

U.S. Health Care Stimulus: Changing the Way We Educate Our Workforce

Introduction

For decades, lawmakers have pondered the prospect of sweeping health care reform in America, and the current economic crisis has intensified its importance. We can no longer endure the rising costs, declining value, and lack of coverage plaguing our health care system. At 16% of gross domestic product, U.S. health spending is double the median of other industrialized nations, yet America ranks 15th to 40th on several key health measures, ranging from life expectancy to years of life lost due to preventable causes.^{1,2} The U.S. health system is not the best in quality of care, nor is it a leader in health information technology.³ Our challenges are complex, and the burden of harm is staggering.

The transformation of clinical education is one of many factors that will assist in meeting national goals of lowering costs and providing quality care that is patient-centered. It has been shown that professional health education has not kept pace with or been responsive enough to America's shifting patient demographics, efforts to improve quality, and changing health system expectations.^{4,5} In order to improve outcomes, we need an education system that is relevant to our patients and responsive to the changing context of health care. I propose that the most important change required of our system is a paradigm shift from professor-centered to patient-centered education. In this essay, I will discuss the guiding principles of patient-centered education, outline the specific steps for reaching the goal of high-value coordinated care, and consider the consequences of changing the way we educate our health care workforce.

Guiding Principles of Clinical Education

The health education system has a fundamental responsibility to produce a workforce that meets the needs of America's patients. The U.S. patient population is becoming increasingly diverse, greater numbers are suffering from multiple chronic illnesses, and individuals are more likely now than ever before to seek guidance from health professionals.^{6,7,8,9} This "new age" of health care must be met with highly competent professionals who are skilled in working with diverse populations, coordinating care across teams, providing long-term management of disease, and educating patients on optimal health behaviors.

As we seek to reform education, we must clearly define our goals. Six national quality measures have been established as important goals for our health care system: safety, effectiveness, patient-centeredness, timeliness, efficiency, and equity.¹⁰ The Institute of Medicine has clearly defined these terms as follows:¹¹

- Safety is prevention of patient injuries.

- Effectiveness means delivering evidence-based medicine to the patients who will benefit.
- Patient-centered care makes every effort to meet the specific needs, values, and preferences of the patient.
- Timeliness reduces wasted time in provision of care.
- Efficiency avoids wasting resources.
- Equitable care does not deviate in quality because of a patient's race, age, or other personal characteristics.

At the 2002 Committee on the Health Professions Education Summit, the following statement was issued in support of national quality initiatives: "All health professionals should be educated to deliver patient-centered care as members of an interdisciplinary team, emphasizing evidence-based practice, quality improvement approaches, and informatics."¹²

Having reviewed the principles and definitions of quality set forth by the Institute of Medicine and other national committees, I propose the following changes to our current system:

- Creation of a National Council on Health Education (NCHE) whose mission is to identify the over-reaching core competencies required of all health professionals in order to meet national quality measures.
- Compliance of all health professions schools to the rules and standards prescribed by the NCHE.
- Creation of Health Professional and Society (HPS) curricula at all U.S. health professions schools, according to NCHE guidelines.
- Commitment to primary care-focused, interdisciplinary training of all health professions students.
- Commitment to integration of basic science and clinical training, allowing students early and lengthened exposure to real-world patient care situations.

These five objectives will now be discussed in detail.

National Council on Health Education

Creation of the NCHE is an important step toward a coordinated, team approach to health care. The NCHE will assist in integrating competencies and unifying health professions schools around a common goal: graduating health professionals who provide the highest quality care. Currently, each health professions school has its own representative organization, such as the Association of American Medical Colleges (AAMC) and the American Association of Colleges of Nursing (AACN). The NCHE will be a composite team of leaders from these professional health care organizations, from education and practice, and from the patient population. This team will have experienced firsthand a broken health care system and will have constructive ideas and the necessary

skills to implement new policies and strategies to prepare health professionals for the future.

Health Professional and Society (HPS) Curriculum

All health professions schools seeking accreditation by the NCHE will be required to integrate HPS coursework into their curricula. I propose that fifteen percent of total teaching time be dedicated to HPS. HPS coursework will educate students on the context and system of U.S. health care, provide opportunities to discuss issues such as patient safety and quality assurance in interdisciplinary settings, and provide opportunities for practicing the teamwork and communication expected of them once they enter the health care field. Students often hear about the issues plaguing our health care system, but they rarely have time to pause and think about solutions. HPS will provide this opportunity. It will also help dissolve the turf battles between different professions, and students will learn to appreciate the contributions of all health workers toward quality, patient-centered care.

