



# Closing the Health Care Workforce Gap

Reforming Federal Health Care Workforce Policies  
to Meet the Needs of the 21st Century

---

Daniel J. Derksen and Ellen-Marie Whelan December 2009

Center for American Progress



# Closing the Health Care Workforce Gap

Reforming Federal Health Care Workforce Policies  
to Meet the Needs of the 21st Century

---

Daniel J. Derksen and Ellen-Marie Whelan December 2009

# Introduction and summary

America's five million health care professionals directly influence the cost and quality of health care through their diagnoses, orders, prescriptions, and treatments.<sup>1</sup> These primary care and specialist physicians, dentists, nurses, and other medical and dental assistants labor every day to take care of their patients, but experts say there are too few of them today, and by 2020 there will be a shortage of up to 200,000 physicians and 1 million nurses.<sup>2</sup> Rural Americans and those living in other underserved areas across the country are especially vulnerable to these current and growing health workforce shortages.

As our nation grapples with reforming the U.S. health care system to cover the uninsured, improve the quality of health care, and cut overall costs in the long term, we must consider provisions to assure an adequate health care workforce. Primary care clinicians—those providing the most basic, frontline health services—continue to decrease in numbers and there are many pockets around the country without enough health care providers overall. Researchers estimate that policies to expand coverage to all Americans would increase demand for physician services by 25 percent.<sup>3</sup> Our nation already suffers from a long-standing shortage of nurses—the U.S. Bureau of Health Professionals estimates today's shortage to be over 400,000 nurses.<sup>4</sup> And the American Hospital Association calculates 116,000 registered nurse positions are unfilled at U.S. hospitals and 100,000 jobs are vacant in nursing homes.<sup>5</sup> Some expect the shortage to worsen as 78 million baby boomers<sup>6</sup> begin to hit retirement age in 2011 and require more care for chronic illnesses.

This is an especially important time to examine these shortages as Congress considers expanding access to health care to the entire nation and the jobless rate in our country hovers at 10 percent.<sup>7</sup> Congress and the Obama administration have a historic opportunity to prepare the nation for health care reform in 2010 as well as solve several long-standing problems in the way federal subsidies support health care workforce training programs.

But what to do? There remain some questions whether the problem is a shortage of health professionals overall or just with the distribution of particular types of health professionals in certain areas of need, such as by geography or by profession. Assessing health workforce needs is difficult because there are many variables that determine its adequacy and no single entity in the United States is in charge of workforce planning. Variables that make workforce planning difficult to estimate include regional maldistribution of health professionals, overspecialization of physicians, and the current and expected demographics of the health

workforce and the population they serve, among others. Few models are available to accurately predict what an adequate ratio of health professionals should be to the population served in a given area.

Still, several remedies that can be acted upon now are clear. First and foremost, training a high-performing health workforce will enhance the success of policy reforms directed at health insurance coverage, access to quality care, and controlling costs. The United States lacks a cohesive approach to workforce shortages, modern training of health professionals across disciplines, and distribution of health professionals to areas of need. Reliable access to quality, affordable care is not available in many areas and for certain populations. Rational reform of the federal support for health workforce training and distribution will create a more efficient, higher quality health system.

Federal funding, including subsidies from the federal government's Medicare program and the joint federal-state Medicaid program, for physician training has not been overhauled for decades. The federal government pays for health care workforce development in two broad categories. The largest is payment to teaching hospitals to train physicians in residency programs and for the higher costs associated with their teaching mission. The payments to these hospitals are based on complex formulas paid through Medicare and Medicaid, totaling about \$12 billion per year.

The second bucket of funding for the health workforce is through Health Resources and Services Administration programs, about \$530 million allocated at the discretion of Congress. HRSA funding supports primary care, general dentistry, nursing, and grants and incentives for providers to work in medically underserved communities and in shortage specialties such as primary care. For every dollar spent on HRSA's programs, teaching hospitals are paid \$24 by Medicare and Medicaid to subsidize physician training. Funding of teaching hospitals is the bulldozer to the HRSA rake in reshaping the health workforce landscape.

Alas, there is little relationship between what the federal government funds and the quality of education or even the costs of educating physicians and other providers. This paper offers the following mix of recommendations to fiscal, legislative, and regulatory policies to assure the balance, mix, and distribution of health professionals necessary for a well-functioning, cost-efficient U.S. health system in the 21st century. In the pages that follow, we identify numerous recommendations to alleviate these problems, but broadly our proposals fall into three general areas.

## Three sets of recommendations to boost our health care workforce

- Create a permanent National Health Workforce Commission to better align federal payment policies for health professions
- Support for health care workers in high-need specialties and underserved areas
- Reform the training of health professionals to grow our health care workforce

---

### Better align federal payment policies for health professions

With so many moving parts and so many different programs in different federal agencies, there needs to be a body specifically assigned to examine and make decisions about the

U. S. health workforce. The best way to accomplish this realignment is by creating a permanent National Health Workforce Commission.

This new commission would make recommendations to Congress and appropriate agencies to design funding and incentives, and to evaluate the implementation and revision of programs, grants, and regulations related to the nation's health workforce. The commission's recommendations would assist Congress and federal agencies address the long-term health care workforce needs for our nation and help to better allocate funding.

In addition, we recommend new federal support for graduate school-level nursing education to ensure there are enough nursing teachers to train the millions of nurses we need in the coming decade. Today, the number of nursing faculty at our universities is insufficient to address current shortages, let alone those projected in 10 years. Improving the nursing workforce must include hiring more faculty, creating loan programs to help nursing students, and redirecting Medicare subsidies to nursing specialties who provide care to Medicare beneficiaries.

Lastly, payment of primary care providers needs to be enhanced and new payment methodologies developed to reward prevention, coordination of care, and management of chronic diseases such as diabetes. If Medicare leads the way by increasing the rates primary care clinicians are paid in the current reimbursement system and developing new ways of paying for care that reward outcomes that typically come from better delivery of primary care, then private payers will likely follow. Innovative payment models include paying for better coordinated care and improved outcomes through so-called Medical Homes and Accountable Care Organizations, which treat patients for "episodes" of care rather than on a per-visit basis, and coordinate care as patients are discharged from the hospitals to prevent rehospitalizations.

---

## Support for health care workers in high-need specialties and underserved areas

Definitions of health care workforce shortage areas include primary care, mental and behavioral health, dental, and other specialties, as well as geographic and population designations. Enhanced funding for the National Health Service Corps would help fill vacancies in these areas, and should include scholarship and loan repayment programs to help recruit and retain an adequate health care workforce.

Increasing funding for nursing workforce programs is necessary to expand nursing faculty to train enough nurses to meet the nation's needs. Special programs to encourage low-income, rural, and minority students to pursue health careers, such as the Health Careers Opportunities Programs and Centers of Excellence funded through the Health Resources and Services Administration, also would help assure a diverse health professions workforce and reduce health disparities due to socioeconomic, geographic, race, and ethnicity factors.

---

## Reform the training of health professionals

Training reform can be accomplished by enhancing and modernizing subsidies for the education of health care professionals of all stripes. This can be accomplished in several ways, by balancing the current emphasis on training in highly subspecialized “tertiary care” hospitals with training outside the hospital in outpatient, rural, and community sites, and changing the content of education to include the provision of health care in teams and coordinated across disciplines, both inside and outside the hospital. These changes will mean increasing the necessary faculty to provide interdisciplinary and team-based training to teach the skills needed to work in a reformed health system.

To achieve these ends, we recommend that current federal dollars now spent on training physicians in hospitals also be available for spending in community-based sites. Currently the funding for medical residents does not allow reimbursement for training in community-based sites. This ban must be lifted. Since most of the health care Americans receive occurs outside the hospital, there needs to be more of an investment in nonhospital-based training for physicians. This could be done through hospitals to expand training locations or with payments directly to community-based sites, a provision known as Teaching Health Centers.

Federal funding also should be expanded to provide grants and loans for the start-up costs associated with developing new community-based training sites in underserved communities. And in addition to new locations, the content of the training must be revamped. Training should be more interdisciplinary and move toward a more team-based approach.

All these reforms, taken together, can prepare our country for the steep health care challenges we face as the baby boom generation enters retirement in force and as health care reform increases demand and further propels us to grow our health care workforce. After reading our paper, we’re confident you’ll agree that demonstrable steps can be taken by Congress and the Obama administration in league with health training institutions to ensure America boasts the best, deepest, and most diversified health care workforce in the world.

# Understanding our health care workforces shortages

There is no disputing the shortage of health care workers in our country today, but there are valid differences of opinion over whether the problem is a shortage of health professionals overall or with the distribution of particular types of health professionals in certain areas of need. The variables that determine the adequacy of our nation's health care needs now and into the 21st century include:

- Regional distribution of physicians, dentists, nurses, and other health care professionals
- Specialization of health care professionals, and the ratio of primary care clinicians to specialists
- Coordination of health services delivery by a new mix or team of health providers
- Current and expected demographic changes in the U.S. health care workforce
- Current and expected demographic changes in the U.S. population

To address these problems, some health care experts recommend that we simply increase medical school class sizes by 15 to 30 percent and relax the cap on residency slots instituted in the 1997 Balanced Budget Act.<sup>8</sup> But this would do little to alleviate the shortage of primary care physicians or the severe shortage of physicians in many rural and low-income areas. For every new physician that decides to practice an underserved area, four will settle in region of the country with adequate numbers of providers.<sup>9</sup> True reform will require close attention to the type of health professionals needed and where those professionals practice.

