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# Health Care Workforce Issues and Access to Care: Assessing the Present and Preparing for the Future

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**Testimony before the House Energy and Commerce  
Subcommittee on Health**

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**On**

**Health Care Workforce Issues and Access to Care:  
Assessing the Present and Preparing for the Future**

**March 24, 2009**

**SUMMARY OF TESTIMONY FITZHUGH MULAN, M.D.  
BEFORE THE HOUSE ENERGY AND COMMERCE SUBCOMMITTEE ON HEALTH  
MARCH 24, 2009**

- **Improving access to health care in the United States will require modifications in the structure of the US physician workforce, the foremost of which will be the construction of a strong primary care delivery base.**
- **There are over 800,000 practicing physicians today or 280 physicians per 100,000 people. This represents a greater physician density than Canada (210) and the United Kingdom (250) but a density less than France (340) and Germany (350).**
- **The distribution of physicians in the U.S. heavily favors urban areas. Metropolitan areas have 2-5 times as many physicians as non-metropolitan areas. Economically disadvantaged areas have significant physician access problems.**
- **Two-thirds of the U.S. physician workforce practice as specialists. The number of young physicians indicating an interest in primary care is declining. Approximately 100,000 nurse practitioners (NPs) and 70,000 physician assistants (PAs) are practicing in the United States today. This represents an important asset for service delivery.**
- **Today's physician-to-population ratio is in the zone of adequacy and should be maintained with appropriate growth in the number of physicians trained to parallel growth in the population. Increased requirements for patient care due to the aging of the population or the inclusion of more Americans in a universal care plan should be met by more strategic distribution of physicians, both geographically and across the primary care – specialty spectrum, and the expanded use of physician assistants and nurse practitioners. The role of PAs and NPs should be in both the generalist and specialist sectors of the care delivery system.**
- **Medical schools – The current expansion of medical schools is welcome but Title VII legislation needs to be reinvigorated and up-funded to augment primary care training in medical schools.**
- **Graduate Medical Education – The current number of Medicare funded slots is sufficient to maintain workforce numbers. However, reforms need to be made in current legislation to prioritize and incentivize community-based and ambulatory training. Beyond that, serious consideration needs to be given to aligning Medicare GME with the workforce needs of the country. This would entail designing a new GME allocation system.**
- **Medical Practice – Primary care payment reform, support for new practice organizations such as primary care medical homes, and investment in health information technology are all important reforms that will help to promote a strong primary care practice base in the country.**
- **Data and leadership in the field of U.S. health workforce development is insufficient. A National Center for Health Workforce Studies and a National Health Workforce Commission would both be important assets at the federal level in managing health care workforce reform.**

## **Introduction**

Thank you Mr. Chairman for this opportunity to testify today. During the 40 years since I graduated from medical school, I have been a member of the health care workforce of the United States working as a pediatrician; I have directed workforce programs such as the National Health Service Corps while serving as a member of the United States Public Health Service Commissioned Corps; and I have been a student of and commentator on U.S. workforce policy in my current role as a Professor of Health Policy at The George Washington University.

Therefore, it is with experience as a practitioner, administrator, and scholar that I come before you this morning.

Current health care access and the expansion of access to all Americans are necessarily reliant on both the number and make-up of the workforce available to provide care. In my remarks, I will briefly review the history, demographics, trends, and problems associated with the U.S. health professions workforce. I will focus on the physician workforce, which is large, at the center of the delivery system, and closely associated with the costs of the health care system. I will also talk about nurse practitioners and physician assistants who make major contributions to clinical care delivery in the country. Much of my commentary will reference the challenge of providing a strong and efficient base to the U.S. health care system – the sector of practice termed primary care. I will propose a number of areas in which legislative action would, in my judgment, support and augment the training and practice of primary care providers, thereby improving the availability, efficiency and effectiveness of the overall health delivery system.

## **Health Care Access and the Health Care Workforce**

Increasing health care access in the United States is necessarily dependent upon the current and future status of the health care workforce – in absolute numbers, specialty make-up, and geographic distribution. Health care reform in Massachusetts provides one instructive example of achieving health care reform without concurrently addressing the health care workforce. In 2006, Massachusetts enacted universal health care measures, increasing the number of insured by 340,000. However, within two years, reports of access problems due to an insufficiency of primary care providers emerged, causing the state legislature to scramble to enact primary care legislation.

In addition to the Massachusetts example, many organizations are indicating increasing concern over the primary care workforce. The National Association of Community Health Centers (NACHC) reports health centers currently have a shortage of over 1,800 primary care providers. Further, if health centers are to increase their services and access, they will need an additional 15,585 primary care providers to reach 30 million patients by 2015 or an additional 51,299 primary care providers to reach 69 million patients.<sup>1</sup>

Both the Massachusetts experience and the NACHC report remind us coverage does not equal access. In order to increase access, we must build a high quality, cost-effective, well distributed workforce.

