

Policy Brief

FINDINGS FROM THE 14TH PRINCETON CONFERENCE, SPONSORED BY THE COUNCIL ON HEALTH CARE ECONOMICS AND POLICY, MAY 23-24, 2007.

THE HEALTH CARE WORKFORCE: FACING PERIL OR OPPORTUNITY?

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The 14th Annual Princeton Conference in May 2007, focused on key health care workforce issues currently facing the United States. At the conference, we examined policies and organizational and professional practices that impact physician supply and demand, issues of diversity in the clinical workforce, nursing shortages and the use of alternative medical care providers.

We may be facing a potential clinical workforce crisis, with far-reaching ramifications. Evidence was presented indicating that an impending physician and nurse shortage may dramatically reduce access to care and adversely impact the health care delivery system. The shortages of human capital within the clinical workforce could erode patient care and outcomes, overwhelm many health care facilities, and further strain the clinical workforce left to grapple with the demand for services. Some participants assert that avoiding this crisis requires immediate action to train and deploy more physicians. Others believe that simply training more physicians will exacerbate the inefficiencies of the current system, and not provide adequate returns for the immense investment that would be required. They made the case that by using physicians and other clinical staff more efficiently we could meet future demand, while also improving quality and reducing costs. Like so many other health policy demands, the key challenge is in determining how to invest our resources wisely. This Policy Brief presents our findings from the 2007 Princeton Conference, and concludes with potential solutions and next steps offered by our invited participants.

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Dr. Richard Cooper

“...THE UNITED STATES WILL FACE A DEFECIT OF 200,000 PHYSICIANS BY 2020.”

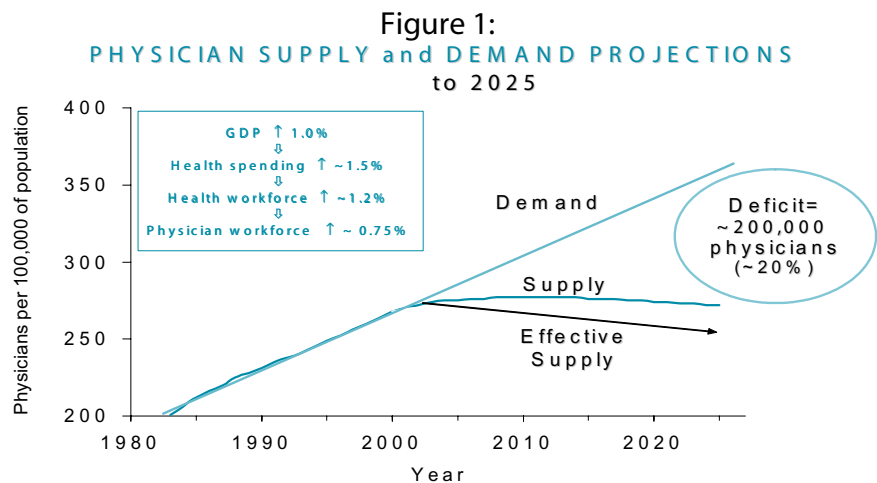
PENDING CRISIS OR NEED FOR GREATER EFFICIENCY?

Dr. Richard Cooper, Professor of Internal Medicine at the University of Pennsylvania, a proponent of increasing our physician supply, advocates immediately training more physicians to avert or mitigate an impending crisis. He cites longer waiting times for patients, increased recruitment challenges, and reports of physician shortages from state medical societies and hospital associations. If the current physician shortage goes unaddressed it will result in people going without necessary care. Dr. Cooper projects that with current trajectories of supply and demand, the United States will have a deficit of 200,000 physicians by 2020.

Figure 1, Physician Supply and Demand Projections, depicts the rising demand for physician services and a steady or decreasing effective supply of physicians into the future. And, even if we increase the number of physician training slots by

500 to 1,000 per year for the next ten years, we still would not have enough physicians to meet our projected demand.

We are facing a similar dilemma with nurses. Dr. Linda Aiken, Professor of Nursing and Sociology, and Director of the Center for Health Outcomes and Policy Research at the University of Pennsylvania and Dr. Peter Buerhaus, Distinguished Professor of Nursing and Director, Center for Interdisciplinary Health Workforce Studies at Vanderbilt University Medical Center agreed that over the next 15 years, the demand for nurses is expected to grow substantially. Simultaneously, large numbers of aging baby boom nurses will retire, leading to a reduction in the supply and average length of professional experience of nurses. Dr. Aiken projects a shortfall of 340,000 RNs by 2020. The inability of the current nursing system to educate and train nurses to fill these positions (e.g. significant shortages of experienced nursing faculty, classroom space and clinical placement programs)



Source: Richard Cooper: The Imperative to Increase Physician Supply

negatively impacts the quality of care delivered to patients and ultimately the health care system as a whole.