Other health care researchers reject the notion that there is an overall physician shortage, arguing that attention to the distribution and provision of more integrated, coordinated health care will be more effective from cost and quality perspectives.<sup>10</sup> These researchers also note that some health care providers are not used to their full capacity or appropriate to their level of training. Health providers such as nurse practitioners, physician, or dental assistants are more quickly trained and deployed, but are too often forgotten in health workforce policy discussions and decisions about federal subsidies for their education.<sup>11</sup>

Experts may not agree on the degree of shortage or the types of health professionals most needed. But there is consensus that certain populations and areas of the country have substantial problems with access to quality care. These shortages can be broken down into distinct categories:

- Primary care physician shortages
- Nursing shortages
- Geographic maldistribution shortages
- Diversity shortages

Let's consider each of these in turn.

---

## Primary care shortage

The health profession's pipeline is failing to supply certain disciplines in shortage areas. The number of graduates from U.S. medical schools who choose family medicine residencies plummeted 50 percent in 10 years.<sup>12</sup> Primary care physicians earn on average half of what their specialty colleagues make, and the gap is widening. The medical school debt is the same for graduates choosing primary care or specialty residencies, but the ability to repay based on income is not.

The current reimbursement system is a big part of the problem. Medicare and most other health insurance providers pay doctors for individual services as they are delivered, a so-called "fee-for-service" system. This payment mechanism rewards increased quantity and intensity of services, without regard to quality, efficiency, or effectiveness. Medicare lacks payment methodologies to catalyze coordination of care and assure value for the services provided. So, too, do most private health insurance plans since they often follow Medicare's lead in physician payment.

Also problematic is how the payment for these services is determined. The American Medical Association formed the Relative Value Scale Update Committee, or RUC, to make recommendations to the Centers for Medicare and Medicaid Services—or CMS, the federal agency that runs Medicare and Medicaid—regarding the relative value of specific physician services and the Medicare physician fee-for-service payment formula. CMS accepts 90 percent of RUC's recommendations.

The problem is, RUC membership is left up to the AMA and is not public. Although primary care physicians handle almost half of Medicare visits, they make up only 15 percent of RUC members.<sup>13</sup> One reason primary care payment levels have not kept pace with demand or market prices is because it takes a two-thirds majority of RUC to accept a recommendation.<sup>14</sup>

Furthermore, private insurers and managed care organizations almost all utilize Medicare's so-called relative value methodology—called the Resource Based Relative Value System, or RBRVS—to determine physician payment. RUC members also determine RBRVS valuation for every physician service. Thus, payment for physician services is not based on the market, but on RUC's recommendations—without outside accountability and transparency.

Primary care clinicians—those providing the most basic, frontline health services—continue to decrease in numbers.

Policymakers and agencies such as the Medicare Payment Advisory Commission, or MedPAC, which advises Congress on Medicare policies and the Government Accountability Office, the investigative arm of Congress, have consistently recommended policy reforms to revive primary care. One GAO expert testifying before Congress recently noted that:

*Conventional payment systems tend to undervalue primary care services relative to specialty services. Research shows that preventive care, care coordination for the chronically ill, and continuity of care—all hallmarks of primary care medicine—can achieve improved outcomes and cost savings.<sup>15</sup>*

For its part, MedPAC recently recommended increasing payment for primary care services and instituting payment methodologies to reward coordination of care.<sup>16</sup> It further recommended that “CMS rely less heavily on physician specialty societies to identify overvalued services and provide supporting evidence, establish an expert panel within CMS to help identify overvalued services, and use volume growth as an indicator of mispricing.”<sup>17</sup>

---

## Nursing shortage

The United States is in the midst of a nursing shortage that is expected to intensify as baby boomers age and the need for health care grows. Nursing programs across the country are struggling to expand enrollment levels to meet the rising demand. The nursing shortage is projected to grow to 260,000 to 1,000,000 registered nurses by 2025, or twice as large as the shortage experienced in the mid-1960s.<sup>18</sup> Attrition due to an aging workforce and lack of nursing faculty are principal contributors to the projected shortage.

The problem is longstanding. Over the past decade, numerous initiatives to recruit more nurses into the profession were launched and many of them were very successful. Yet with this increase in enrollment comes an added challenge—the need for increasing the nursing faculty and clinical sites to educate new nurses. Without qualified faculty to teach students, the nursing shortage will worsen.

Interest today in nursing careers is high, with almost 50,000 qualified applicants to professional nursing programs turned away in 2008, including nearly 7,000 to master’s and doctoral degree programs. Over three-quarters of the nursing schools responding to a survey pointed to faculty shortages as the reason for not accepting all qualified applicants into entry-level baccalaureate programs.<sup>19</sup> Clearly, to fix the nursing shortage we must first address the dearth of nursing faculty.

---

## Geographic maldistribution shortages

There is general agreement that the current health care workforce is not well distributed. More than 20 percent of the U.S. population, or 64 million people, live in areas designated by the federal government as health professions shortage areas, struggling every day without access to adequate medical care.<sup>20</sup> Another 48 million lack access to dental care,<sup>21</sup> and 77 million are without access to behavioral and mental health services. Physician, dentist, and nursing supply varies two to threefold across regions.<sup>22</sup>

No measurable relationship exists between regional health needs and health workforce supply. For example, there are 93 primary care physicians per 100,000 people in metropolitan areas, compared with 55 primary care physicians per person in nonmetropolitan areas, and a wider variation of specialists, at 200 per 100,000 in metropolitan areas and 33 in nonmetropolitan areas.<sup>23</sup>

Both the primary care shortage and the geographic maldistribution are due in part to where doctors are trained. Most of the health workforce clinical training venues are in urban areas and a preponderance of federally subsidized training occurs in inpatient, highly specialized “tertiary care” hospitals such as those with high level intensive care units and trauma centers. This is the opposite of what physicians will experience once they are in practice. About 79 percent of practicing physician income is from “ambulatory care,” or care provided in a doctor’s office or other outpatient settings, while only 21 percent is from inpatient care in hospitals.<sup>24</sup> Individuals receive the vast majority of their health care outside of the hospital. For every patient hospitalized in a teaching hospital, more than 200 visit a physician’s office, and more than half of those are in a primary care physician’s office.<sup>25</sup>

Programs that train health professionals with clinical experiences in community-based, rural, and medically underserved areas have a higher rate of graduating students and trainees into these areas to practice. But there are few federal subsidies for outpatient, community-based training. Reform should balance where physicians are trained with where they are going to spend most of their time practicing and where people access most of their care.

---

## Diversity shortage

The current education pipeline for health care professionals often begins and ends in urban, adequately served areas and does not reflect the socioeconomic, racial and ethnic, or rural diversity of the population. The new surgeon general, Regina Benjamin, recently noted that the proportion of U.S. physicians who are minorities is the same proportion as a century ago stating, “There’s something wrong with that.”<sup>26</sup>

Data suggest that medical school applicants from underrepresented minority, rural, and middle- or low-income families are more likely to practice in underserved areas from which they came.<sup>27</sup> Underrepresented minorities are those racial and ethnic populations that are underrepresented in the medical profession relative to their numbers in the general population, largely African Americans, Hispanics, and Native Americans. Although 25 percent of the U.S. population is comprised of these racial groups, medical training programs are comprised of fewer than 7 percent of these underrepresented minorities.

These training programs over the past two decades have made little progress to assure a diverse health professions workforce.<sup>28</sup> The number and percentage of rural medical school applicants, for example, who were accepted into these training programs fell to 1,097 in 2007, or 5.8 percent of those enrolled, compared to 1,275, or 7.5 percent, in 1988.<sup>29</sup> This is not at all reflective of the 20 percent of the U.S. population living in rural areas.

In addition, medical students tend to come from the most affluent families. About 70 percent of medical school graduates currently come from families in the top 20 percent in parental income, or those who make more than \$100,000 a year. Medical students from the highest income segment are also the least likely to enter primary care, or practice in rural and underserved areas. In fact, 80 percent of specialist graduates practice in just 3 percent of the nation's total land area, usually in the same zip code as major medical centers.<sup>30</sup> Reducing the poorer health outcomes suffered by minority, low-income, and rural populations will require new investments to assure a more diverse health professions workforce, more reflective and representative of our population. These outcomes should be tracked as part of the evaluation and ranking of health professions training programs receiving government support.

# Current federal funding of education programs for health care professionals

The federal government pays for health care workforce development in two broad categories. The first and largest component is payment to teaching hospitals to train physicians in residency programs and for the higher costs associated with their teaching mission. Since their inception, Medicare and Medicaid have subsidized hospital physician training, averaging almost \$100,000 per resident per year. This payment to teaching hospitals is through add-on payments to Medicare and Medicaid. In 2007 Medicare paid \$8.9 billion<sup>31</sup> and the Medicaid program contributed another \$3.2 billion<sup>32</sup> in 2005, the last year for which complete data are available, or \$12 billion in government subsidies. Surprisingly, states are not required to regularly report on Medicaid spending to support resident education, which explains the four-year time lag on available Medicaid data (see Table 1 on page 12).