## **The Demographics of the Workforce**

Today, there are over 800,000 practicing physicians in the United States. This number represents a steady increase over the last 50 years in both the number of physicians and the physician-to-population ratio (see Figure 1). The current density of physicians is 272 per 100,000. However, the distribution of physicians in the United States trends heavily towards urban and well-to-do areas. Less than 10% of physicians practice in rural areas while 20% of the country's population resides in these areas. Metropolitan areas have a primary care

physician-to-population ratio of 93 doctors per 100,000 people compared to 55 primary care doctors per 100,000 people in non-metropolitan areas. Specialists are even more concentrated, with greater than three times the density of specialists in metropolitan areas versus non-metropolitan areas.

American medicine is highly specialized. Currently, there are 142 Accreditation Council on Graduate Medical Education (ACGME) recognized specialties and combined subspecialties as well as multiple additional unrecognized subspecialties. Physicians reporting that they practice primarily as specialists comprise 63% of practitioners whereas those working in the primary care specialties (family medicine, general internal medicine and general pediatrics) comprise only 37% of doctors in practice. This figure is markedly different than it was 50 years ago when 50% of America's physicians were generalists. In Canada today, by contrast, 51% of physicians are currently family physicians and GPs.

The situation in primary care, however, is more problematic than the numbers might suggest. Hard work, low pay, and "lifestyle" expectations of medical graduates today have resulted in dramatic reductions in interest in primary care in U.S. medical graduates (see Figures 2 and 3). Between the mid-1990s and today, the number of training positions in family medicine has declined 20% and the percentage of the family medicine residency positions being selected by U.S. graduates has fallen from 72% to 44%. The majority of family medicine positions are now filled by international medical graduates.

A recent questionnaire of senior medical students considering careers in internal medicine showed that only 2% of them wanted to be general internists.<sup>2</sup> These trends have implications for the future – a future that will require more primary care services for our aging population. A recent study projects that we will be short approximately 40,000 primary care doctors in 15 years<sup>3</sup> – and that doesn't take into account the millions of Americans who will seek primary care when universal coverage is implemented.

### **Physician Assistants and Nurse Practitioners**

The United States is a global pioneer in the creation of new categories of health professionals who contribute to the delivery of clinical services. Separate pilot programs in the 1960s introduced the world to the idea of the nurse practitioner (NP) and the physician assistant (PA). Since those early programs, both professions have grown enormously in size, stature and public acceptance. Approximately 125,000 nurse practitioners have been trained in the United States, the majority of whom are engaged in clinical practice. There are almost 70,000 certified physician assistants in the United States and more than 100 training programs.

Both of these professions are associated with primary care and practice in rural and underserved areas. About 25% of all nurse practitioners are located in non-metropolitan areas and an estimated 85% of them practice primary care. Physician assistants are active across the spectrum of medical specialties with more than one third of them working in primary care practices and approximately one fifth of them working in rural areas.

### **The Career Lifecycle of a Physician**

Before considering questions of the sufficiency of the workforce or policy options to modify its direction, I would like to suggest a framework for considering physician careers. I call this the career lifecycle of a physician. It has three phases --- one of which is educational, one of which is transitional and the final one of which is vocational (see Figure 4). The phases are medical school, graduate medical education, and practice. The first two might be considered "pipeline phases" since they determine the quantity and nature of physicians prepared for practice. The final phase is the "payout" phase when the physicians are actually providing health care to the nation.

This framework allows us to consider capacity, cost and performance in three separate but interlinked longitudinal phases of the career path of physicians.

One further clarification is necessary to understand the dynamics of the physician lifecycle. The governing sector in the lifecycle is graduate medical education (GME). Contrary to popular belief, it is not medical schools that determine the ultimate size and specialty composition of the physician workforce of the country. Rather it is residency programs, taken as a whole, that serve as the final pathway into practice and largely govern the numbers and specialty distribution of the physicians in practice. In order to practice medicine in the United States, one needs a license from a state. All states require one to three years of residency in order to obtain a license. It is also important to recognize that a significant proportion of practicing physicians did not attend U.S. (allopathic) medical schools. Of the current first year residents, for instance, 64% graduated from U.S. allopathic (M.D.) medical schools, 7% from U.S. osteopathic (D.O.) medical schools, and 29% from medical schools abroad (International Medical Graduates or IMGs).<sup>4</sup> Almost all of these physicians will complete residency and enter practice in the United States. Thus, it is the size and specialty offerings of the aggregated residency programs of the country that really determine the future of the U.S. physician workforce.

### **Sufficiency**

As we examine the nation's health care system and as we consider options to increase coverage, fairness, quality, and affordability, we must wrestle with the question of how many physicians we need. This is a central question, not only because it involves the physician production process but also because it has important implications for training requirements for other health professionals (i.e. nurse practitioners and physician assistants.) It also has ramifications for prospective spending in a number of areas including hospital beds, diagnostic testing, medication usage and locations of practice.