Returning to the issue of physician shortage, Dr. Cooper's conclusions were bolstered by evidence of physician shortages in 14 states as presented by Edward Salsberg, Director of the Center for Workforce Studies for the Association of American Medical Colleges (AAMC). Mr. Salsberg discussed some alarming trends among practicing physicians, which could exacerbate this shortage. These included physicians experiencing overload and burn-out, and reports of shortages by state medical societies, hospital associations and specialty organizations. Additionally, many leading professional associations, including the AAMC, American Medical Association (AMA) and Council on Graduate Medical Education (COGME) all believe that we face a growing physician shortage.

Other experts had very different perspectives. They argue that the United States would not need more physicians if it used its healthcare workforce more efficiently. These views were expressed by Dr. David Goodman, Professor of Pediatrics and Community & Family Medicine and Dr. Elliott Fisher, Director of the Center for Evaluative Clinical Studies at Dartmouth Medical School. They believe there are enough physicians practicing and in the pipeline who could meet cur-

rent and future demands if properly deployed. Their research concludes that physician-to-patient staff ratio at high performing hospitals and health care systems demonstrate that fewer physicians can lead to higher quality.

Dr. Fisher and colleagues' research demonstrates that high performing hospitals and health care systems achieve better quality with fewer physicians than the average facility. As Dr. Fisher points out, the Mayo Medical Center uses 20.3 FTE physicians per 1,000 decedents whereas UCLA and Cedars use 40.6 and 52.2 FTE physicians respectively. Not only is Cedars more expensive but their quality outcomes are the same if not worse in some categories than Mayo's. The Center for Evaluative Clinical Studies believes that local capacity and clinical culture are the drivers of how physicians practice and bill for their services. Clinical evidence guidelines, such as those resulting from randomized clinical trials are a critically important -- but very limited -- influence on clinical decision-making. It is how physicians practice within a local organizational context and policy environment that profoundly influences their decision-making (See Figure 2).

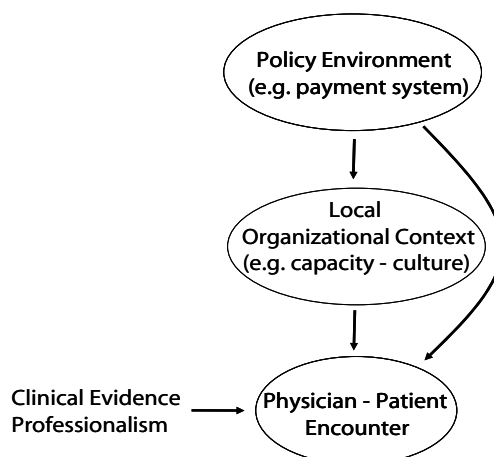
In addition, by only focusing on increasing the physician supply, we may be ignoring other important factors that play a growing role in measuring the requirements for our healthcare workforce. Drivers that



Dr. Elliot Fisher

“HIGH PERFORMING HOSPITALS AND HEALTH SYSTEMS ACHIEVE BETTER QUALITY WITH FEWER PHYSICIANS”

Figure 2: Drivers Behind the Physician - Patient Encounter



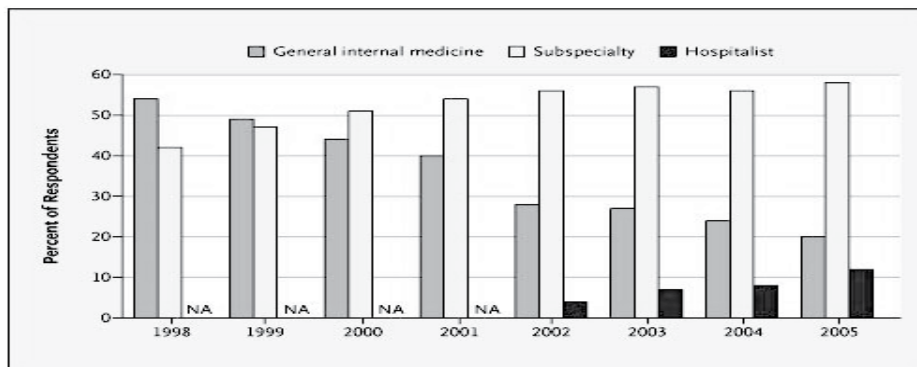
Source: Source: Elliott Fisher, *Can we use the health care workforce more efficiently? Insights from variations in practice.*