The second and smaller component is a set of health workforce programs administered by the Health Resources and Services Administration at the discretion of Congress. HRSA funds programs that support primary care, general dentistry, and nursing, and grants for providers to work in medically underserved communities and in shortage specialties such as primary care. For fiscal year 2009, Congress appropriated nearly \$530 million in funding for these programs, and an additional investment of \$200 million in the American Recovery and Reinvestment Act of 2009 (see Table 2 on page 14).<sup>33</sup>

For every federal dollar spent on HRSA's primary care, nursing, and dental workforce programs, teaching hospitals are paid \$24 by Medicare and Medicaid to subsidize physician training. Federal funding of teaching hospitals is the bulldozer to the HRSA rake in reshaping the health workforce landscape. The bulldozer—teaching hospital subsidies—can be used to clear the way and smooth the road toward a reformed system, responsive to individual and community need. For years, our nation has been using a rake to push change through a meager patchwork of support for HRSA's training programs intended to counter overwhelming market incentives toward lucrative and highly specialized services—mostly in metropolitan areas.

It is important to note that Medicare and Medicaid funding, including the teaching hospital subsidies, is considered “mandatory” spending in Congress and therefore does not face the annual budget battles that characterize the modest health professions workforce subsidies in the HRSA programs, which are considered “discretionary.” This means the \$12 billion in federal subsidies to teaching hospitals for physician residency training is

paid automatically every year, by the same formula, without any Congressional intervention. This is in sharp contrast to any funding that is distributed through the appropriations process, which is included in the president’s budget, then must be written into both the House of Representatives and the Senate appropriations bills and then ultimately passed by both chambers—every year. This is how the HRSA workforce programs—the programs for all other health professionals summarized in the next section—are funded.

More equitable funding of these programs will ultimately create a more balanced health delivery ecosystem. Changing federal subsidies can inspire reform and restore balance. As we will demonstrate in this section of the paper, using the federal policy tools available to us—including the gathering and analysis of data to make recommendations through a national workforce commission, making funding formulas for subsidies of physician education more rational and aligned with health workforce needs, and enhancing funding for high-needs specialties in rural and underserved populations—will create a more balanced health delivery system, more responsive to individual and community health needs.

---

### Medicare and Medicaid payments to teaching hospitals

The large majority of federal funding for the education of health care professionals supports teaching hospitals’ training of physicians and the safety-net missions of these institutions—delivered by new physicians in residency training programs. Teaching hospitals deliver medical care to patients and also provide clinical education and training to future and current doctors, nurses, and other health professionals.

In our country, the process of becoming a doctor starts with an undergraduate degree followed by four years of medical school—referred to as “undergraduate” medical education. Medical school students then select an area of specialty and move onto residency training—known as Graduate Medical Education, or GME—sponsored by medical schools or teaching hospitals. This “graduate” residency is a minimum of three years for primary care specialties and longer for the subspecialties.

The federal government, through Medicare and Medicaid payments, subsidizes teaching hospitals by paying for:

- The actual or “direct” cost of resident salaries and fringe benefits and teaching supervision by faculty physicians, known as Direct Graduate Medical Education, or DGME
- An additional amount to cover the indirect costs that hospitals incur training inexperienced new doctors who might be less efficient in the care they provide, for example, by ordering more tests or taking more time to come up with diagnoses, known as Indirect Medical Education, or IME

More equitable funding of health workforce programs will ultimately create a more balanced health delivery ecosystem.

**TABLE 1**  
**Federal investment in physician training**

Breakdown of federal funding of graduate medical education in teaching hospitals

Teaching Hospital Residency Graduate Medical Education (GME) funding	In billions
Medicare Direct Graduate Medical Education payments	\$2.9
Medicare Indirect Medical Education payments	\$6.0
<b>Fiscal year 2007 subtotal Medicare GME/IME</b>	<b>\$8.9</b>
Medicaid Direct Graduate Medical Education payments	\$0.8
Medicaid Indirect Medical Education payments	\$2.4
<b>Fiscal year 2005 subtotal Medicaid GME/IME</b>	<b>\$3.2</b>
<b>Estimated* annual Medicaid + Medicare GME/IME</b>	<b>\$12.1</b>

\* 2005 Medicaid data is most recent year available and likely underestimates current total.

Source: Medicare numbers (most recent year available): MedPAC Report to the Congress: Improving Incentives in the Medicare Program. June 2009; Medicaid numbers (most recent year available) Iglehart J. Medicare, Graduate Medical Education, and New Policy Directions. N Engl J Med 2008. 359:6:643-50 and Henderson TM. Medicaid direct and indirect graduate medical education payments: a 50-state survey. Washington, DC: Association of American Medical Colleges, 2006.

In 2007, Medicare paid nearly \$9 billion to teaching hospitals for the education and training of 90,000 resident physicians in more than 1,100 teaching hospitals.<sup>34</sup> Two-thirds of this, \$6.0 billion, was for indirect medical education costs to help pay for hospital operating expenses (see Table 1).<sup>35</sup>

The Medicaid program contributed another \$3.2 billion in 2005 (the last year data is available) from federal and state sources. Subsidies from Medicare and Medicaid support predominantly urban, inpatient, and specialty physician education and services. The annual payments to teaching hospitals are based on complex formulas paid through Medicare and Medicaid and total more than \$12 billion each year.

In its 19th Report to Congress, the Council on Graduate Medical Education recommended that these federal subsidies for teaching hospitals more explicitly align with healthcare needs and be more flexible in the training venue beyond the traditional inpatient hospital sites.<sup>36</sup> While the direct GME funding requires detailed reporting of work done within the hospital, the accounting for indirect IME funding is much less detailed—even though it comprises two-thirds of the total Medicare GME funding. MedPAC found that in regard to IME, “These funds are provided to hospitals with no accountability for how they are used.”<sup>37</sup>

In addition to federal subsidies, private insurers also contribute to the training of physicians. It is even more difficult to estimate these contributions. Usually, it is an indirect subsidy, paid for by higher fees for the highly specialized services that can only be done by teaching hospitals or because of the large number of providers and services in those institutions that allow them to negotiate higher rates with private payers. One study estimates that private payer support of hospital-based residency training at \$7.2 bil-

lion in 2006.<sup>38</sup> This support is quite variable, most likely underestimated, and similar to Medicare and Medicaid subsidies, does not require a clear definition of what is expected in exchange for that support.

Medicare, Medicaid, and private subsidies for hospital residency training came about because of the role teaching hospitals play in the delivery of care to vulnerable populations. Academic health centers, teaching hospitals, and medical facilities such as community health centers and rural clinics provide crucial safety net health services for the poor. They offer rich opportunities for the contemporary training of health professionals. The higher costs of teaching and providing care in hospitals and in the community, and their importance to vulnerable patients, have resulted in a patchwork of funding using opaque, outdated formulas that are unrelated to performance or national health workforce needs.

Yet this generous funding of physician residency programs is not consistent with the nation's current health workforce needs. Increasingly, health care is provided outside hospitals, while the vast majority of physician training occurs in hospitals. This emphasis on inpatient training is in part responsible for the nation's primary care-specialty imbalance. It is therefore not surprising that most physician trainees go on to subspecialize while the primary care workforce shortages worsen.

Another big problem with the Medicare GME subsidy is it does not allow payments for community-based sites. For medical facilities providing community-based rotations and ambulatory learning experiences for health professionals, a current GME regulation does not allow payment if those experiences occur outside the confines of the teaching hospital or their affiliated clinics. This regulation creates a major obstacle to contemporary training in ambulatory and community-based venues.

Case in point: Medical residents do not receive training in the settings in which they are most likely to practice, while the community clinics and other venues that could serve as teaching sites continue to scramble for providers. Training programs that try to balance inpatient training with training in ambulatory primary care settings—such as in community health centers and rural health clinics—are often plagued by insufficient funding and the reluctance of urban teaching hospitals to allow residents to see patients outside the institution.

---

## Medicare funding for nursing training

Since its inception in 1965, Medicare also has paid—to a much lesser degree—for nursing education for hospital-based diploma programs. In those days, over 90 percent of registered nurses were trained in hospitals. Today the majority of nurses are trained in academic settings and only 7 percent receive their primary training in a hospital-based setting. Yet Medicare still pays about \$150 million per year to these hospitals for nurse training and nothing to academic centers.<sup>39</sup> In addition, the majority of this funding goes to just three states.<sup>40</sup>

## Health Resources and Services Administration

The second funding source for health professions is programs within HRSA, the nation’s “access” agency, which is charged with improving health by making sure the right health care services are available in the right places at the right time. Funds for this agency are allocated at the discretion of Congress to support primary care and general dentistry, nursing programs, and grants and incentive payments to encourage providers to work in parts of the country without enough health providers and in shortage specialty areas such as primary care.