Many policy scholars and analysts have written on this topic with strikingly different conclusions. Some have suggested that we are training too many physicians while others issue predictions that we are entering into a period of dramatic physician shortage. These projections are largely dependent on the assumptions made about the health care system of the future. If one assumes that the health care system will be highly coordinated with the well organized use of physician services, such as is the case in prepaid managed care plans like Kaiser Permanente, the case can be made that we might well have a surplus of physicians. If one assumes the continuation of a minimally organized, specialty dominated, predominantly fee-for-service system that is an extrapolation of today's circumstances, one can make the case for a perpetually escalating need for physicians. Both cases have been argued eloquently.

My view is that the density of physicians (the physician-to-population ratio) that we have at the moment is reasonable and the role of public policy (financing and regulation at the federal and state levels) should be to maintain a physician workforce of approximately the current size. This strategy should take into account projected growth in the size of the U.S. population (which is projected at 1% per year) so that the absolute number of physicians would grow in a modest but consistent fashion.

This strategy would be challenged by critics who would raise objections in the following areas:

1. The American population is aging, and by all measures, older citizens require more health care;
2. Physician practice patterns have changed and physicians don't work as many hours as they used to;
3. Technology is advancing and we will need more specialists to deliver the fruits of new technologies to the population;
4. Don't bet on better organization of the health care system.

These observations are all valid. A response to these concerns could certainly be placement of greatly increased numbers of physicians into practice --- whether from U.S. medical schools or from physicians trained abroad at

the expense of other nations. However, all evidence indicates this would be a very costly response since physicians are expensive to train and to compensate in practice. Additionally, excellent evidence shows an association of more physicians and, especially, more specialist physicians with higher health care costs. This is the case because more physicians and, particularly, more specialty physicians are associated with higher hospital utilization and increasingly costly patterns of practice. Importantly, this evidence also shows no benefit in care from this higher intensity of physician practice.

Reforming physician workforce policies in a way that promotes quality and constrains costs requires a different strategy. The essential elements of that strategy are three:

1. The revitalization of a primary care workforce that will be able to staff an organized system of national primary care delivery that needs to be created by reforms in the delivery system. Whether services are delivered in primary care medical homes, accountable care organizations (ACOs), prepaid group practices, or community health centers, the size and skills of the primary care workforce need to be robust;
2. The physician education pipeline needs to produce enhanced numbers of primary care physicians prepared to work in hard pressed inner city and economically challenged communities cities and rural areas as well as in economically comfortable urban and suburban settings;
3. To the degree that the clinical care workforce as a whole needs more providers to address the changing needs of the population, a strong strategy of support for nurse practitioners and physician assistants should be adopted. The increased use of PAs and NPs should not be limited to the primary care sector. Both professions have demonstrated excellent functionality as team members in all aspects of medical practice from the pediatric office to the operating room. Nurse practitioners and physician assistants are trained more quickly, at less expense than physicians, cost less in practice, and are not, on their own, drivers of ancillary clinical tests and services. Moreover, they represent a highly flexible workforce – an important asset generally lacking in the physician workforce. In contrast, physicians (especially specialty physicians), invest enormous amounts of time, money and deferred income in establishing their capabilities and credentials. Training, retraining, and/or redirecting them is not easily done. Physician assistants and nurse practitioners are, comparatively speaking, “stem cells” and more able as individuals and as professions to focus on areas of emerging or urgent need. NPs and PAs provide a well-proven quality, clinical workforce that can interdigitate with all aspects of physician practice and whose pipeline can be turned up or down as needed to assist in addressing emerging or changing clinical needs.

No discussion of the physician workforce would be complete without reference to international medical graduates (IMGs) who constitute approximately 25% of physicians in practice and 29% of physicians in residency training. No American policy body --- certainly not the U.S. Congress --- has ever advocated that we “offshore” one quarter of our medical training or design a system in which our medical schools are only capable of training three-quarters of the physicians we need. Yet that is what we have done.

We can be proud that the appeal of our way of life and the prowess of our medical institutions that have made the United States a magnet for physicians from around the world for the last 50 years. Most have arrived under educational visas and, in overwhelming numbers, have remained in the United States following residency training. This has been an enormous gift to the United States. In steadily escalating numbers, these hard working, smart, and ambitious men and women from all over the world have staffed our health system. They have also allowed us to be casual in our medical education policy. There is no need for planning or precision nor, even, adequate funding for medical schools since large numbers of foreign graduates are always available to fill in the gaps in residency programs and in specialties that are out of favor with American graduates. Sixty percent of international medical graduates come from poor countries --- largely the Indian subcontinent, Africa

and the Caribbean. In many small countries the physician “brain drain” is the largest and most destabilizing aspect of their health sector. We are not the only country to rely on foreign trained physicians, of course. At one point, Nelson Mandela personally appealed to Tony Blair to stop “poaching” South Africa’s doctors. Recently, global attention has turned to the question of health system strengthening to fight AIDS and end poverty, and yet everywhere one turns the brain drain of doctors and nurses stands as an impediment to improved health in developing countries. Some have called it “reverse foreign aid.”

