The United States does not have enough health professionals in primary care to meet the anticipated demand. To have any hope of meeting that demand, major changes in the education and reimbursement for primary care professionals will be required. Any effort at healthcare reform must place healthcare workforce issues front and center.

In April 2009, the Josiah Macy, Jr. Foundation convened a meeting in Washington, DC, to discuss the nation’s healthcare workforce. Individuals representing four organizations with expertise in primary care and prevention were in attendance. These professionals work in the trenches of primary care, representing groups that recruit high school and college students into the health professions, nudge medical education toward a greater appreciation of primary care, and guide training for physicians, nurse practitioners, physician assistants, and others on the front lines of healthcare delivery. Their insights are compelling. Representatives of these groups have been working in primary care for years. Their experience is substantial, and their ideas about what needs to be done to train thousands of new primary care professionals are grounded in that experience. The organizations they represent play a key role in recruiting and educating primary care providers, encouraging participation in the National Health Service Corps, managing community health centers, and advancing prevention education and research. These are the groups that will help make an expansion of primary care feasible. The following are brief descriptions of the organizations represented at the meeting:

• The National Area Health Education Centers (AHEC) system is a network of 54 coordinating program offices and 259 centers located in 48 U.S. states. Its mission is to recruit young people to careers in the health professions, guide their educational choices, and place them in locations where they can train and eventually become members of the healthcare safety net workforce.

• The National Health Service Corps (NHSC) is a major player in this primary care world because it offers scholarships to students and loan repayment to healthcare professionals in return for work in underserved communities. The NHSC’s scholarship and loan repayment programs are funded by the federal government and administered by the Health Resources and Services Administration.

• The National Association of Community Health Centers (NACHC) is the coordinating organization for the community health center system (often referred to as the nation’s healthcare safety net). Included under its umbrella are more than 7,000 facilities that provide care to underinsured and uninsured populations. New programs and funds to increase training opportunities at community health centers are ways to begin the process of responsibly increasing the healthcare workforce.

• The Association for Prevention Teaching and Research (APTR) is the professional organization for the academic healthcare and public health communities. The APTR is dedicated to interprofessional prevention education and research. Tying prevention to primary care and to the healthcare safety net system is vital to achieving the twin goals of better health and lower costs.

The meeting’s participants unanimously agreed that the ideal model for primary care in the twenty-first century would include extensive collaboration among teams of caregivers and that changes would be needed in health professionals’ education to achieve this goal. Exemplifying the collaboration they espouse, the participants arrived at the following set of recommendations that should be implemented to advance the health of the nation.
Summary of Recommendations*

- New entities, to be called “teaching community health centers,” should be established. These centers would serve as sites for the training of healthcare professionals and would work with primary care practices to raise standards of care. These teaching community health centers will require strong, collaborative ties with traditional teaching hospitals, continuing the theme that collaboration is essential for better patient care and for preventing disease.

- AHECs should be designated and well supported to coordinate the educational experiences of health professions students and primary care residents in teaching community health centers and in other primary care, community-based clinical settings.

- Title VII of the U.S. Public Health Service Act must be expanded to direct more financial support to education in the primary care professions.

- Private and federal insurance program payment policies must be changed to reduce income disparities between primary care providers and other specialists.

- The National Health Service Corps, with substantially increased funding, should become a focus of efforts to alleviate the burden of debt that discourages medical students from selecting primary care as a specialty and to increase the numbers and diversity of primary care professionals who practice and teach in underserved communities.

- Criteria for admission to medical school should be changed to attract a larger and more diverse mix of students who are likely to choose primary care and to care for patients in inner cities, small towns, and rural areas.

- The graduate medical education system needs to be better aligned to meet the physician workforce needs of the country.

* No priority ranking is implied by the sequence of these recommendations.

Healthcare Reform: Innovations in Education and Reductions of Financial Disparities Are Vital to Producing a Sufficient Number of Primary Care Providers to Meet the Healthcare Needs of the Nation

The United States must reduce the amount of money it spends on healthcare if it is not to bankrupt the country. Simultaneously, the country must find ways to insure the estimated 48 million people who are either uninsured or underinsured, not only because it makes economic sense but also because a moral imperative exists to provide care to those who do not have ready access. The education and practice patterns of the healthcare workforce need to adapt to this new reality to serve the health of the nation.

Both Congress and the Administration are engaged in serious discussions about healthcare reform. One of the greatest challenges to reform is this: There are not enough family doctors, general internists, general pediatricians, primary care nurse practitioners, physician assistants, and others to take care of the U.S. population.

Increasing the number and diversity of primary care providers will mark an important milestone in matching the healthcare workforce with the needs of the nation. These changes will also require an extraordinary commitment of money, imagination, and collaboration to recruit, educate, and pay for the corps of primary care professionals essential to the success of any reform.