Learners completing HPS coursework will be expected to show competency in the following areas:

- Coordination of Care
- Quality Solutions
- Informatics
- Patient Safety
- Medical Economics
- Population Health
- Social Issues in Healthcare
- Navigating the U.S. Health Care System

The rationale and specific objectives of each of these components is as follows:

Coordination of Care – Teamwork across disciplines is the key to high quality, patient-centered care. Students will learn this important skill by working in interdisciplinary teams, providing care to patients in real-world and simulated environments.

Quality Solutions – Through problem-based learning, students will identify barriers to providing high-quality care and devise solutions for system flaws.

Informatics – With a rapidly expanding evidence base, it is important that health professionals learn how to access and evaluate new scientific knowledge. Quality improvement initiatives rely heavily on this skill.

Patient Safety – Medical errors account for roughly 98,000 annual deaths¹³ and around \$30 billion in lost income and health care expenditures.¹⁴ HPS will

provide opportunities to analyze situations where patient safety was compromised and think of ways to avoid these adverse events.

Medical Economics – Helping students understand the finance of health care is an important step toward greater efficiency in practice.

Population Health – Students will be exposed to important issues in public health and disease prevention. This knowledge will assist in improving health outcomes.

Social Issues in Healthcare – We need health professionals who understand the many factors leading to disease. Students will consider the influence of socioeconomic background, culture, values, spirituality and religion on health. Practical experiences with the chronically underserved will also be provided.

Navigating the U.S. Health Care System – Tremendous waste and misuse of services pervade our health care system.^{15,16,17} Students will learn the many players in the U.S. health care system and how to effectively manage available resources and services.

The HPS curriculum will encourage systems-based analysis of these topics through a combination of experiential learning, lecture, small group discussion, case investigation, team projects, and interdisciplinary clinical activities. HPS will seek to imbue students with invaluable problem-solving skills and positive attitudes toward lifelong learning. Furthermore, it will antagonize one of the most dangerous forces in our health care system: the delivery of fragmented care that is unsafe and inefficient.

The central premise of the HPS curriculum is interdisciplinary, problem-based learning. Many health professions schools are located in close proximity to each other and should collaborate whenever possible on HPS coursework. Schools may also seek to integrate other didactic sessions, in addition to HPS. Many schools have overlapping degree requirements and may benefit from creating opportunities for students to work together on similar coursework. For example, at Mayo Medical School, medical and physical therapy students work together on the small group dissection required in their first-year Gross Anatomy course.

Primary Care Focus

The value of primary care specialties in improving the quality and efficiency of health care delivery has been well documented.^{18,19,20,21} It has been shown that each additional general practitioner per 10,000 population is associated with about a 6% decrease in mortality.²² Many leading countries in quality health measures have primary care-focused systems, but the U.S. has emphasized specialty care instead.^{23,24} Specialists grossly outnumber generalist physicians, and some fear that soon, the growing supply of specialists will exceed demand

for specialty care.²⁵ There is widespread agreement that these trends must be reversed.²⁶

Since 1992, the AAMC has embraced the goals of its Generalist Task Force, which has set forth strategies for increasing the number of medical students committed to careers as family physicians, general internists, and pediatricians.²⁷ AAMC policy clearly delineates the goal of having the majority of graduating medical students enter generalist specialty areas.²⁸

Our health education system must respond to calls for greater emphasis on primary care. Undergraduate medical education will need to make a concerted effort to educate students on the importance of primary care. Medical school leadership should host interest groups and provide strong mentors for those interested in generalist specialties. Clinical experiences in primary care should be integrated into the basic science coursework of years 1 and 2. In addition, advanced clerkships in family medicine, pediatrics, and internal medicine should receive greater emphasis and increased curriculum time in years 3 and 4. The vast majority of students enter medical school in order to help people. It is the duty of the school to teach and inspire these students to provide the primary care skills that patients so desperately need.

In graduate medical education, becoming primary care-focused may mean reducing the number of specialty training positions available. The AAMC supports this type of action, especially when market forces have proven ineffective in responding to America's great need for generalists.²⁹ These types of cuts must be done carefully and should be based on the most sensitive and insightful predictions about our future.

A truly primary care-focused system will train students in clinical epidemiology, decision analysis, disease prevention, health care economics, and other topics that are extremely valuable in primary care and correspond to better outcomes for patients. These initiatives will be strengthened by the HPS curriculum discussed earlier. Becoming primary care-focused will also mean more training of students in diverse, outpatient settings. In order to understand generalist practice, students must follow patients through an entire course of illness (an experience not readily available in inpatient settings) and learn how to manage complex problems.