Heavy reliance on international medical graduates to fill residency positions and undergird the nation’s physician workforce is neither good domestic policy nor good foreign policy. Going forward, public policy makers and medical educators should work toward self sufficiency in medical education. This boils down to a single simple principle: U.S. medical schools should graduate approximately the number of students required to fill the first year residency positions offered in the country.

In that regard, the current initiation of new medical schools and expansion of class sizes at existing schools is a positive development. These new U.S. students will undoubtedly find residency positions upon graduation, decreasing our need to draw on the rest of the world to meet our medical needs. This will be an asset in our efforts to promote the U.S. as a good global citizen and also provide an overdue opportunity for more U.S. students to go to medical school in the U.S.

## **Reform in the Three Sectors of the Physician Workforce**

### **Medical Schools**

The principal federal legislation impacting medical schools since 1963 has been the series of programs authorized under Title VII of the Public Health Service Act. From 1963 to 1976 the principal investments were designed to increase the number of medical schools and medical school graduates. Construction grants, capitation funds, and student loans were all used as stimuli for medical schools. The result was a more than a doubling of the nation’s annual medical school graduating class from approximately 7,500 students a year in 1960 to 16,000 students a year in 1980. This was an extraordinary achievement of public policy and medical education.

The problems with medical education, however, that concerned policy makers even in those early years went beyond absolute numbers. It was growingly clear that physicians were not equally distributed in the country nor were medical students reflective of the diversity of the population of the U.S. The term “primary care” was first used in the 1960s to focus on yet another problem with medical graduates - the increasing specialization of physicians such that many parts of the country had little access to generalist care.

The result was a new growing set of programs authorized under Title VII of the Public Health Service Act to promote community practice, rural practice, primary care, and opportunities for minorities and disadvantaged students. These included the Area Health Education programs, support for family medicine, general internal medicine, and general pediatrics, the Health Careers Opportunity Program and funding for physician assistants. During this same period, funding for nursing and, particularly, new nurse practitioner programs was similarly increased under Title VIII of the Public Health Service Act.

In the early 1970s, the funding for Title VII programs reached over \$2.5 billion (2009 dollars) (see Figure 3). In the mid-1970s, the consensus changed with the belief that we were training enough (some thought too many) physicians and Title VII authorizations and appropriations were throttled back. The Title VII programs have functioned in the very modest \$200 - 300 million/year range from that time until the present.



In the latter years of the Bush administration, serious efforts were made to eliminate all Title VII funding including support for primary care, minorities in medicine, rural placements and workforce tracking. During the same period, medical school revenues from NIH research funding have risen from \$2.4 billion in 1970 to \$16.3 billion in 2004 (all 2009 dollars), creating a robust culture of research at medical schools that dominates medical school finances, faculty values and school culture (see Figure 4).

Any serious proposal to reform medical practice in the United States must start with reinventing and reinvigorating Title VII funding to medical schools for the purpose of creating incentives and educational pathways that will select and train students for primary care, rural health, diversity, and social mission. Parallel support for nurse practitioners and physician assistants is important as well.

In the past, critics of Title VII have proposed high standards of measurement, asking “how do we know Title VII funds make a difference?” This is a difficult problem for programs with small funding streams that function within large institutions with many contrary incentives. Nonetheless, an impressive series of studies have shown that Title VII funds affect physician careers positively in regard to primary care, rural placement and minority opportunities. There are many ways in which Title VII could be augmented and strengthened. One of those would be an initiative which provides incentives for the creation of “teaching community health centers” – creating funded linkages between medical schools and Federally Qualified Health Centers (FQHCs) for the purpose of training. Another area in which Title VII needs strengthening is in the ability to collect important data and produce useful policy analyses on the workforce. A national center for workforce studies should be given serious consideration in augmenting Title VII authorities and funds.

Funding for the education of physician assistants and nurse practitioners should be continued and augmented to help provide the build-up of flexible clinicians for health reform.

While the National Health Service Corps (NHSC) it is not an educational program, it is a brilliant but underfunded asset available to redistribute health professionals – physicians, NPs, PAs and others. I say brilliant since it matches the needs of individual health science students/professionals with national needs for practitioners in underserved areas. The program has been “tested” since 1971 and works to the benefit of clinicians and communities. Many clinicians have remained in their assigned communities for long periods or full careers. At times, however, the NHSC has received criticism for not having as high “retention rates” as some would like. There are American communities that for reasons of geography or economy have never been able to retain physicians. To the degree that the NHSC can meet service needs with serial placements in these communities, the program is a success. The principal problem with the NHSC is its size. There are many more communities eager for NHSC help and many more clinicians interested in scholarships or loan repayment opportunities than can be met given the program’s budget. Major re-investment in the NHSC would do a great deal to increase access to health services in some of our poorest and most rural communities.

A word should also be said about Community Health Centers which are not teaching institutions but have a stellar record of providing learning sites and supervision for clinical students – often without recompense. Good data now shows that in many communities CHCs are struggling to find sufficient primary care providers to meet their staffing needs. Support through Title VII and Medicare GME for CHC based teaching activities will be essential to allow them to expand to meet the growing needs of the un- and underinsured populations of our country.