HRSA’s 2009 appropriation of almost \$530 million is “intended to counter market forces that encourage specialization.”<sup>41</sup> Another \$200 million in one-time funding was authorized in the American Recovery and Reinvestment Act of 2009. Despite this short-term bolus of funding, the total allocation is insufficient to address workforce reform needs. Funding streams are vulnerable to yearly budget battles and cuts. (See Table 2, which summarizes HRSA program funding appropriated from 2007 to 2009.)<sup>42</sup>

HRSA Health Professions Programs are authorized by Titles III, VII, and VIII of the Public Health Service Act and sometimes referred to by their title. They provide funds to health professions schools and training programs, which they use to expand, improve, and provide training and financial aid to students. The objective is to build a health professions workforce that will meet the nation’s urgent health care needs, including:

- Health professionals prepared and motivated to work in Health Professional Shortage Areas
- Health professionals who mirror the U.S. population in race and ethnicity
- Health professionals with the skills needed to care for our aging population

**TABLE 2**  
**HRSA funding programs**

Funding for workforce programs in Public Health Service Act (Title VII, III, and VIII) in fiscal years 2007 to 2009

HRSA programs – Public Health Service Act (PHSA)	Appropriated		
	FY 2009 (in millions)	FY 2008 (in millions)	FY 2007 (in millions)
National Health Service Corps – Title III	\$135	\$123	\$125
Primary care and general Training – Title VII			
Training for diversity	\$86.8	\$69.7	\$63.8
Training primary care medicine & dentistry	\$48.4	\$48	\$48.9
Interdisciplinary and community-based education	\$77.4	\$68	\$64.2
Public health workforce development	\$9	\$8.3	\$7.9
<b>Total Title VII</b>	<b>\$221.7</b>	<b>\$194</b>	<b>\$184.7</b>
Nursing workforce development – Title VIII	\$171	\$156	\$184.8
<b>Total of VII, III, VIII</b>	<b>\$527.7</b>	<b>\$473</b>	<b>\$494.5</b>

Source: Budget in Brief. U.S. Department of Health and Human Services. Fiscal Year 2009; Senate Finance Committee, House Appropriations Committee, AAMC Washington Highlights 3/6/09; and Association of American Medical Colleges Health Professions Programs Funding Chart, available at: <http://www.aamc.org/advocacy/hpnc/fy10fundingchart.pdf>.

In this section of the paper we'll examine how each of these programs were created and how they currently work and are funded.

## The National Health Service Corps

The NHSC, established in 1972 and authorized through PHSA Title III, provides scholarships and provides loan repayment to health professionals who agree to work in health professional shortage areas in the United States. The NHSC helps assure Americans have access to medical, dental, and mental health providers to meet their health needs. Since its inception, more than 30,000 clinicians have served in the National Health Service Corps, expanding access to health services and improving the health of people who live in urban and rural areas where health care is scarce. About half of all NHSC clinicians work in HRSA-supported health centers, which deliver preventive and primary care services to patients regardless of their ability to pay. About 40 percent of health center patients have no health insurance.<sup>43</sup>

Despite a continued shortage of providers in underserved areas, this program has been chronically underfunded. In 2006, the National Health Service Corps had a total of 4,200 vacant positions posted by sites that met criteria as a health professional shortage area, but had funding for only 1,200 positions. For each NHSC award, there were seven applicants.<sup>44</sup>

## Primary care workforce training programs

Primary care workforce programs were enacted in 1963, as Title VII of the Public Health Service Act. These programs focus on increasing the number of students and faculty in primary care medicine, dentistry, public health, and related health professions and preparing them for real-world practice. Over the years, new health workforce needs, and social and market trends have emerged, and programs were added in a piecemeal fashion. These include programs to support and increase the workforce to care for rural populations such as:

- Programs to improve care for aging populations through Geriatric Education Centers
- Programs to improve the racial and ethnic diversity of the nation's workforce through scholarships
- Health Careers Opportunities Programs for disadvantaged students, interdisciplinary training programs, and attempts to develop an infrastructure for health workforce analysis

Funding for these programs has been precarious over the last decade, forcing some programs to the brink of extinction and an overall decrease in real dollars. For example, in 2009 dollars, funding for these programs have has decreased from a high of \$2.5 billion per year in the mid-1970s, to about \$222 million today.<sup>45</sup>

## Nursing workforce training programs

Nursing workforce training programs, first funded in 1964 as Title VIII of the Public Health Service Act, focus on nursing programs, particularly training for advanced practice nurses and improving nurse retention and patient care. Educating the next generation of qualified nurses in sufficient numbers is paramount to addressing the current nursing shortage. While schools are struggling with barriers such as limited classroom space, insufficient clinical sites, and overall budget constraints, it is the shortage of nursing faculty that is the major obstacle to increasing student capacity. As the nursing shortage worsens, more than 50,000 qualified nursing school applicants were turned away in 2008, with faculty shortages identified by such programs as a major reason for turning away qualified applicants.<sup>46</sup>

In fiscal year 2008, these programs provided loan, scholarship, and programmatic support to 51,657 student nurses and nurses.<sup>47</sup> These nursing programs are essential not only for educating nurses, but more critically, to fund the education of additional nursing faculty. Federal funding for nursing education programs has also been flat through the years, thus decreasing in real dollars. Funding for fiscal year 2009 was \$171 million. These programs provide the largest source of federal funding for nursing education.

# Recommendations

Despite the dire predictions about the looming health workforce shortage, there are some concrete steps Congress and the Obama administration can take to address the issue. With some initial changes and minimal investment, we can start to make the changes necessary to shore up the nation's health workforce.

The first set of recommendations focuses on realigning federal money that the U.S. government currently spends on workforce development. The second set of recommendations focuses on how to get more people into the health care professions currently experiencing shortages and into the areas of the nation without enough of these health care providers. This tends to be in the form of scholarships or loan repayment programs. The last cluster of recommendations is more long term and focuses on how health professions are trained. These include the location and content of the training.

## Our recommendations to reform federal health care workforce policies

### **Realign federal spending to better address workforce needs by:**

- Creating a National Health Care Workforce Commission
- Changing Medicare funding to support nursing education
- Reforming payments to better reward primary care

### **Support health workforce training in high-needs specialties by:**

- Increasing funding of the National Health Service Corps
- Targeting shortage areas and serving underserved communities
- Increasing funding to promote workforce diversity

### **Reform the training of health professionals by:**

- Allowing federal funding of physician training to include community-based sites
- Providing new funding for community-based physician training
- Changing the content of health professional training

---

## Realign federal spending to better address workforce needs

Right now most of the federal investment in the nation's health workforce development goes to training specialty physicians in urban, tertiary care hospitals. Generally, this is not where we need more physicians and does not help to increase other necessary health professionals. Most health care experts agree that training more specialty physicians is not a priority in addressing health workforce shortages.

Better alignment of federal spending on health workforce should start with an examination of annual Medicare and Medicaid investment in teaching hospitals of about \$12 billion compared with the investment of \$530 million in Health Resources and Services Administration programs that promote for primary care, nursing, and dental health workforce in underserved areas. In addition, the Institute of Medicine recommends that medical education and public health issues be more closely aligned, especially in relation to preparedness for natural disasters, pandemics, bioterrorism, and other threats to the nation's health.<sup>48</sup> Based on these goals, here are our recommendations in this arena:

### Create a permanent National Health Workforce Commission

The creation of a national planning body to assess and make recommendations about important health care workforce issues was first officially recommended in 2008 by the Council on Graduate Medical Education 19th Report, a Journal of the American Medical Association editorial, and the Association of Academic Health Centers.<sup>49</sup>

A permanent National Health Workforce Commission would make recommendations to Congress and appropriate government agencies to design funding and incentives, and to evaluate the implementation and revision of programs, grants, and regulations related to the nation's health workforce. Because demand for health care services changes and the health workforce training lasts many years, a permanent commission could regularly evaluate federal funding of health professional education and graduate distribution to areas of need, and make recommendations to improve outcomes.

The most important issue our proposed commission would evaluate is federal spending on residency programs. The \$12 billion spent in teaching hospitals is not consistent with where Americans receive their health care or current workforce needs. While there is general recognition that the reinvigoration of primary care is the basis of meaningful health care reform, these monies reinforce a specialty driven health care system.

Moreover, this money is not actively managed by the government. The funding formulas to support health professions education are complex, inconsistently evaluated, and often unfairly distributed to states. The health care institutions receiving subsidies for health professions education should be required to annually report on their performance and outcomes, be independently evaluated, and be held more accountable for meeting the

nation's workforce needs. This would entail new partnerships and collaborations with communities, and a more conscious and deliberate effort by training programs to assure that in exchange for public support, their health professions trainees are a public good that serve the needs of the communities where they practice, the trainees themselves, and of the educational institutions.

The new commission would be tasked with evaluating data and making recommendations to create transparent funding formulas for health professions training with measurable outcomes, expectations, and deliverables. The commission would work closely with accrediting groups to determine workforce needs, assign accountability, allocate funding, and develop innovative training models to meet the needs of the community, training institutions, and trainees.<sup>50</sup>

There are a number of reasons why a new body must be created and charged with these responsibilities. Though there are numerous groups now charged with making recommendations about specific workforce issues, none are at the level of oversight that can take into account the full range of issues and priorities necessary. The Medicare Payment Advisory Commission, for example, can make recommendations about payment policies to Medicare, and the Centers for Medicare and Medicaid Services can make regulatory changes to Medicare and Medicaid, but neither MedPAC nor CMS is charged with nor has the authority to provide overall workforce planning. Other health professional task forces, councils, and committees have narrow foci by statute or inclination. These include:

- The Council on Graduate Medical Education for medical training, authorized by Congress in 1986 to provide an ongoing assessment of physician workforce trends, training issues, and financing policies and to recommend how to address needs
- The National Advisory Committee on Nursing Education and Practice
- The Advisory Committee on Training in Primary Care Medicine and Dentistry
- The Relative Value Scale Update Committee, or RUC, which advises CMS on physician Medicare reimbursement rates

In the Senate health reform bill, H.R. 3590, The Patient Protection and Affordable Health Care Act, a provision is included to provide a national overview of the nation's workforce priorities. The bill would establish a National Health Workforce Commission to serve as a resource to Congress, the president, and federal agencies on the workforce supply and demand, education, retention, fiscal stability, and the success of any pilot programs designed to address these issues. In this model, the Government Accountability Office's comptroller general would make appointments to the new commission, with staffing provided by appropriate federal agencies.