impact physician supply include: an aging workforce, imminent retirements, and international medical graduate students. Drivers of demand include the overall growth and distribution of the population, an aging population, population health status and economic growth. Newer dynamics that impact the supply of physicians include gender and generational differences as well as international migration. New demand factors include changing public expectations, life style factors, technology and other medical advances. As Dr. Fisher and colleagues' research demonstrates, health care workforce staffing needs are also largely contingent on the overarching structure of our health care system.

Therefore, we find ourselves at a cross-road between these two fundamentally different perspectives: Should we train more physicians, or focus on restructuring our financial and organizational healthcare institutions? Without consensus, solutions to managing the supply and efficiency of the health care workforce are destined to be ineffective.

IMPACTS OF THE PAYMENT SYSTEM

The problem may not be a lack of total physicians but the mal-distribution of physician specialties. Dr. Kevin Grumbach, Professor and Chair of Family and Community Medicine at the University of California, San Francisco, presented data which demonstrates a signifi-

Figure 3: Residency Positions Filled from 1998 to 2005

Source: Kevin Grumbach: *The Collapsing Primary Care Physician Foundation: Why it Matters and What to do about it.*

cant shortage of primary care and family practitioner physicians. In 2005, there were 2,727 family medicine residency positions available and only 1,132 were filled, leaving a gap of 1,595 or 58 percent of positions unfilled, as shown in Figure 3.

Dr. Uwe Reinhardt, Professor of Political Economy, Princeton University points out that, “in their infinite wisdom, both private and public payers signal with the fees they pay that America does not value much the professional work of primary-care physicians – pediatricians, general practitioners, internists, geriatricians, etc.” Reinhardt, while not happy with this fact of economic life, reminds us that young physicians understand this signal. “We are getting the type of health care professionals we are willing to pay for.”

Current payment systems in place, such as those for Medicare as described by Dr. Mark Miller, Executive Director of MedPAC, exacerbate the inappropriate mix between specialists and primary care physicians. Dr. Miller recognizes that today’s Medicare system rewards the specialties that generate certain types of high technology services, not necessarily the most appropriate ones. Also, with a fee-for-service system in place, the incentive is there for physicians to order more tests and conduct more procedures, creating the potential for unnecessary medical utilization. Therefore, a consequence of all of these issues is that reasonable individual clinical and local decisions can lead, in aggregate, to higher utilization rates, greater costs and inadvertently, worse outcomes.



Dr. Uwe Reinhardt

“WE ARE GETTING THE TYPE OF HEALTH PROFESSIONALS WE ARE WILLING TO PAY FOR.”



Dr. David Goodman

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RAMIFICATIONS OF INCREASING THE PHYSICIAN SUPPLY

The Cooper and Fisher camps both make compelling arguments. If we maintain the status quo with our healthcare system we will experience critical physician shortages that will impact access and quality of care. However, our current system is inefficient and using physicians more appropriately and efficiently may lead to better quality at lower costs. In light of that how do we decide which path to pursue?

By injecting more physicians into the current system, we may be able to meet the surge in demand generated by the growth and changing demographics of the U.S. population as well as satisfy the expectations of health consumers who demand and require care. One approach to increasing the number of physicians is to build more medical schools, which is being done today. We might be able to avoid the drastic physician shortages predicted, ease costly reorganization efforts and unproven technology fixes, reduce anxiety and uncertainty across the health care system, and ensure broad physician access, regardless of state or county. Yet, in addition to increasing the number of medical schools, Dr. Cooper recommends increasing the number of paid residency training positions in hospitals. However, this approach will likely perpetuate current ineffi-

ciencies, drive costs higher, and still may not provide the number of primary care physicians necessary to meet demand.

Further, as suggested by Dr. Goodman and colleagues, simply increasing the total number of physicians does not solve the problem of access or quality. They argue that in regions with high concentrations of physicians:

- There is a greater tendency for physicians to use aggressive treatment;
- Physicians perceive care to be less available;
- Physicians are less likely to provide primary care;
- There is lower perceived access by patients; and,
- There are no better and some times worse outcomes.