### **Graduate Medical Education**

Graduate medical education (GME) grew significantly through the 1980s and early 1990s and leveled off at about 100,000 residents and fellows a year in GME from the late 1990s to the early 2000s. In recent years there has been a small increase in the total number of residents and fellows. Residency programs are unevenly

distributed throughout the country, with history playing an important role. The locations of the earliest residency programs 100 years ago are the areas of the largest residency concentrations today including Boston, New York City, Philadelphia and Washington, D.C. In general, the resident physician-to-population ratio is highest in cities in the Northeast, lower in Southern and Western states, and lowest in rural areas.

The most important financial policy and educational instrument in graduate medical education is Medicare GME. While Medicare has paid for a portion of GME since its inception, the current system was established in 1983 as part of the prospective payment reforms of Medicare. The current system reimburses hospitals that train residents for two costs:

1. Direct costs (DGME) associated with residents, such as salaries, teaching time of faculty, administrative costs; and
2. Indirect costs (IME), which are intended to subsidize the higher cost of patient care in teaching hospitals related to both higher patient care acuity and the presence of residents in the hospital.

The calculation for direct and indirect payments is different, but both are based on the number of residents at a given teaching hospital and, as such, are a form of capitation payment - the more residents, the higher the payment. In 2006, direct GME payments totaled \$2.8 billion and indirect GME payments totaled \$5.8 billion, a total of \$8.6 billion. This total amount represents only 2% of Medicare's expenditures in 2006 and, perhaps, receives less public debate than it might. On the other hand, \$8.6 billion far and away the largest federal expenditure related to in any way to medical education.

As part of Medicare, these funds function as an entitlement and are allocated based on established formulas. Medicare legislation requires no community or regional physician needs assessment to qualify a hospital for GME payments, sets no targets for the number or type of resident physicians that a hospital trains and requires no accountability for the type or sufficiency of physicians in the hospital's city, county or state. Concerned with the cost of the program and its potential to escalate, Congress capped the number of federally funded residents in the Balanced Budget Act of 1997. In the last five years, the total number of residents in the country has grown slowly presumably due to the addition of "off-cap" residents and the selection of specialties with longer training periods.

While Medicare GME in its current form has provided a large and stable source of income for teaching hospitals that is understandably of enormous value to those important institutions, it is effectively a Federal payment without a deliverable – a subsidy. The resident compliment of any given hospital is determined by the staffing needs of that particular hospital with, presumably, the input of the chiefs of the clinical services. There is no requirement that the particular hospital or the medical school with which it is affiliated make any judgments about the workforce needs of their community, region or state. The result is that the annual graduates of the over 9,000 residency programs at nearly 1,100 teaching hospitals in the U.S. comprise the workforce of the country with no regard to specialty selection, practice location or regional needs.

Effectively, we are addressing the health care needs of the country with a physician staffing pattern based on hospital needs. This is a core problem for workforce reform. There are many ways in which Medicare GME could be reconceptualized and redirected. For the purpose of this testimony, let me suggest two levels of reform that might be considered. The first I will entitle "modest" and the second "major".

Modest reforms to current Medicare GME would entail modifications in the rules governing the use of GME funds. Currently, there are a variety of financial disincentives to offsite training. Hospitals stand to lose GME payments, both DGME and IME, for residents who spend time offsite (for instance in Community Health Centers, office-based practices, or local public health departments.) The sites, in turn, face either complicated negotiations to obtain GME pass-through funds or the prospect of training residents without receiving the benefit of GME financing.

There is much that could be done to make Medicare GME more user-friendly to primary care and community-oriented training. Reforms in this area would be helpful but would do little to change the basic problem of hospital staffing patterns dictating the nation's physician workforce.

A major reform would require reconstituting the current policy thinking that governs Medicare GME. Rather than seeing GME as a convenient vehicle for teaching hospital support, Medicare GME should be seen as the principal instrument to shape the physician workforce of the country. This perspective would require teaching hospitals to undertake community or regionally oriented analyses of physician workforce needs and make application for training positions based on a fiduciary responsibility to train a complement of residents that corresponds to agreed upon regional needs. This approach might also call for rebalancing regional and sectional allocations of GME funding and therefore physicians to provide a more balanced landscape of GME training.

One problem with envisioning a system of this sort is that many teaching hospitals who are current recipients of GME funding are not large and do not have a large number of teaching programs. In fact, many larger hospitals have specific foci such as cancer or children or surgery that do not equip them to address regional needs. An answer to this problem is the formation of independent consortia of teaching institutions that would, when working together, represent training capacity that could address regional needs in a much more comprehensive fashion. A variant approach would be state based GME organizations that might (or might not) have a link to state government. In either case, the consortium would be able to represent regional needs and work with the Center for Medicare and Medicaid Services (CMS) on residency training targets and GME funding.