In the House of Representatives, the legislation developed by all three committees of jurisdiction, H.R. 3962, the Affordable Health Care for America Act, includes the creation of the Advisory Committee on Health Workforce Evaluation and Assessment, which will also evaluate, enumerate, and advise on the health workforce and prepare a report to Congress annually.

A National Health Workforce Commission would make recommendations to Congress and government agencies to design funding and incentives related to the nation's health workforce.

Both the Senate Workforce Commission and the House Committee on Health Workforce would be comprised of 15 members representing a broad range of health workforce stakeholders. Data, analysis, and recommendations could be compiled and analyzed from the various nursing, physician, and dental health workforce committees. The commission in the Senate bill however is preferable because its design would help protect it from political interference.

### Changing Medicare funding to support nursing education

Medicare contributes approximately \$150 million per year to support nursing education compared to \$12 billion currently going to hospitals for physician education. Because so few nurses receive their primary training in hospital-based programs today, Medicare should instead support the education and training of nurses who care for Medicare beneficiaries whether in the hospital, ambulatory, nursing home, or home care venues, and training for nurses in administrative and leadership positions to implement delivery system reforms.

Payments could continue to be made to hospitals but should also be available for the costs of graduate nursing education in communities, outpatient, and other clinical settings through contractual agreements. This education could be provided (and the funding flow directly) through organizations that have affiliations with accredited schools of nursing, which in turn partner with nonhospital, community-based care settings.

Medicare reimbursement would be expanded to include graduate nursing education costs that are attributable to the preparation of advanced practice nurses with the skills necessary to provide primary and preventive care, transitional care as patients are discharged from hospitals, chronic care management, and other nursing services appropriate for the Medicare population. This includes training programs for advanced practice nurses such as nurse practitioners, clinical nurse specialists, and certified registered nurse anesthetists.

The Senate bill includes such a provision—a graduate school nurse education demonstration program—and directs the secretary of Health and Human Services to establish a program to increase graduate nurse education training under Medicare and authorizes \$50 million to be appropriated from the Medicare Hospital Insurance Trust Fund for each of the fiscal years 2012 through 2015.

### Payment reform to better reward primary care

Medicare is at the center of the physician and health workforce payment universe. The responsibility for reviewing and updating physician payment and fees in Medicare falls to the Relative Value Scale Update Committee.

Primary care, as defined by the Institute of Medicine,<sup>51</sup> is “the provision of integrated, accessible health care services by clinicians who are accountable for addressing a large majority of personal health care needs, developing a sustained partnership with patients, and practicing in the context of family and community.” Primary care is the cornerstone of an efficient, high-quality health system.

Changing reimbursement systems and subsidies to more appropriately value primary care is a fundamental change that needs to occur. In addition, the current fee-for-service system creates incentives to increase the volume and intensity of services provided without regard for improved quality. There are few payment methodologies currently used that encourage coordination of care, prevention, quality, or better care. These problems led Congress to work with researchers and policy experts to develop payment systems to encourage collaboration and accountability between health providers, hospitals, and other sites of care—two such models include the Medical Home and Accountable Care Organizations.<sup>52</sup> Such changes could save the U.S. health system billions of dollars per year by preventing inappropriate emergency room visits, preventable hospitalizations, and unnecessary procedures.<sup>53</sup>

A Medical Home is a model of health care delivery that promotes a team-based approach to care of a patient through many disease states and across the patient’s stages of life.<sup>54</sup> Overall coordination of care is led by a primary care clinician with the patient serving as the focal point of health care delivery. Accountable Care Organizations are defined as a set of providers associated with a defined population of patients, accountable for the quality and cost of care delivered to that population.<sup>55</sup> Providers could include a hospital, a group of primary care providers, specialists, and possibly other health professionals who share responsibility for the quality of care and cost of care provided to patients. While the medical home model is centered around a single practice, ACOs are at the other end of the spectrum, housing many practices within one organizing entity. A single ACO could be quite large and cover thousands of patients.

Both health reform bills currently being considered by Congress partially address the underpayment of primary care clinicians by proposing increasing fee-for-service payments for primary care providers by a range of 5 percent to 10 percent depending on who provides the service and where. The higher rate will be applied in health professional shortage areas. The Senate bill would extend the bonus payments for general surgeons who work in underserved areas. The House bill would also increase primary care payments for providers in the Medicaid program, gradually increasing the payment for primary care services up to the level of Medicare payments. Both bills also include nurse practitioners and physician assistants as primary care providers.

Both bills include incentives for providers to deliver care in a more coordinated way, including Medical Homes and ACO’s. These bills also include important provisions to allow the secretary of Health and Human Services to expand any pilot or demonstration program to facilitate widespread adoption of effective models without the need for additional legislation.

One important provision currently only in the House legislation is expanding primary care payments in the Medicaid program. Both bills before Congress will expand Medicaid coverage in all states which the Congressional Budget Office estimates will add an additional 15 million Americans to the Medicaid program. With this increase in coverage we need to assure there will be enough clinicians to provide their care. To help address this, the House legislation includes a provision that will increase Medicaid payments to primary care physicians and practitioners to 80 percent of Medicare rates in 2010, rising to 100 percent by 2012.

---

## Support health workforce training in high-needs specialties, shortage areas, and underserved communities

Health care workforce shortages often occur in rural and remote areas, and in certain high-needs specialties such as primary care. Certain federal programs help assure access to quality care and providers. Many of these programs have been successful, but have not received adequate funding support. To remedy this situation we propose to:

### Increase funding of the National Health Service Corps

This should be one of the highest priorities to help fill vacancies in shortage areas and to create new programs to train physicians, dentists, and nurses emphasizing team-based service, public health, epidemiology, and emergency preparedness and response in affiliated institutions. Funding would include scholarship and loan repayment programs. Increased funding would be used to fill vacancies in shortage areas and to create new programs to train physicians, dentists, and nurses emphasizing team-based service, public health, epidemiology, and emergency preparedness and response in affiliated institutions. Students could receive tuition remission and a stipend, and be Commission Corps officers with a service commitment for each year covered.

All health reform legislation moving through Congress includes provisions to substantially increase funding for the National Health Service Corps. In addition to increased funding, the Senate bill includes eliminating the existing cap on the number of individuals who may serve in the corps and would establish a new body: The “ready reserve corps” and a U.S. Public Health Science Track that would be train health professionals to assist in the event of a disaster.

### Increase funding for those who choose health professions in high demand

Increasing the funding of the HRSA primary care and nursing workforce programs would catalyze reforms to enhance the primary care, dental, and nursing workforce, as well as support a more diverse health professions workforce. Federal investment in the pipeline

of these high needs specialties is as important as addressing payment inequities in the Medicare system, and must be done concurrently.

The House and Senate health reform legislation include many provisions to address health workforce shortages, emphasizing the workforce for primary care, nursing, and public health. These include health workforce development grants, scholarships, student loan and repayment programs, and education and training enhancements for family medicine, general internal medicine, general pediatrics, physician assistants, general dentistry, geriatrics, advanced nursing, nurse faculty, and community and public health. Additional provisions support training for diversity, interdisciplinary and community-based linkages, and workforce diversity. Hospital training programs wishing to increase resident slots would be given preference for expansion if they place greater emphasis on training in community health centers, rural health clinics, and in health professions shortage areas, while maintaining or increasing their primary care resident trainees.

Both the House and Senate bills include additional funding for loan repayment for nurses who agree to teach in nursing schools to help alleviate the nursing shortage. The Senate bill includes a payment of up to \$10,000 per year and the House bill sets the maximum loan repayment amount for potential nursing faculty at \$35,000 each year. The Senate bill also adds money for a new provision aimed at providers who choose to specialize in geriatrics. The legislation authorizes new funding for geriatric education centers to support training in geriatrics, help to develop curricula and best practices in geriatrics, and expand the geriatric career awards to advanced practice nurses, clinical social workers, pharmacists, and psychologists.

### Increased funding to recruit and graduate students from minority and low-income families and rural areas

Studies and experts agree that improving the socioeconomic, racial, ethnic, and rural makeup of our current health professionals would have dramatic impacts on health outcomes and health disparities. Past interventions have not moved the needle, yet few changes have been made in how our training institutions select, accept, matriculate, and graduate students from minority and low-income families and rural areas. These students are more likely to enter primary care specialties, practice in underserved areas, and serve underserved populations.

This is another place the National Health Workforce Commission could play a key role. Best practices from training institutions that make strides toward achieving a diverse workforce could be collected, analyzed, and disseminated.

Both the House and Senate bills also include provisions to help expand the diversity of the health workforce. The Senate bill included funding for programs that focus on diversity training and the establishment of Centers of Excellence on diversity training. Both bills

target funding for loan repayment to individuals who come from disadvantaged backgrounds and provide additional awards for cultural and linguistic competency.

