substantial proportions of our workforce. These trends are similar in many developed countries including the United Kingdom, Canada, Australia, and New Zealand.[19]

Expanding the Physician Workforce

There are three sources for potential expansion of the U.S. physician workforce: (1) U.S. medical schools; (2) schools in other countries, many of whose graduates — referred to as international medical graduates or IMGs — seek residency training and permanent practice opportunities in the U.S.; and (3) schools in other countries — principally the Caribbean — that train U.S. citizens unable to secure spots in the U.S. Graduates of these schools are referred to as U.S. international medical graduates or USIMGs.

There are significant issues associated with each of the potential sources of expansion. U.S. allopathic medical schools are indeed expanding after a long period without growth. The Association of American Medical Colleges has recommended a 30% increase in M.D. enrollment by the year 2015.[20] Applications to medical schools are on the rise, and it would seem that there will be little difficulty expanding U.S. medical school graduates by increasing enrollment in both current and new schools. Additionally, there are an estimated 20 schools in the Caribbean whose principal goal is preparing candidates for U.S. residency.[21] The preponderance of IMGs, however, are from developing countries in the Indian sub-continent, Africa, and the Caribbean.[22]

Regardless of the location of the medical school, the key factor that determines the subsequent size of the physician workforce in the U.S. is the number of residency positions in the U.S. Because residency is a requirement for licensure in all states, U.S. graduates and international graduates all complete residency training positions in order to enter practice. Currently the Medicare funding that subsidizes hospitals that employ residents is capped, and residency numbers have remained flat. The increased number of U.S. medical school graduates will likely supplant IMGs in training but not result in more physicians in practice unless Medicare pumps more funds into hospitals — an unlikely occurrence given the shaky finances of Medicare.

Expanding the Nurse Workforce

There are two strategic options for increasing the number of practicing nurses: expanding U.S. training capacity or importing from abroad. At the moment, both are occurring simultaneously. The number of positions in baccalaureate nursing programs has increased an average of 9.2% per year from 2001 to 2006.[23] A major barrier to expansion is the difficulty in increasing faculty to keep pace with expanded enrollment. International recruitment has always been present in nursing but recently has become a more prominent strategy of hospitals and recruitment firms. The proportion of foreign trained nurses in the U.S. nursing workforce has been steadily increasing from less than 5% in 1998 to over 14% in 2003.[24] Nursing recruitment is often carried out by professional recruitment agencies on behalf of specific hospitals,[25] and has raised global concerns about the ethics of international recruitment and the participation of governments and health care organizations in this process.[26]

Many more clinicians need to be trained as certified experts in the care of the elderly, and all clinicians need to have their skills developed and sensitivities raised with regard to the care of this population. The source, quality, and educational standards of nursing homes and home health personnel need attention from policy leaders and academics.

Task Shifting

In addition to augmenting domestic production and/or increasing foreign importation, there is a third strategy to increase the effectiveness of the health workforce. "Task shifting" refers to the development of practice strategies, educational policies, and regulatory frameworks that allow certain clinical tasks to be assigned to lesser trained health professionals. Simultaneously, this strategy allows more advanced medical and nursing professionals to focus on clinical duties for which they are uniquely qualified. The United States has effectively pioneered this movement by leading the world in creating new types of providers who function in between what was once defined as "medicine" and "nursing": nurse practitioners and physician assistants. The approximately 165,000 nurse practitioners and physician assistants active in

the U.S. are performing many functions that were once limited to physicians.[27] Similar sorts of innovations have taken place with regard to nurses passing duties to nursing associates and assistants.[28] The broad application of task-shifting policies would mitigate the need for as many physicians as projections using current practice patterns might suggest.[29] It would also build economy into the system by moderating the use of highly trained specialists who are wedded to expensive patterns of diagnosis and practice. A final benefit of task-shifting is "nimbleness"; health workers who are trained in a more generic way are more adaptable and prepared for clinical innovations and changes in practice patterns.

3. Treat Geriatrics as a Priority Need Area

The aging of the population and the oncoming flood of chronic conditions qualifies geriatric training and practice as a national priority area of concern. Many more clinicians need to be trained as certified experts in the care of the elderly, and all clinicians need to have their skills developed and sensitivities raised with regard to the care of this population. The source, quality, and educational standards of nursing homes and home health personnel need attention from policy leaders and academics. More competitive remuneration for geriatricians will also be needed if the field is to become a major presence in medical practice.

Self-sufficiency policies need to include strategies to incentivize rural and underserved practice. This is good domestic and good foreign policy and needs to be at the heart of our national workforce policy.

Conclusions

These analytic comments lead to a number of conclusions that might be considered as the nation enters a period of health care reconsideration and reform.

1. Build and Invest in a Nimble Workforce

Highly trained sub-specialists will continue to be needed in many areas of clinical science. However, the tendency of technology to "move downhill" would suggest avoiding over-specialization in training physicians, nurses, and others. Professional agility and lifelong learning should be values central to health professions' education in the future. Nurse practitioners and physician assistants have provided excellent examples of this approach to training and further investment in "task-shifting professionals" such as nurse extenders, and dental extenders would be similarly advisable.

2. Prioritize Public Funding to Safety Net Programs

Federal educational funds should be targeted to promote opportunities for minority professionals as well as service capacity building in underserved areas. The National Health Service Corps, which provides scholarships and loan re-payments in return for service, is an excellent example of these principles. The program could be expanded and applied to a number of areas of need such as prisons, public health departments, clinical research, and international health development.

4. Invest in Health Workforce Data Collection and Analysis

Major federal investment in workforce tracking and planning is needed. Important collaboration can and should take place in this area between organizations representing education and practice in nursing, medicine, and the other health professions. In an epoch where every successful business enterprise is awash in business metrics, government investments in health workforce rely on inadequate, irregular, and poorly funded data.

5. Invest in a Domestic Strategy to Meet Our Workforce Needs

National policy should focus on domestic answers to workforce problems. Without an enunciated policy, we have turned repeatedly to the rest of the world to fill shortages that have existed in many health professions for the last half century. This is bad domestic policy and bad foreign policy. The growing and aging population will create a greater demand for health services and, in the absence of policy and political leadership, we will drift toward further calls on the world to care for our population. This is our problem, and the education budgets of other countries (many quite poor) around the world should not be expected to pay for it. IMGs disproportionately work in underserved areas in the U.S. Decreases in their numbers might diminish services in poor communities. Therefore, self-sufficiency policies need to include strategies to incentivize rural and underserved practice. This is

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While the innovation and investment to address these challenges are by no means certain, the upcoming changes in the demographics of the U.S. population are inevitable. Data, policy discussion, and political will are the needed ingredients to ready the workforce of the future.

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