A consortium system would require the establishment of many new arrangements within the medical teaching sector. It might also mean that teaching hospitals would have to modify their complement of residency programs in ways that might not be popular with the chiefs of service or the hospital administration. Strong political objection would predictably be mounted against any such reform, but if this most crucial link in the construction of the physician workforce in the United States --- graduate medical education --- is to be modified to meet the needs of an efficient and effective health system in the future, changes will need to be made in the way the federal government does business with the teaching hospitals of the country.

## **Medical Practice**

Reincentivizing and redirecting primary care in the pipeline (medical schools and GME) will amount to little if parallel reforms are not achieved in support for primary care practice. Physicians are smart and ambitious enough that, if the current reimbursement inequities and structural disincentives to primary care practice remain in place, many will abandon primary care during their practice years despite excellent primary care education and support for primary care in their training years. The key areas in the practice environment that will help are practice reimbursement, practice organization, and health information technology.

Primary care physician average annual incomes are currently less than half those of their specialty colleagues. Given high medical school debt, late entry into an economically productive life and demands of the job, it is not hard to understand why primary care careers are severely disadvantaged in comparison to more lucrative specialty options that often have more controlled lifestyles. While physicians receive payment from many sources, the Medicare fee schedule is the primary determinant of physician reimbursement and is a candidate for major restructuring.

The organization of primary care practice is another area of major reform potential. The preponderance of primary care providers still work in solo practice or small groups. This minimizes the opportunity to develop a full service primary care team benefitting from new information technologies or relating in an effective way to specialty consultants. Larger team based practices with excellent information systems such as medical homes or

accountable care organization offer the promise of a new platform for health care delivery. Incentivizing and supporting these forms of practice stands to do a great deal to improve the overall health system, particularly promoting primary care, whose currency is patient well being over time linked to episodes of care provided by other practitioners. Health IT will organize and empower the primary care practitioner in ways that will make the practice of primary care much more effective. Investments in these areas are crucial.

### **A National Center for Workforce Studies**

Underlying reform efforts in all three sectors of the physician workforce is the need for national level analyses and guidelines for workforce policies. Policy changes aimed at reforming the three sectors to address the health care needs of the nation can not be successful without clear workforce objectives, which require the ability to collect important data and produce useful policy analyses on the workforce. A national center for workforce studies should be given serious consideration.

### **Conclusion**

In order to reform the delivery of health care in the United States in a way that is more effective and constrains costs, a number of changes need to be made in the workforce since the workforce is an essential governing component of the functionality, quality and cost of the system as a whole.

The number of physicians entering practice in the United States currently is in a zone of adequacy. Many of these physicians are trained abroad and measures should be taken to increase U.S. medical school output so as to decrease our dependence on foreign trained physicians. The training and use of nurse practitioners and physician assistants should be augmented to absorb increased demand in the system due to an aging population.

The current system is heavily balanced towards fragmented specialty care, making it inefficient and expensive. Moreover it is unevenly distributed, raising serious concerns of access and equity. Major investments in the pipeline at the medical school and GME level will be essential to rebalancing the system. At the GME level, in particular, where a large investment already exists, modifications need to be made in the system. In the practice sector, primary care is currently severely disadvantaged and reforms in payment systems and practice support will be needed to reincentivize and restructure the practice of primary care across the country.

It goes without saying that this is an important moment in the history of health care in the United States. The Congress has an unprecedented opportunity to lead in the reform of the system for the benefit of all Americans. I very much appreciate the opportunity to testify before you and I remain available to provide assistance in whatever way I can.

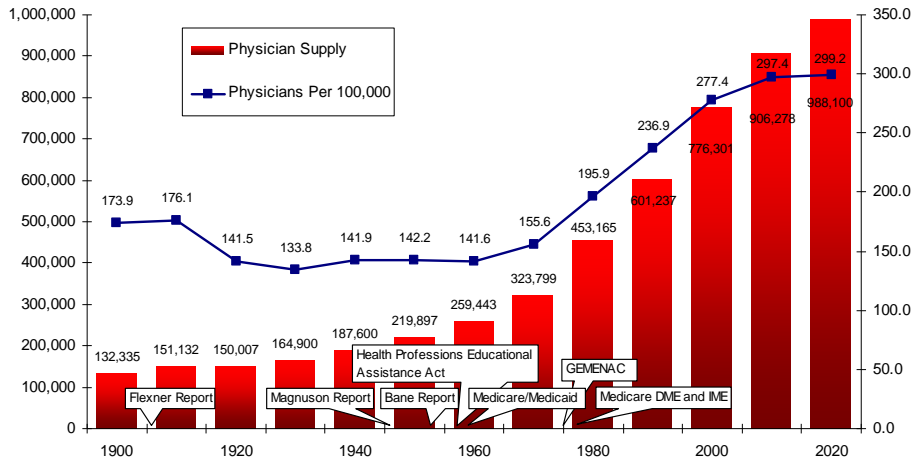
Thank you.