---

## Reform the training of health professionals

These reforms should include enhancing and modernizing hospital and tertiary care training with training in outpatient (also called ambulatory or clinic sites), rural, and community sites; changing the content of education; and increasing necessary faculty to provide interdisciplinary and team-based training. Our specific recommendations in this arena would:

### Allow federal funding of physician training to include community-based sites

Currently the Centers for Medicare and Medicaid Services regulations do not allow payment for physician training outside of the teaching hospital. In CMS language, hospitals are called “providers” and training outside of teaching hospitals is referred to as training in “non-provider sites.” Thus, while the majority of patient care in the real world occurs outside of hospitals, Medicare only pays for resident training that is provided inside of teaching hospitals.

Consequently, there is a training imbalance that prevents adequate preparation of a workforce for the place where most health care takes place—in outpatient settings. The current funding formulas also encourage subspecialization and practice after graduation in close proximity to adequately served urban areas—because that’s where most teaching hospitals are located. Data collected by the Dartmouth Atlas Project show that increasing the number of specialists in these urban areas increases costs, without improvement—and sometimes results in a decrease—in the quality of care.<sup>56</sup>

Both bills in Congress amend Medicare Graduate Medical Education payments to allow time spent by residents in community settings to be reimbursed. In addition, the House bill also requires HHS’s Office of the Inspector General to conduct a study to assess the effect of the increased time spent by medical residents in community settings and to present the findings to Congress within four years.

### Provide new funding for community-based physician training

In addition to allowing current federal Graduate Medical Education program training dollars to be spent in community-based sites, there should be additional funding provided to expand these sites. To support reform of health professions education, new federal funding should provide grants and loans for start-up costs associated with developing community-based training activities in underserved communities and populations. This will help

balance urban, hospital, and tertiary care training venues with community-based, rural, ambulatory, and interdisciplinary team training and can be administered through HRSA.

Teaching Health Centers—nonhospital community settings that would develop and operate an accredited primary care residency program—are one way to increase community-based training for medical residents. There are different proposals circulating in Congress on how to accomplish this.

In the House bill there is a new grant program through HRSA for the establishment and operation of community-based residency training programs that includes Teaching Health Centers. In the Senate, the proposal goes further and would expand flexibility of the payments and the ultimate capacity of community-based training. In this model, federal funding would go directly to community-based sites.

Both of these proposals would reward teaching hospitals that contract with entities such as federally qualified community health centers and rural clinics for community-based resident and nursing education, and create an infrastructure to train doctors, nurses, and others to provide both service and learning to provide coordinated care and increase primary care capacity in underserved rural and inner-city urban venues. Allowing the federal financing of Graduate Medical Education to flow directly to these community-based sites is a significant change that would restore balance to health professions education between hospital, outpatient, and ambulatory training, and redirect the pipeline to areas of need in health professions shortage areas.

These new models of care delivery create opportunities to provide more team-based care.

### Change the content of health professional training.

New health professions education and training models should integrate with health reform measures aimed at insurance coverage, delivery systems, payment systems, and accountability for quality. Examples include the Medical Home and the Health Commons models of care delivery, which combine medical, behavioral, oral, and public health with services to address social determinants of disease, as well as Accountable Care Organizations,<sup>57</sup> which create service delivery and education models that integrate and coordinate care. These new models of care delivery create new opportunities to provide—and be reimbursed—for more team-based care.

Training institutions have an unprecedented opportunity to take a leadership role in meaningful reform for the fiscal and quality outcomes of the health of the population served and the preparation and ongoing education of the health professionals who provide that care. Though there is nothing in the pending legislation that would actually change the training health providers receive—that will be left up to the academic institutions and hospitals—both the House and Senate bills provide funding to start and expand primary care Medical Homes and Accountable Care Organizations in an attempt to provide better coordinated primary care, especially for those with chronic illnesses.

# Next Steps

Health care workforce reform will not end with the passage or defeat of legislation in Congress. Even if a bill is passed and signed into law, we still will need to continue to work to assure contemporary health workforce training and distribution that serves individual patients and communities without access to quality care. The following simultaneous steps will help drive change, and push beyond the limits of the current legislation:

---

## Train health professionals to promote team-based, collaborative care

This education cannot be regulated at the national level. Instead, Academic Health Centers, teaching hospitals, and universities must commit to changing the way they educate and train health professionals. In addition, professional organizations, accrediting bodies, and teaching institutions must be involved.

Currently some of their requirements actually create barriers to interdisciplinary education. The American Board of Family Medicine, for example, inhibits integration of primary care training by penalizing programs that colocate in outpatient clinical sites with other residency specialties such as general internal medicine. Such regulatory and institutional barriers should be identified and removed or made more flexible to allow coordination and integration of health care. While an entity like the National Health Workforce Commission can serve a convening function, it's really up to professional organizations, accrediting bodies, and teaching institutions to execute meaningful reform.

---

## Maximize use of all health professionals

Expanding the role of nurse practitioners and physician assistants in primary care is part of a cost-effective strategy to address the looming primary care shortage.<sup>58</sup> Indeed, both professions were created nearly a half century ago to address the shortage of primary care physicians—a problem our nation is still grappling with. Given the current and growing

## Health care workforce training after health care reform

- Train health professionals to promote team-based collaborative care
- Maximize use of all health professionals
- Consider ways to continue to promote better coordinated care

shortage of health professionals, it is important to encourage the use of the nation's entire health workforce to the full extent of their education and training.

One potential barrier to maximum use of this segment of the workforce is restrictive state practice acts and how states define “scope of practice.” All health professions are licensed at the state level and every state is responsible for establishing regulations to describe requirements for education and training, and must define the health professionals’ “**scope of practice**”—the procedures, actions, and processes that are permitted for the licensed individual—for their own state. For most health professionals, including registered nurses and physicians, the definition of scope of practice for each profession is nearly identical in every state. The same is not true for nurse practitioners, where the scope of practice varies depending on the state, ranging from working nearly independently to having requirements to work directly with a physician. Although not included in either bill moving through Congress, the Brookings Institution and the Leaders’ Project of the Bipartisan Policy Institute both suggest maximizing the scope of practice of all health professionals as an important provision to include in health reform. We agree.

Most experts see this not only as a way to fully maximize the nation’s health workforce but also a way to increase quality while decreasing costs. In fact, health economist Mark Pauly, a cost containment expert and a professor of health care management at the Wharton School of Business, puts it: “In a world of finite resources, it is logical to worry about rationing. Making greater use of advanced practice nurses is one way to trim costs and maintain high quality.”<sup>59</sup> But he suspects there are few instances of such “low-hanging fruit.”

The Brookings Institution included this recommendation in their report, “Bending the Curve: Effective Steps to Address Long-Term Spending Growth.”<sup>60</sup> They recommended creating incentives for states to amend the scope of practice laws to allow for greater use of nurse practitioners and other health providers, especially in states that limit how the provider can practice. The Bipartisan Policy Center also included such a recommendation in their report “Crossing Our Lines: Working Together to Reform the U.S. Health System,” written by former Senate Majority Leaders Howard Baker, Tom Daschle, and Bob Dole.<sup>61</sup> They noted that there are currently many states that have scope of practice laws that discourage use of advanced practice nurses, among others. As one way to promote high-quality, high-value care they recommend revising state scope of practice laws and suggest providing incentives for states to amend scope of practice laws that discourage the use of advanced practice nurses, pharmacists, and other allied health professionals.

Another way to accomplish this is to bypass the states altogether and have a federal preemption of the state practice acts. This has worked for the Veteran’s Administration and the Indian Health Service. This brings consistency to the scope of practice for health professionals, regardless of the state in which they practice. In this way, the federal preemption must be seen as a floor and not the ceiling to allow states with progressive state practice acts to continue to fully maximize their entire workforce, especially in this era of provider shortage.

Given the current and growing shortage of health professionals, it is important to encourage the use of the nation’s entire health workforce to the full extent of their education and training.

---

## Consider ways to continue to promote better coordinated care

The legislation now before Congress creates several new models of integrated, coordinated care catalyzed by federal grants, direct subsidies, and payment reforms which will accelerate the pace of change. But these programs alone will not fully reform the health training and delivery systems. In many of the early models of coordinated care—whether in Medical Homes, Nurse Managed Clinics, Accountable Care Organizations, or Health Commons cited earlier—colocating services was insufficient to improve health outcomes. Breaking down barriers of communication and management even within one facility can be difficult, often because providers lack training.

Important tools to care coordination will be electronic health records and health information technology advances, which will require meaningful use and real time communication with patients and between health providers. Yet current health professional training occurs in isolation, separate from other health professionals and disciplines, often without learning about how to appropriately use new technology. We recommend that academic health centers and other health professions training institutions quickly develop new curricula to prepare students to practice in the evolving health system, armed with the latest in health information technology. Academic health centers and training institutions have an unprecedented opportunity to provide leadership in reforming the education of health professionals. They must deliver for reform to be successful.

# Conclusion

A rational, robust health workforce will enhance the success of other national health reforms. Health professions training—and especially training that results in health care professionals practicing in areas of need—are largely disconnected from any current national health workforce policy. Federal support does not reliably include training of nurses, nurse practitioners, dental hygienists, or physician assistants. Inpatient, ambulatory, and community-based training venues should incorporate contemporary models of interdisciplinary, coordinated, and team-based care, building on the strength of the current hospital based education systems while maintaining the critical safety net services they provide.