Dr. Goodman suggests that instead of spending money on training more physicians, perhaps we should consider other places to invest needed resources. Areas that have proven a return on investment include implementing the U.S. Preventive Services Task Force recommendations, ensuring health insurance for all children, or increasing immunization rates. Unless profound changes do occur that move us towards this more efficient delivery system, failure to train more physicians will result in denied or delayed access to health care services.

Dr. Mark Pauly, Professor and Chair of the Department of Health Care Systems at the Wharton School, the University of Pennsylvania noted that we need to think about the opportunity costs of drawing more people into the physician workforce, considering that as a subset, those who go into medicine are among our best and brightest. The issue of drawing in more physicians not only impacts the places from which we draw on supply, but also pulls people from other potential career tracks, in a nation that is already lacking in science and math skills. If we draw more bright people into the medical profession, then we must ask ourselves: What is it that they will not be doing? Can we afford to take these individuals away from other industries or professions that require talent and specialized skills?

THE CALL FOR GREATER DIVERSITY

Another area that may not be addressed properly by radically increasing the supply of nurses and physicians in the workforce is diversity. Focusing only on the total numbers and not their make-up may continue to exacerbate the lack of diversity in the clinical workforce. According to an Institute of Medicine (IOM) report titled “In the Nation’s Compelling Interest: Ensuring Diversity in the Health Care Workforce,” there is a large gap between the rapidly growing minority populations in the

United States and their representation among health professionals, in particular physicians and registered nurses (RNs). According to the IOM report, Latinos constitute 12 percent of the general population, but make up only 3.5 percent of physicians and 2 percent of RNs. Similarly, while African Americans constitute 12.5 percent of the population, less than 5 percent of practicing physicians are African American. While some efforts have been made over the years to improve the racial and ethnic composition of the workforce, these have not resulted in significant and sustained success.

Dr. Joan Reede, Dean for Diversity and Community Partnership at Harvard Medical School, emphasized that we need to be creative in thinking of ways to increase diversity in our health care workforce because as it is now, we have paralyzed creative thinking. Dr. Reede notes that we need to fill the pipeline with an increasing number of minority students who are better educated in science and math starting at much younger ages. We need not only better data regarding our workforce make-up but we need leadership to say that this is an important issue; or as Dr. Nancy Dickey, President and Vice Chancellor for Health Affairs at Texas A&M University System states “a push from the center.”

America’s (domestic) physician supply and demand policies have



Dr. Joan Reede

“WE NEED TO BE CREATIVE IN THINKING OF WAYS TO INCREASE DIVERSITY IN OUR HEALTH-CARE WORKFORCE...”

international ramifications, particularly when we rely on using greater numbers of foreign medical graduates to increase our physician supply. Both Dr. Fitzhugh Mullan, Murdock Head Professor of Medicine and Health Policy at George Washington University and Dr. Onyebuchi Arah, from the Department of Epidemiology, School of Public Health, University of California, Los Angeles, presented convincing arguments that using foreign medical graduates is not a fair answer to meeting demand in the United States, and that we must aim for greater self-sufficiency. If we increase the number of graduate training slots for physicians without increasing the number of United States trained medical students, we will only increase the reliance on international medical graduates to fill the projected open slots. The focus should be on increasing the number of medical schools in the United States, with the goal of using these graduates to fill in the slots for graduate medical education. Filling open slots with international medical graduates represents a form of subsidy from developing nations to developed nations, particularly when considering the costs of education and training. However, there was some dissent among participants as to whether the United States should be concerned about the use of international medical graduates particularly if they meet the appropriate United States standards.

INTERPRETING SHADES OF GRAY: ADDRESSING ISSUES OF SUPPLY AND DEMAND

Demand for physicians could be mitigated through the greater and more appropriate use of other medical professionals. For instance, there was consensus that opportunity exists to use more nurse practitioners and physician assistants, and use them more effectively. Not only does it take less time and money to educate these medical professionals (24-30 months at approximately \$1,000 per month), but they are more likely to practice in family and primary care practices as 87 percent of individuals who become NPs and PAs work in primary care practices. It was discussed that the relative debt loads and opportunity costs (years of schooling and training) for physicians may result in the disparity of physicians not choosing to practice general medicine, intensifying the shortage of primary care physicians. One of the main constraints to these medical professionals is the low number of graduates per year due to the limited training programs available nationwide. Therefore, expanding these training programs would likely be beneficial.