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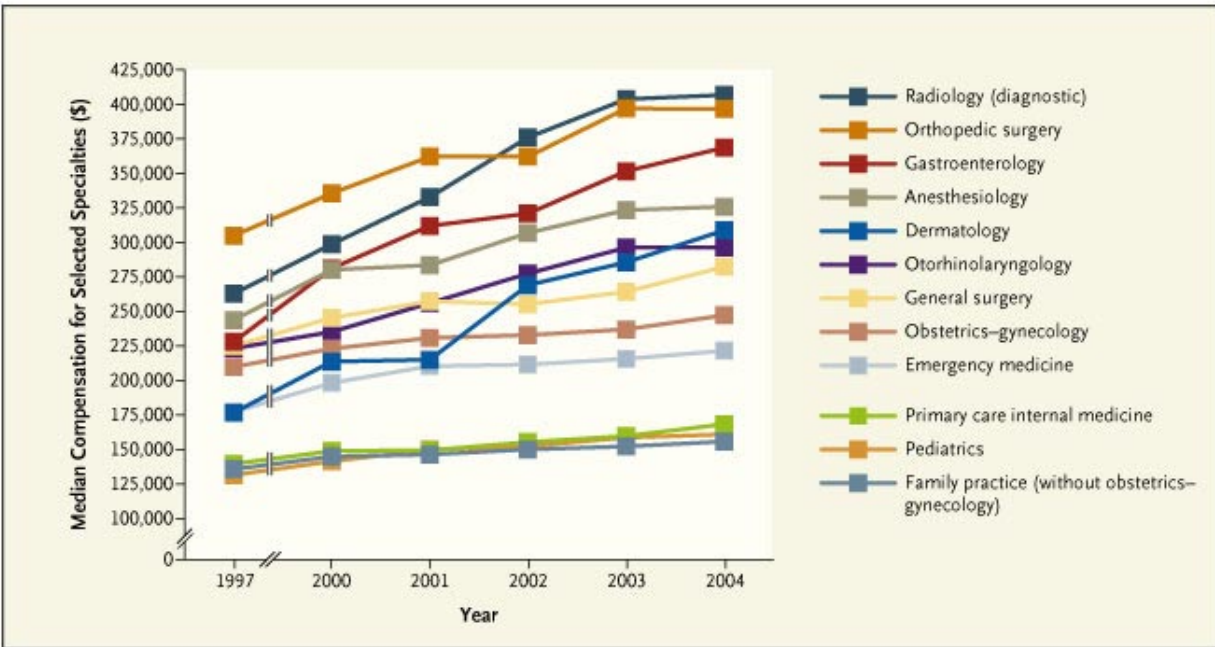
**FIGURES**

**Figure 1: Physician Supply 1900 Projected to 2020**



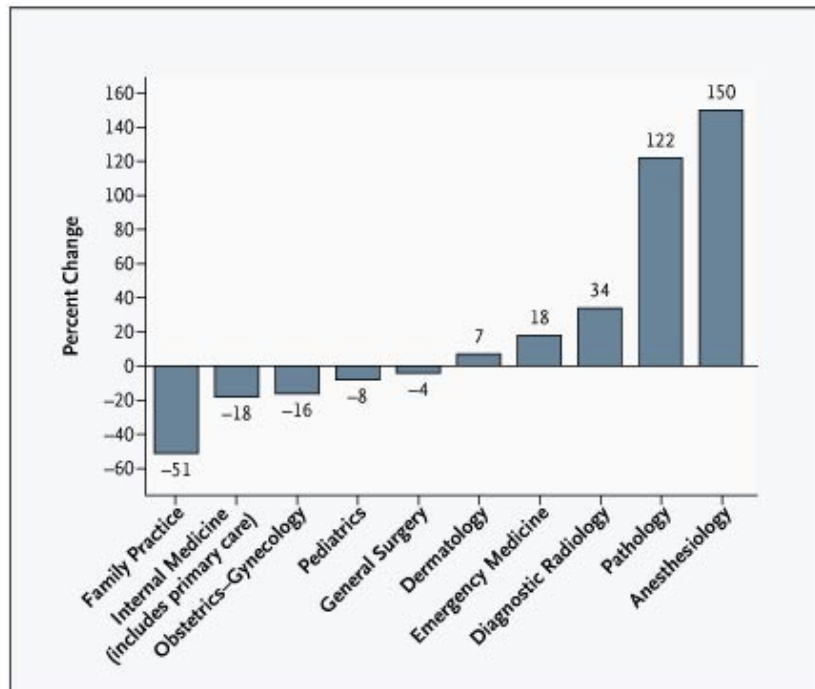
Sources: 1900, 1920: US Census occupations; 1910: Schofield (1984); 1930,1940: Stewart WH (1960); 1950-2020 data provided by the Bureau of Health Professions.