At a recent Senate Finance Committee hearing on the health workforce, Fitzhugh Mullan, the Murdock Head Professor of Medicine and Health Policy at George Washington University, said:

*We won't be able to create a more inclusive, affordable, quality system [of health care reform] without a powerful primary care workforce at the center of the system. Reinventing Title VII without making Medicare GME more responsive to national needs will result in little progress.<sup>62</sup>*

The clear conclusion: the cornerstone of an efficient, high quality, accessible health system is primary care.

Today, Medicare and Medicaid Graduate Medical Education payments of \$12 billion per year to teaching hospitals are wrongly amplified by the current fee-for-service reimbursement system, which undervalues primary care services and continues to expand the supply of resident trainees in subspecialties that perform highly reimbursed procedures for the hospital. This must change.

Health care workforce reform requires renegotiating and realigning the federal incentives to address unmet health and social needs. Performance indicators for health workforce training and distribution of graduates to areas of need, like the dashboard indicators on a car, will help. A National Health Workforce Commission can assure that our nation's investment in the education and distribution of health professionals is a public good, of the highest quality, and accountable for better performance on clear and measurable outcomes.

# Endnotes

- 1 Bureau of Labor Statistics, *Occupational Outlook Handbook 2008-2009 edition*, (Department of Labor, 2008) available at <http://www.bls.gov/oco>. John K. Iglehart, "Grassroots activism and the pursuit of an expanded physician supply," *New England Journal of Medicine* 358 (16) (2008): 1741-1749, available at <http://content.nejm.org/cgi/content/full/358/16/1741>.
- 2 Council on Graduate Medical Education, "16th Report: COGME physician workforce policy guidelines for the United States, 2000-2020" (2005), available at <http://www.cogme.gov/report16.htm#sumrec>. Richard A. Cooper and others, "Economic and Demographic Trends Signal an Impending Physician Shortage," *Health Affairs* 21 (1) (2002): 140-152, available at <http://content.healthaffairs.org/cgi/content/abstract/21/1/140>. David I. Auerbach, Peter Buerhaus, and Douglas O. Staiger, "Better Later Than Never: Workforce Supply Implications of Later Entry into Nursing," *Health Affairs*, 26 (1) (2007): 178-185, available at <http://content.healthaffairs.org/cgi/content/abstract/26/1/178>.
- 3 Michael J. Dill, and Edward S. Salsberg, "The Complexities of Physician Supply and Demand" (Washington: Association of American Medical Colleges Center for Workforce Studies, 2008) available at [https://services.aamc.org/publications/index.cfm?fuseaction=Product.displayForm&pr\\_id=244](https://services.aamc.org/publications/index.cfm?fuseaction=Product.displayForm&pr_id=244).
- 4 Bureau of Health Professionals, Health Resources Services Agency, "What is Behind HRSA's Projected Supply, Demand, and Shortage of Registered Nurses?" (2004) available at <http://bhpr.hrsa.gov/healthworkforce/reports/nursing/rnbehindprojections/4.htm>.
- 5 American Association of Colleges of Nursing, "Fact Sheet: Nursing Shortage," (2009), available at <http://www.aacn.nche.edu/Media/FactSheets/NursingShortage.htm>.
- 6 U.S. Census Bureau, "Oldest Baby Boomers Turn 60" (Department of Commerce, 2006) available at [http://www.census.gov/Press-Release/www/releases/archives/facts\\_for\\_features\\_special\\_editions/006105.html](http://www.census.gov/Press-Release/www/releases/archives/facts_for_features_special_editions/006105.html).
- 7 Peter S. Goodman, "U.S. Unemployment Rate Hits 10.2%, Highest in 26 Years," *The New York Times*, November 6, 2009, available at <http://www.nytimes.com/2009/11/07/business/economy/07jobs.html>.
- 8 Association of American Medical Colleges, "Statement on the Physician Workforce" (2006), available at <http://www.aamc.org/workforce/workforceposition.pdf>.
- 9 David C. Goodman, "Twenty-Year Trends in Regional Variations in the U.S. Physician Workforce," *Health Affairs* Web Exclusives (2004) available at <http://content.healthaffairs.org/cgi/content/abstract/hlthaff.var.90>.
- 10 John E. Wennberg and others, "Improving Quality and Curbing Health Care Spending: Opportunities for the Congress and the Obama Administration" (Hanover: Dartmouth Institute, 2008) available at [http://www.dartmouthatlas.org/topics/agenda\\_for\\_change.pdf](http://www.dartmouthatlas.org/topics/agenda_for_change.pdf).
- 11 Robert L. Phillips and others, "COGME's 16th Report to Congress: Too Many Physicians Could Be Worse Than Wasted," *Annals of Family Medicine* 3 (3) (2005): 268-270.
- 12 Thomas Bodenheimer, "Primary Care—Will It Survive?" *New England Journal of Medicine* 355 (9) (2006): 861-864.
- 13 Thomas Bodenheimer, Robert A. Berenson, and Paul Rudolf, "The Primary Care – Specialty Income Gap: Why it Matters," *Annals of Internal Medicine* 146 (4) (2007): 301-306.
- 14 Kent J. Moore and others, "Family Practice Management: What Every Physician Should Know about the RUC" (Washington: American Academy of Family Physicians, 2008) available at [http://www.ncbi.nlm.nih.gov/pubmed/18303653?tool=EntrezSystem2.PEntrez.Pubmed.Pubmed\\_ResultsPanel.Pubmed\\_RVDocSum&ordinalpos=20](http://www.ncbi.nlm.nih.gov/pubmed/18303653?tool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVDocSum&ordinalpos=20).
- 15 A. Bruce Steinwald, "Primary Care Professionals: Recent Supply Trends, Projections, and Valuation of Services," Testimony before the Senate Committee on Health, Education, Labor, and Pensions, February 12, 2008, available at <http://www.gao.gov/new.items/d08472t.pdf>.
- 16 Medicare Payment Advisory Commission, "Report to Congress: Reforming the Delivery System" (2008) available at [http://www.medpac.gov/documents/Jun08\\_EntireReport.pdf](http://www.medpac.gov/documents/Jun08_EntireReport.pdf).
- 17 Martin E. Miller, "Medicare Payments & Workforce Issues" (Washington: Medicare Payment Advisory Commission, 2007).
- 18 American Association of Colleges of Nursing, "Fact Sheet on Nursing Shortage" (2009) available at <http://www.aacn.nche.edu/Media/FactSheets/Nursing-Shortage>.
- 19 American Association of Colleges of Nursing, "Fact Sheet on Nursing Shortage" (2009) available at <http://www.aacn.nche.edu/Media/FactSheets/Nursing-Shortage>.
- 20 "Shortage Designation: HPSAs, MUAs & MUPs," available at <http://bhpr.hrsa.gov/shortage/>.
- 21 Shelly Gehshan, "Foundations' Role in Improving Oral Health: Nothing to Smile About," *Health Affairs* 27 (1) (2008): 281-287. National Institute of Dental and Craniofacial Research, National Institutes of Health, "Oral Health in America: A Report of the Surgeon General" (2000).
- 22 John E. Wennberg, "Variation in Use of Medicare Services among Regions and Selected Academic Medical Centers: Is More Better?" (New York: The Commonwealth Fund, 2005). "Registered nurses per 100,000 population in 2007," available at <http://www.statehealthfacts.org/>. "Dentists by state," available at <http://www.statehealthfacts.org/comparamtable.jsp?ind=442&cat=8>.
- 23 A. Bruce Steinwald, "Primary Care Professionals: Recent Supply Trends, Projections, and Valuation of Services." "Shortage Designation: HPSAs, MUAs & MUPs," available at <http://bhpr.hrsa.gov/shortage/>.
- 24 Karen E. Lasser, Steffie Woolhandler, and David U. Himmelstein, "Sources of U.S. Physician Income: The Contribution of Government Payments to the Specialist-Generalist Income Gap," *Journal of General Internal Medicine* 23 (9) (2008): 1477-1481, available at <http://www.springerlink.com/content/ql727j6357270761?p=61e20debe5e2441db52ae70e5347682a&pi=3>.
- 25 Larry A. Green and others, "The Ecology of Medical Care Revisited," *New England Journal of Medicine* 344 (26) (2001): 2021-2025.
- 26 "Surgeon General: More Minority Doctors Needed," *The Associated Press*, December, 3, 2009, available at [http://www.nytimes.com/aponline/2009/12/03/health/AP-US-MED-Surgeon-General.html?\\_r=1&scp=2&sq=regina%20benjamin&st=cse](http://www.nytimes.com/aponline/2009/12/03/health/AP-US-MED-Surgeon-General.html?_r=1&scp=2&sq=regina%20benjamin&st=cse).
- 27 Miriam Komaromy and others, "Diversity in Medicine," *New England Journal of Medicine* 334 (20) 1996: 1327-1328.
- 28 Institute of Medicine, "In the Nation's Compelling Interest: Institutional & Policy Level Strategies for Increasing Racial & Ethnic Diversity of the US Healthcare Workforce" (2004).
- 29 Jen L. Hyer and others, "Medical School Expansion: An Immediate Opportunity to Meet Rural Health Needs," (Washington: Robert Graham Center, 2007) available at <http://www.graham-center.org/online/graham/home/publications/onepagars/2007/medical-school-expansion.html>. Center for Workforce Studies, Association of American Medical Colleges. Data Compiled from American Medical College Application Service (AMCAS).