As the Macy Foundation conference participants noted, the Accreditation Council on Graduate Medical Education recognizes 26 specialties and 100 subspecialties. Fifty years ago, 50 percent of graduating physicians chose to specialize in the primary care disciplines of family medicine, general internal medicine, and general pediatrics. Today, only 37 percent of doctors practice in one of those fields, which carry less prestige, pay less than other specialties and demand long hours. Only 30 percent of graduating medical students are choosing these primary care specialties, and this percentage continues to decline (1,2). Not only are there too few primary care providers, but they are also unevenly distributed (3–5). Healthcare reform cannot succeed without commensurate workforce reform that reverses these trends.
Given the ever-increasing trend toward ambulatory care, an emerging consensus exists among educational reformers and leaders of the primary care community that health professions students need to spend less time training in tertiary care hospitals and more time in community settings. This shift would help prepare doctors and other health professionals to address the needs of the nation as patients spend less and less time in the hospital and more time seeing healthcare providers in private practices or in community health centers.

Although the heroic treatment of serious disease in this country may be the envy of the world, our health status indicators are worse than those of other nations that spend far less on healthcare and high-technology interventions. Healthcare reform is also about improving the overall health of the population, and that requires a primary care workforce that is large and diverse enough to do the job. A stronger educational foundation in clinical prevention and population health is critical to this endeavor.

Representatives from the NACHC, George Washington University, and the Robert Graham Center in Washington, DC, presented data showing the ways in which the primary care workforce needs to grow. An estimate made in 2008 indicates that community health centers need more than 1,800 additional primary care providers. If the community health center system is to serve 30 million patients by 2015, as described in the “Access for All America” plan (6), almost 16,000 more primary care providers and 12,000 to 14,000 more nurses will be needed. Training men and women to fill these positions is a daunting but vital task that requires important changes in the way health professionals are educated and, of equal importance, changes in the ways they are paid. We will not succeed unless the income disparity between the primary care and other specialties is drastically reduced.

**Rationale for Recommendations**

**Teaching Community Health Centers**

In a reconfigured healthcare system, community health centers could become part of the health professionals’ educational mainstream by aligning themselves, where possible, with academic programs and teaching hospitals to become primary sites of education and residency training not only for physicians but also for nurse practitioners, physician assistants, and others. In short, these entities could become teaching community health centers for the training of physicians and other health professionals. This initiative would elevate the status of individuals in primary care practice and augment opportunities for learning beyond what academic health centers already provide.

The Macy conference participants unanimously endorsed the idea of aligning community health centers more closely with health professions education programs and with AHECs to establish teaching community health centers. Evidence indicates that healthcare professionals’ ultimate career choices are strongly influenced by their educational experiences, leading to the assumption that if more health professions students are trained in ambulatory care settings as members of healthcare teams, more will be attracted to careers in primary care. Even those students who eventually choose careers in non–primary care specialties will have gained invaluable experience through this broader educational exposure.

The Macy conference participants acknowledge the cultural, territorial, financial, and administrative barriers standing in the way of these changes and recommend the development of a plan to create teaching community health centers and disseminate information about these educational venues.

**Connecting Community Health Centers and Other Primary Care Teaching Sites with Health Professions Educational Programs**

Simply designating community health centers as teaching community health centers is not sufficient in itself. An infrastructure is required to coordinate the linkage between the educational programs located at academic health centers and programs developed for the teaching community health centers. The national AHEC system, with program offices and centers in 48 states and close affiliations with academic health centers and community health centers, is well positioned to serve in this role and assist with the development of the teaching community health center concept. A substantial increase in federal and state funding for AHECs and community health centers will be needed to fully realize the educational potential of teaching community health centers.
The Title VII Program

Title VII of the U.S. Public Health Service Act provides funds to support a range of programs that focus on education for primary care, interprofessional education, and increased diversity in the healthcare workforce. As one Macy Foundation contributor has written, “Any serious proposal to reform medical practice in the United States must start with reinventing and reinvigorating Title VII funding for the purpose of creating educational pathways that will support the training of students for primary care, rural health, diversity, and social mission.” Title VII is also important for physician assistant training, and Title VIII is similarly critical for nurse practitioner training. In recent years, the Title VII program has received between $200 million and $300 million, down from $2.5 billion (in 2009 dollars) in the 1970s. As part of the 2009 American Recovery and Reinvestment Act (ARRA), the administration has added more money to existing programs, including $300 million for the National Health Service Corps (Title III) and $200 million for primary care physician training under Title VII and to nursing training under Title VIII. More substantial levels of support for these programs will be needed in the coming years.

Debt and the National Health Service Corps

As many experts have noted with distress, students often graduate from medical school with debt in excess of $150,000, and this level of debt is a distinct disincentive at present to elect primary care practice (7). Senator Max Baucus (D-MT) has concurred that primary care physicians are grossly underpaid compared with many other specialists (8,9). Private and federal insurance programs, including Medicare and Medicaid, must make a commitment to reduce the disparities that exist in pay between primary care providers and those other specialists whose lifetime income is estimated to be $3.5 million higher (10).