There are many benefits to a primary care-focused system. We can expect that quality and efficiency of care will be greatly improved. Professionals will be better equipped to provide care to those who are chronically underserved in inner city and rural areas. Furthermore, as more interest is fostered in primary care, it is reasonable to expect more research and practice aimed at eliminating health disparities.³⁰

Interdisciplinary Training

Currently, students train within their given profession without much contact with other disciplines. This is not ideal, nor is it realistic. Health care services are rarely provided in isolation. There is often much coordination across teams and time frames in order to provide care. Health care education should reflect the system students will be entering. Creating opportunities for health professions students to work together should be a major goal. I envision a system where students are engaged in clinical activities as members of an interdisciplinary team. The Johns Hopkins School of Medicine has provided an outstanding example of interdisciplinary coursework. In a first-year medical course, students were given the opportunity to work with intensive care nurses in order to understand and reflect on challenges to patient safety.³¹ This model could be reasonably expanded to include health students from multiple disciplines. For example, a care team might include a nursing student, medical student, and pharmacy student.

Integration of Basic Science and Clinical Training

Integration of basic science and clinical training is another underlying principle influencing the changes I have outlined, and it makes sense on many levels. It makes sense for our patients, who need providers with extensive exposure to real-world situations. It makes sense for students, who will receive relevant reinforcement of basic science principles. The great divide between pre-clinical and clinical training must be blurred, and all teaching, whether basic science or clinical, must be patient-centered.

Consequences of Proposed Model

The addition of HPS to health professions curricula will require much coordination. It will also force schools to make tough decisions about what is absolutely necessary in their curricula and which components can be replaced with HPS. Some schools may find that they are already covering many HPS topics, but simply need to reorganize their curricula in order to satisfy HPS objectives.

The consequences of a primary care-focused system are complex. Some view the primary care movement as anti-intellectual. They fear that basic science training will be undermined. However, the system I have proposed here will do anything but undermine intellectual rigor and scholarship. A greater understanding of basic science and other topics such as economics and epidemiology is needed in order to satisfy HPS and primary care objectives. Primary care-focused training will require more generalist faculty, of which there are currently few. Recruiting and retaining more primary care faculty will be an important step. If we move to a system where specialty positions are gradually

tapered, we must be innovative in maintaining scholarship and research that is currently dominated by specialists. Lastly, training students in ambulatory care settings is important to primary care initiatives, but it is more expensive and will require more federal dollars, which are currently allocated mainly for inpatient training.

Conclusion

Dr. William J. Mayo, co-founder of Mayo Clinic, said, "Instruction from teachers and books teaches a man *what* to think, but the great need is that he should learn *how* to think." In this essay, I have proposed ways in which we can teach health professionals *how* to think: through the problem-based HPS curriculum, through greater emphasis on primary care, and through interdisciplinary training (see figures 1 and 2). We must believe that every American health student possesses the heart of a healer, and when taught how to think, he or she will impact our society in significant ways. It is most important for us now, as health education nears a crossroads, to guard against reform without real change. We must not compromise on our duty to create a health education system that is relevant to America's patients. It will take our best efforts in order to achieve our loftiest aspirations.