**Figure 2: Median Compensation for Selected Medical Specialties**



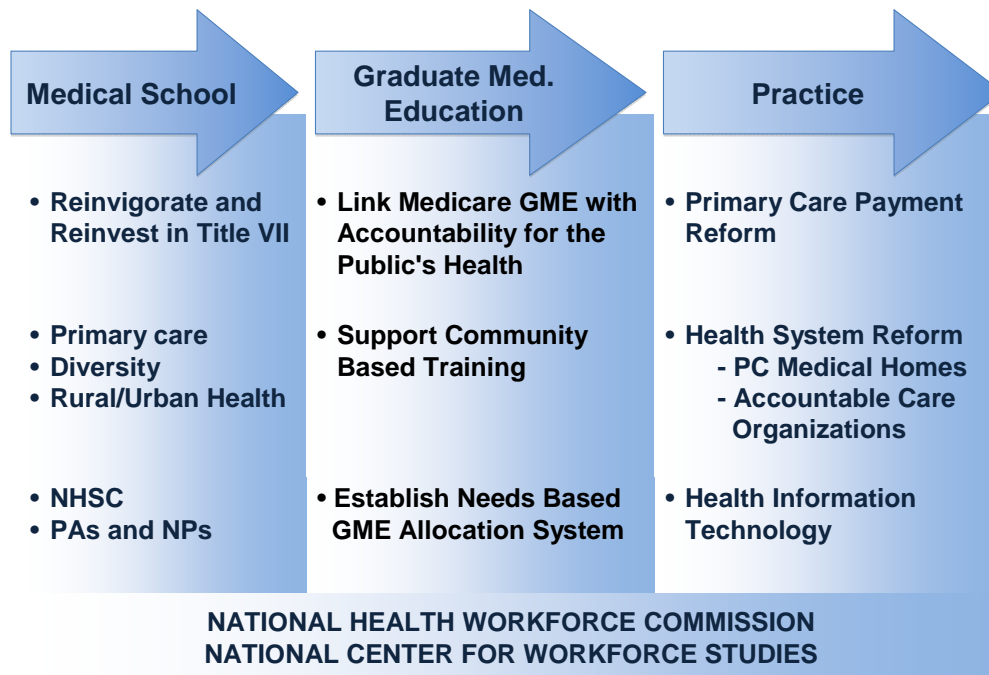
Source: Medical Group Management Association Physician Compensation and Production Survey, 1998 and 2005. From: Woo: N Engl J Med, Volume 355(9).August 31, 2006.864-866.

**Figure 3: Percent Change between 1998 and 2006 in the Percentage of U.S. Medical School Graduates Filling Residency Positions in Various Specialties.**

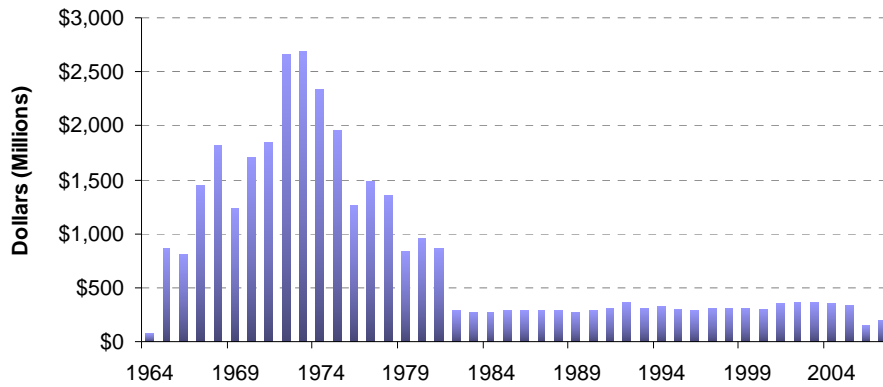


Source: Medical Group Management Association Physician Compensation and Production Survey, 1998 and 2005. From: Woo: N Engl J Med, Volume 355(9). August 31, 2006.864-866.

**Figure 4: Primary Care Workforce Reform**

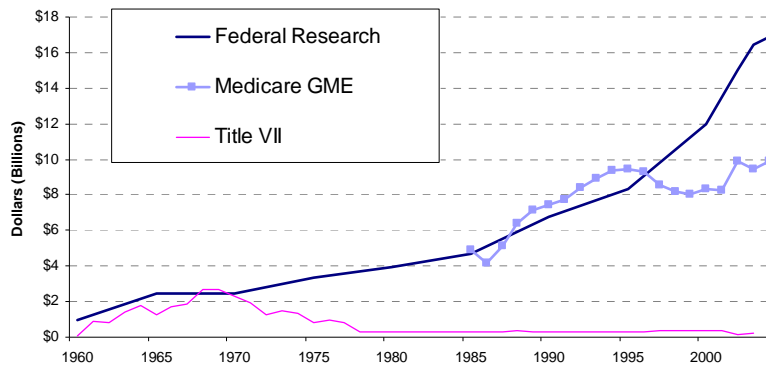


**Figure 5: Title VII Funding, 2008 Dollars**



Source: Health Resources and Services Administration

**Figure 6: U.S. Medical School Revenue, 2008 Dollars**



Source: AAMC Data Book, Centers for Medicare and Medicaid Services, Health Resources and Services Administration