Expanding the NHSC is another imperative to support growth in the primary care workforce. Established 35 years ago to reduce medical school debt in exchange for a fixed term of practice in an underserved area, the NHSC has been vital through its efforts to enable students to attend medical school and to provide doctors to communities that do not have them. There could not be a better time for reinvigorating the NHSC with both money and prestige.

President Obama and the U.S. Congress have already reaffirmed their commitment to the notion of service to the nation. Legislation to triple the size of the Americorps program, whose members work to rebuild communities affected by natural disasters, to restore parks and other public spaces, and to tutor children, was recently signed into law. The new legislation authorizes $1.1 billion so that Americorps can grow to 250,000 by 2017, up from 75,000 members now, signaling a commitment to service careers that has not been seen in decades. The NHSC could become the avenue of choice for those desiring to serve by addressing the healthcare needs of the nation.

The NHSC must acquire the prestige needed in order to inspire and enable young people to enter the health professions and experience the rewards of primary care. Not everyone who becomes a NHSC scholar will choose to remain in a health professions shortage area after their service obligation has been completed, but many will and the nation will be well served. Increased focus on mentorship and special training opportunities for NHSC scholars would surely increase the appeal of this career path and increase retention in underserved areas. Four thousand clinicians now serve in the NHSC as scholarship and loan repayment beneficiaries. The new economic stimulus package will infuse $2.40 million more recruitment dollars into scholarships and loan repayment contracts for primary care clinicians to enter into the NHSC, doubling the number of clinicians to 8,000 in underserved communities during the next several years.

Those attending the Macy Foundation–supported conference recommend a sustained increase in support for the NHSC beyond the two years of funding from the American Recovery and Reinvestment Act.

Changing Admission Policies

The Macy Foundation group identified another important element in the disparity between physicians who choose primary care and those who choose non–primary care specialties—an element that is also important in creating a cadre of healthcare providers that more closely resembles the U.S. population. Because medical schools have long valued basic science and research, it follows that medical school admission has increasingly become dependent on high science grades in high school and college, along with high scores on admissions tests, such as the Medical College Admissions Test (MCAT). Although this system helps to
identify students who are good at math, science, and test taking, it does not always do equally well at identifying students whose basic intelligence and personal qualities, such as empathy and a desire to serve, would make them good doctors. As one participant observed, “Some students give up even thinking about medical school because they get one C in a chemistry course. They think that is enough to shut them out. And maybe they are right.”

The group recommends changing admissions criteria to increase the selection of more students whose personal, demographic, and intellectual characteristics are associated with choosing careers in primary care and providing service to underserved communities.

Graduate Medical Education

Data suggest that post-graduate or residency training is the key determinant influencing career paths for the healthcare workforce. Funding for graduate (or residency) medical education through Medicare is provided to hospitals to help offset the cost of training physicians. At present, most hospitals base decisions about the specialty residency programs they will support and the number of residents they plan to train on the specialty needs of hospitalized patients rather than on the needs of patients from their communities who may lack the care they need. Therefore, hospitals determine the number of residents they will train based on their entirely rational desire to fully staff their wards and emergency rooms. In a reformed system, the needs of the population being served—especially the need for healthcare providers in underserved areas—would be a component of the Medicare graduate medical education calculus and would help create a thoughtful system for anticipating and meeting local, regional, and national needs.

At present, there is no such entity as a National Health Care Workforce Commission. The Macy Foundation group recommends the creation of such a commission that would provide advice about the important policy issues pertaining to both graduate medical education and the overall configuration of the nation’s future healthcare workforce.

Conclusion

President Obama seems to understand the importance of support for novel approaches to reinventing the workforce. In an interview published in the New York Times Magazine on May 3, 2009, the President spoke about workforce issues. Although his remarks were not directed specifically at healthcare, they reveal his frame of mind: “...somehow we have not done a good job of matching up the training with the need out there.” The very fact that members of the current Administration and Congress are vitally interested in healthcare reform in all its aspects adds to the importance of this and other reports that outline the way to a better future for the health of the nation.

Some of the ideas presented here are novel. Many are variations on themes that have been identified by others, framed by the unique viewpoint of front-line healthcare professionals and educators. Collectively, they speak to the urgent need to change the way we train the healthcare workforce as well as how we pay for and deliver healthcare services. These issues need to be addressed if we stand a chance of reaching the ultimate goal of excellent, affordable, accessible care for the entire nation. This is just a start.

The Josiah Macy, Jr. Foundation is dedicated to advancing the education of health professionals in the interest of the health of the nation. For many years, the Foundation has gathered a broad range of experts to study and recommend ways to enhance the training of doctors, nurses, and other health professionals who constitute the backbone of the healthcare workforce in the United States. The Foundation has pointed to the planned expansion of medical schools and other educational programs for healthcare professionals to focus on the health needs of the nation by emphasizing primary care and the importance of training professionals to work together as collaborative teams to care for all members of the population.
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The Josiah Macy, Jr. Foundation

April 20, 2009
Washington, D.C.

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