Figure 1 – Summary of HPS model of education

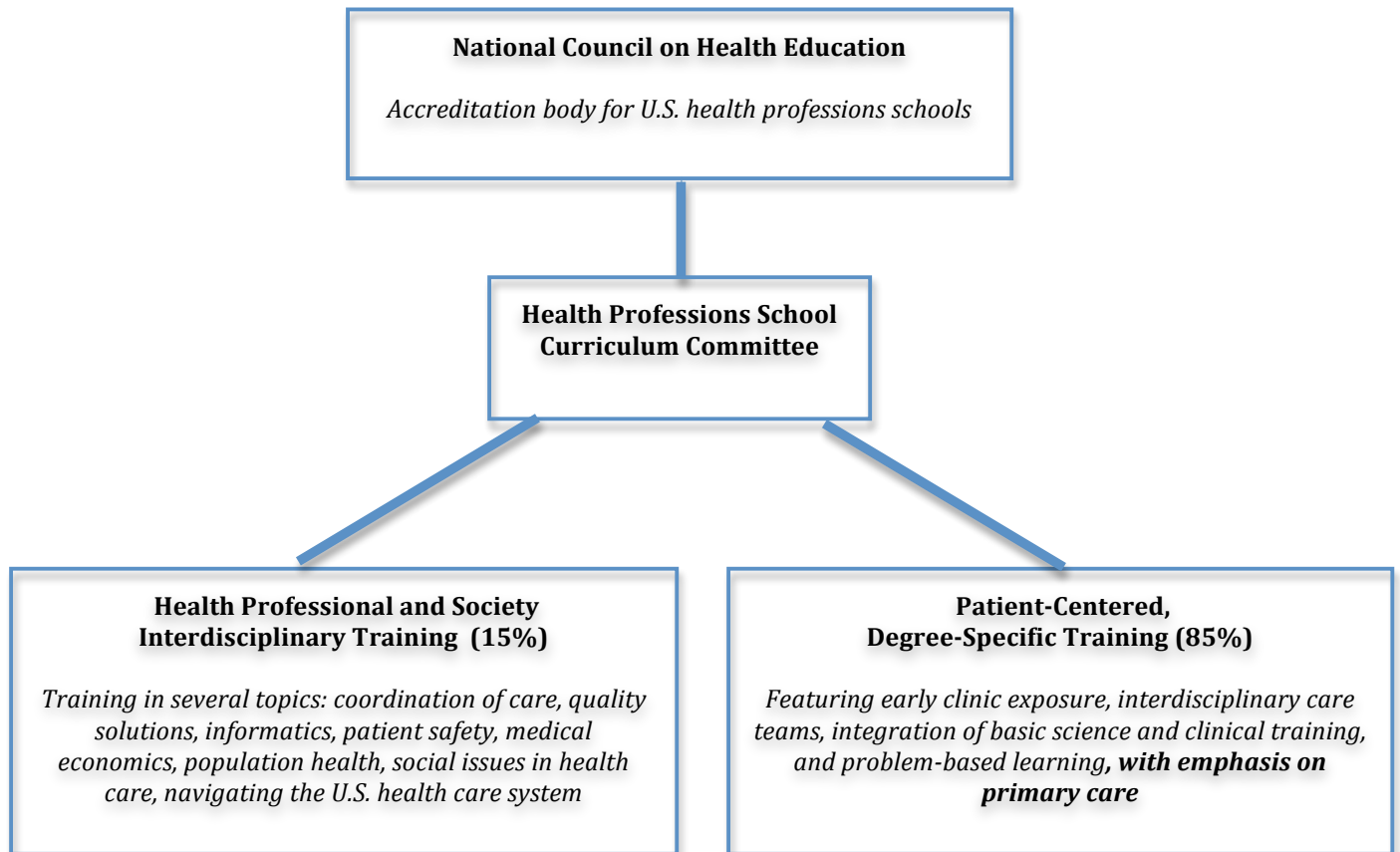
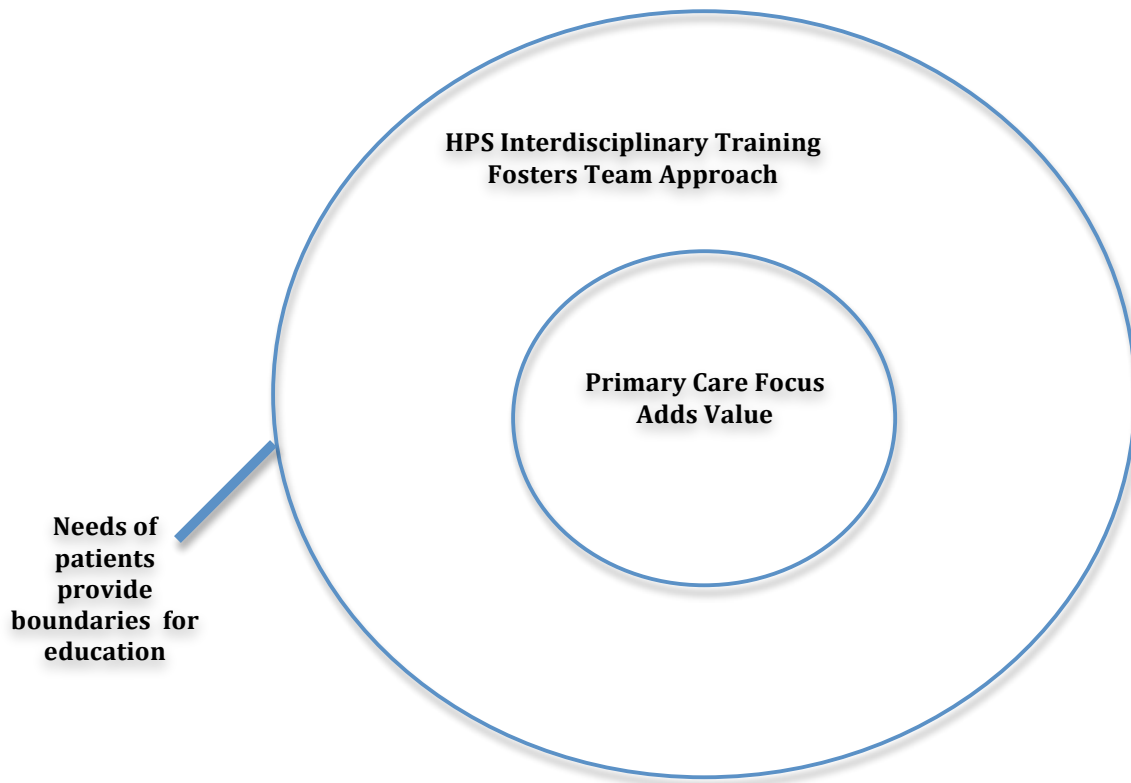


Figure 2 – Composite View of Proposed Changes – High Value, Team Approach to Coordinated, Patient-Centered Care



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