- 30 Robert C. Bowman, "Changes in Admissions in the United States," *Rural and Remote Health* 7 (722) (2007), available at <http://www.rrh.org.au/articles-subviewnew.asp?ArticleID=722>.
- 31 Medicare Payment Advisory Commission, "Report to the Congress: Improving Incentives in the Medicare Program" (2009) available at [http://www.medpac.gov/documents/Jun09\\_EntireReport.pdf](http://www.medpac.gov/documents/Jun09_EntireReport.pdf).
- 32 John K. Iglehart, "Medicare, Graduate Medical Education, and New Policy Directions," *New England Journal of Medicine* 359 (6) (2008): 643-650. Tim M. Henderson, "Medicaid Direct and Indirect Graduate Medical Education Payments: A 50-state Survey," (Washington: Association of American Medical Colleges, 2006).
- 33 Association of American Medical Colleges Health Professions Programs Funding Chart, available at: <http://www.aamc.org/advocacy/hpniec/fy10fundingchart.pdf>.
- 34 Medicare Payment Advisory Commission, "Report to the Congress: Improving Incentives in the Medicare Program" (2009) available at [http://www.medpac.gov/documents/Jun09\\_EntireReport.pdf](http://www.medpac.gov/documents/Jun09_EntireReport.pdf).
- 35 John K. Iglehart, "Medicare, Graduate Medical Education, and New Policy Directions."
- 36 Council on Graduate Medical Education, "19th Report to Congress" (2008) available at <http://cogme.gov/19thReport/default.htm>.
- 37 Medicare Payment Advisory Commission, "Report to Congress: Medicare Payment Policy" (2008) available at [www.medpac.gov](http://www.medpac.gov).
- 38 Barbara Wynn and others, "Report to the Office of the Assistant Secretary for Planning: Alternative Ways of Financing Graduate Medical Education" (Santa Monica: Rand Health, 2006).
- 39 Kae Rivers Lively and others, "Yesterday, Today, and Tomorrow: Challenges in Securing Federal Support for Graduate Nursing Education," *Journal of Nursing Education* 46 (4) (2007).
- 40 Linda H. Aiken and Marni E. Gwyther, "Medicare Funding of Nurse Education—The Case for Policy Change," *Journal of the American Medical Association* 273 (19) (1995):1528-1532.
- 41 Congressional Research Service, "Report for Congress: Title VII Health Professions Education and Training: Issues in Reauthorization" (2008).
- 42 Association of American Medical Colleges, "Washington Highlights: March 6, 2009." U.S. Department of Health and Human Services, "Budget in Brief: Fiscal Year 2009" (2008) available at [www.hhs.gov/budget/09budget/2009BudgetInBrief.pdf](http://www.hhs.gov/budget/09budget/2009BudgetInBrief.pdf); and Association of American Medical Colleges Health Professions Programs Funding Chart, available at: <http://www.aamc.org/advocacy/hpniec/fy10fundingchart.pdf>.
- 43 Roger A. Rosenblatt and others, "Shortages of Medical Personnel at Community Health Centers," *Journal of the American Medical Association* 295 (9) (2006): 1042-1049.
- 44 C.B. Forrest, "Strengthening Primary Care to Bolster the Health Care Safety Net," *Journal of the American Medical Association* 295 (9) 2006: 1062-1064.
- 45 Fitzhugh S.M. Mullan, Testimony before the Senate Finance Committee," June 23, 2009.
- 46 "Nursing Shortage Fact Sheet," <http://www.aacn.nche.edu/Media/FactSheets/NursingShortage.htm>.
- 47 National Association of Clinical Nurse Specialists, "Nursing Workforce Development Programs: Title VIII of the Public Health Service Act" (2009) available at <http://www.nacns.org/LinkClick.aspx?fileticket=pf0tOrOydc%3D&tabid=124>.
- 48 Institute of Medicine, "Emergency Medical Services at the Crossroads" (2006) available at <http://www.iom.edu/CMS/3809/16107/35010.aspx>.
- 49 Council on Graduate Medical Education, "19th Report: Enhancing Flexibility in Graduate Medical Education" (2008) available at <http://cogme.gov/19thReport/default.htm>.
- 50 David C. Goodman, "Improving Accountability for the Public Investment in Health Professions Education," *Journal of the American Medical Association* 300 (10) (2008): 1205-1207. American Association of Academic Health Centers, "Out of Order, Out of Time: The State of the Nation's Health Workforce" (2008) available at [http://www.aahcdc.org/policy/AAHC\\_OutofTime\\_4WEB.pdf](http://www.aahcdc.org/policy/AAHC_OutofTime_4WEB.pdf). Council on Graduate Medical Education, "Nineteenth Report: Enhancing Flexibility in Graduate Medical Education."
- 51 Institute of Medicine, *Primary care: America's health in a new era* (Washington: National Academy Press, 1996).
- 52 Ellen-Marie Whelan and Judy Feder, "Payment Reform to Improve Health Care: Ways to Move Forward" (Washington: Center for American Progress, 2009) available at [http://www.americanprogress.org/issues/2009/06/health\\_payment\\_reform.html](http://www.americanprogress.org/issues/2009/06/health_payment_reform.html).
- 53 Melinda Beeuwkes Buntin and David M. Cutler, "The Two Trillion Dollar Solution: Saving Money by Modernizing the Health Care System" (Washington: Center for American Progress, 2009).
- 54 Paul B. Ginsburg and others, "Making Medical Homes Work: Moving from Concept to Practice" (Washington: Center for Studying Health System Change, 2008).
- 55 Medicare Payment Advisory Commission, "Report to Congress: Improving Incentives in the Medicare program" (2009) available at [http://www.medpac.gov/chapters/Jun09\\_Ch02.pdf](http://www.medpac.gov/chapters/Jun09_Ch02.pdf).
- 56 John E. Wennberg and others, "Improving Quality and Curbing Health Care Spending: Opportunities for the Congress and the Obama Administration" (Hanover: Dartmouth Institute, 2008) available at [http://www.dartmouthatlas.org/topics/agenda\\_for\\_change.pdf](http://www.dartmouthatlas.org/topics/agenda_for_change.pdf).
- 57 Paul B. Ginsburg and others, "Making Medical Homes Work: Moving from Concept to Practice" (Washington: Center for Studying Health System Change, 2008). Paul A. Nutting and others, "Initial Lessons from the First National Demonstration Project on Practice Transformation to a Patient-Centered Medical Home," *Annals of Family Medicine* 7 (3) (2009): 254-260. Arthur Kaufman and others, "The 'Health Commons' and Care of New Mexico's Uninsured," *Annals of Family Medicine* 4 (1) (2006): S22-S27. John E. Wennberg and others, "Improving Quality and Curbing Health Spending: Opportunities for Congress and the Obama Administration."
- 58 "Doctor Shortage and Disparities After Reform Examined, Nurses Prepare For Changing Role," *Medical News Today*, August 4, 2009, available at <http://www.medicalnewstoday.com/articles/159684.php>. Kate Pickert, "If a Health-Care Bill Passes, Nurse Practitioners Could Be Key" *Time*, August 3, 2009, available at <http://www.time.com/time/nation/article/0,8599,1914222,00.html>. "Shalala: Health Revamp May Mean Doctor Shortage," *NPR*, August 1, 2009, available at <http://www.npr.org/templates/story/story.php?storyId=111447841>. Ellen-Marie Whelan, "Expanding the Primary Care Workforce: An Essential Element of Health Reform" (Washington: Center for American Progress, 2009) available at [http://www.americanprogress.org/issues/2009/11/primary\\_care\\_shortage.html](http://www.americanprogress.org/issues/2009/11/primary_care_shortage.html).
- 59 Ceci Connolly, "In Delivering Care, More Isn't Always Better, Experts Say," *The Washington Post*, September 29, 2009, available at <http://www.washingtonpost.com/wp-dyn/content/article/2009/09/28/AR2009092803837.html>.
- 60 Mark McClellan and others, "Bending the Curve: Effective Steps to Address Long-Term Health Care Spending Growth," (Washington: Brookings Institution, 2009), available at [http://www.brookings.edu/reports/2009/0901\\_btc.aspx#](http://www.brookings.edu/reports/2009/0901_btc.aspx#).
- 61 Bipartisan Policy Center, "Crossing Our Lines: Working Together to Reform the U.S. Health System" (2009) available at <http://www.bipartisanpolicy.org/events/2009/06/crossing-our-lines-working-together-reform-us-health-system>.
- 62 Fitzhugh S.M. Mullan, Testimony before the Senate Finance Committee.

---

## About the Authors

**Daniel J. Derksen, MD**, is a Senior Fellow at the Robert Wood Johnson Center for Health Policy, and Professor of Family & Community Medicine, at the University of New Mexico School of Medicine.

**Ellen-Marie Whelan, NP, PhD**, is a Senior Health Policy Analyst and Associate Director of Health Policy at the Center for American Progress.

---

## Acknowledgements

The authors would like to thank Sonia Sekhar, Special Assistant for Health Policy at the Center for American Progress, for her assistance in the preparation of this paper.

---

The Center for American Progress is a nonpartisan research and educational institute dedicated to promoting a strong, just and free America that ensures opportunity for all. We believe that Americans are bound together by a common commitment to these values and we aspire to ensure that our national policies reflect these values. We work to find progressive and pragmatic solutions to significant domestic and international problems and develop policy proposals that foster a government that is “of the people, by the people, and for the people.”

---

Center for American Progress