However, it is well known that educational and cultural systems, in general, are very difficult to change. The training and culture of physicians is no exception. To achieve greater efficiencies, we will need to

fundamentally change how physicians are trained. Dr. Kevin Schulman, Professor of Medicine & Business Administration at Duke University Medical Center warned that if we truly want to modify education and training, we can no longer let the “guild” determine training requirements for its benefit, rather we need policymakers and health care practitioners to work together to find common ground and practical solutions.

Also, although there are healthcare systems that function well with fewer physicians, the case has not been made that this is the best solution for all practices in all states. States and health care systems have individual needs and what works in New York may not work in Idaho. These variations need to be considered.

POTENTIAL SOLUTIONS TO IMMINENT WORKFORCE ISSUES

While broad consensus was seldom achieved by attendees, a myriad of perspectives yielded some important ideas. Proposals ranged from dealing with supply issues, such as reducing our nursing shortages and improving the diversity challenges in the workforce, as well as restructuring our medical and continuing medical education system.

INCREASING OUR NURSING SUPPLY

Dr. Aiken and Dr. Buerhaus believe that education is a key part of the solution. They recommend a substantial increase in targeted public subsidies for baccalaureate nursing programs in order to upgrade the education of the nurse workforce, thereby improving care quality and efficiency. In addition, upgrading nursing training programs helps to create a larger qualified pool from which to recruit faculty for all schools of nursing, many of which face acute shortages of qualified instructors. Dr. Aiken also encourages an increase in graduate education, thereby increasing qualified faculty while meeting the demand for higher educated nurse clinicians in primary care, chronic disease management, and acute care. Yet, it is unlikely that sufficient numbers of nurses will be trained by traditional means. Nurses, like physicians, need to explore alternative training program options to avoid their predicted shortages.

IMPROVING SUPPLY THROUGH IMPROVED DIVERSITY

There were numerous ideas for improving diversity (and thus supply) among our clinician workforce through the reductions of barriers, broader faculty and student recruitment, and re-evaluation of institutional missions. One of the practi-



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cal tools suggested was the development of collaborative programs that would foster interest by more minority students at a younger age. This would increase access to career exploratory opportunities, addressing the great education gaps that currently exist for minority students. We need to rectify the sharp inequities of educational attainment along ethnic and racial lines that generate statistics like those displayed in Figure 4 below.

FOCUS ON THE DISTRIBUTION AND CAPACITY OF OUR HEALTHCARE WORKFORCE OR FOCUS ON HOW IT IS FINANCED AND ORGANIZED?

As pointed out by Dr. David Goodman, before we are able to create and implement policy options and solutions we first need to agree on where we want to end

up. Only then can our actions be directly related to our intended outcomes. Attendees agree on working towards improving access, quality, outcomes and cost. Unfortunately, the next, and arguably the most difficult step, is deciding the most effective and efficient ways of achieving these desired outcomes.

One important recommendation is to reform physician payment policies by investing in the development of primary care physicians, i.e. providing more appropriate payments, recognition and more flexible work hours, thereby reducing the physician income gap. Other payment reform options include: medical home care coordination payments that support electronic health records (EHRs), however, payment reform will not solve all the challenges of efficiency and outcomes.

Figure 4: The Pipeline

	White (25-29 year olds)	African American (25-29 year olds)	Latino (25 -29 year olds)	American Indian/Alaskan Native (24 year olds)
Graduate from High School	93	87	63	58
Complete at least some College	65	50	32	
Obtain at least a Bachelor's Degree	33	18	11	7

Source: Joan Reede, The Changing Demographics of the Physician Workforce

To restore the balance in our health care system, it was suggested that the health care system should ensure accurate prices, reward care coordination (i.e. reward physicians who choose to be accountable), and improve payment incentives, information, and education. Similarly, Dr. Fisher and colleagues' suggestions for improvement include: fostering development of local organizations and delivery systems and making them accountable for care. We also need to provide balanced information to our physicians and medical providers on risks and benefits as well as comprehensive performance measures. By providing a shared savings to our physicians in the interim, with the long term goal of the overall reform of the payment system, we can align payment with the appropriate incentives.

Technology was an additional area for potential solutions, as its impact on the provision of health

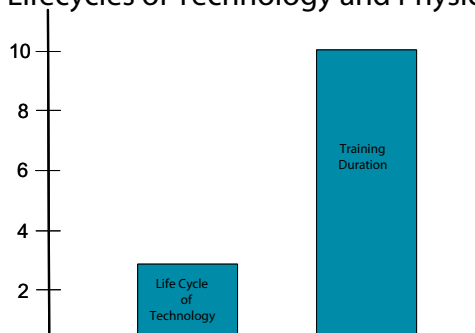
care in the United States cannot be ignored. In regards to technology and physician training, Dr. Schulman makes some interesting observations. As shown in Figure 5, the lifecycle of a new technology is approximately a third of the time it takes to train a physician. What that means is the technology that physicians learn in their training may not be the same technology they use (or should use) once they reach their practices. Dr. Schulman also acknowledges that physicians need more training in using decision support tools that can help them practice more efficiently. Dr. David Blumenthal, Director of the Institute for Health Policy, Massachusetts General Hospital, suggested we begin to train physicians for the task of life-long learning. By modifying the training of physicians in medical school and hospital settings, we can equip them with the necessary tools to adapt their practice of medicine that seems to be ever-changing,



Dr. Elliot Fisher

“...WITH THE LONG TERM GOAL OF OVERALL REFORM OF THE PAYMENT SYSTEM, WE CAN ALIGN PAYMENT WITH THE APPROPRIATE INCENTIVES.”

Figure 5: Lifecycles of Technology and Physician Training



Source: Kevin Schulman, Reflections



Dr. David Blumenthal

“THE DAYS ARE GONE WHEN A PHYSICIAN COULD EXPECT TO PRACTICE MEDICINE IN A SIMILAR FASHION FOR THEIR ENTIRE CAREER.”

such as the growing role of personalized medicine.

The days are gone when a physician could expect to practice medicine in a similar fashion for their entire career. The medical world is dynamic and we need our training of medical professionals to reflect that. In addition to modifying our physician training, we also need to create a new training paradigm that is flexible, economical and sustainable.

CONCLUSIONS

As Dr. Harvey Fineberg, President of the Institute of Medicine, observed, the health care workforce issue is viewed as important but not urgent. In Washington, only the urgent issues get the money and most notably, the attention. In order to bring health care workforce issues to the forefront, we need to add salience to the problem. We need leadership that understands what the drivers of potential influence are versus the levers of potential influence. While population growth, an aging population and economic growth of states may be drivers of potential influence; public expectations, life style factors, technology and political know-how may be the levers of potential influence. Life style factors are particularly important because physicians and other clinical staff who enter the workforce may be seeking more flexibility in their careers and a more balanced work-life balance.

Currently, the system is fractured, and lacks strong leaders who are capable of listening to various positions and addressing some of the challenges, thereby, heightening the problem.

We believe that Dr. Cooper and colleagues are correct: if the health care system remains the way it is we will experience significant physician shortages that will impact access to and quality of care. However, Dr. Fisher and colleagues are also correct: the current system is inefficient and theoretically, re-allocating physicians could meet demands and lead to better quality at lower costs. Moreover, training more physicians in the same manner will worsen current inefficiencies. Thus, the impending crisis could be an opportunity for major system change.

However, if we do not start training physicians now, in the absence of reform, shortages will occur and the consequences could be profound.

We can hope that a pending physician shortage will put pressure on the system to change, but the price of failure could be very high. In the interim, there are some policy options that we could begin implementing to move us in the right direction. Solutions might include the increased use of community clinics, non-traditional provider venues such as minute clinics, and practice better management of

chronic diseases. The greater use of alternative non-physician providers such as nurse practitioners and physician assistants could ease demand without reducing quality. We could alter payment methodology to reward preventive care, increase coordination among clinicians, and conduct close management of patients with chronic conditions to help contain spiraling health care costs. Payment incentives could be adjusted to 1) provide financial incentives for medical students to become primary care physicians and 2) reward primary care physicians and specialists in short supply. A longer term goal is to revamp the medical education system to train (and re-train) versatile physicians, helping them become more capable of using rapidly changing technology both more effectively and efficiently.

Dissension among key stakeholders will make it difficult to ensure that tomorrow's health care delivery system meets future needs efficiently and effectively. More work is needed to determine how to move towards a higher performing health care delivery system, and realize system-wide efficiencies that are being achieved by the best hospitals and health care systems. But change is difficult and takes time and pressure. The sense of crisis may have to deepen to force political and health care stakeholders to reach some sort of consensus both around the problems and the potential solutions to muster the political will necessary for change.

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Council on Health Care Economics and Policy



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