

***“Physician Workforce Planning: What Have We Learned?  
Lessons for Planning Medical School Capacity and IMG Policies:  
The United States Experience”***

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***Abstract***

While there is no centralized, formal system of physician workforce planning in the United States, the policies and practices of the federal and state governments, medical schools, teaching hospitals and others have generally followed the public consensus and recommendations of national advisory committees in terms of decisions around the number and types of physicians to educate and train. From the late 1970s until recently, there had been a general consensus that the nation faced an overall surplus of physicians but a shortage of generalists; in response, policies and practices were designed to constrain the growth in physician supply and promote generalists.

The United States is now in the midst of a major reassessment of its physician workforce needs and policies. This reassessment is happening on several fronts. There have been articles in major journals articulating different views on physician workforce issues, presentations and panel discussions at national association meetings and most recently, a review of current policies by the national Council on Graduate Medical Education (COGME) which is charged with advising the federal government and the public on physician workforce issues. While the debate is continuing, there appears to be an emerging consensus that the nation is likely to face major shortages over the next 20 years, especially of non-generalists.

Over the past several years, there has been growing concern that the nation might have too few physicians in the future to meet expected demand and needs. This concern reflects growing shortages in selected specialties, particularly among non-generalist specialties, increasing use of physicians services over the past 20 years, the rate of growth of the population which will exceed the rate of growth of the physician supply in coming years, and the aging of the “baby boom” generation which will begin to reach 65 years of age in 2010. The current debate covers whether there is or will be a shortage, whether it is preferable to have more or less physicians and what the national policy should be regarding medical education and international medical school graduates (IMGs). There is also debate around the preferred distribution between generalist and non-generalist specialties. The recognition of the long timeframes needed to modify the supply of physicians is contributing to the increasing intensity of the discussion.

The national debate includes disagreement over technical issues, such as forecasting methodologies. Uncertainty over key factors, such as future physician productivity, hours

worked, retirement patterns of physicians, cost containment efforts, insurance coverage, the impact of increased national wealth, and medical advances, leaves much room to debate the most likely future supply, demand and need for physicians. But the national debate goes beyond technical and methodological issues, it also includes issues that are more of a political and philosophical nature. This includes the appropriateness of intentionally limiting supply to control costs and to force system changes; how to respond if there are significant differences between need and demand, and the implications for physician workforce policy if physicians and medical care only have a limited impact on the health of the population.

It is likely that some US policies and practices will be modified over the next few years, including a modest increase in class size by existing medical schools and the addition of several new medical schools. While there may be pressure to reduce the use of IMGs due to the impact on developing countries, there is likely to be equal pressure to continue the high level of inflow (4,000 to 5,000 per year) given high demand in the US. Similarly, in the short run, while there will be pressure on the federal government to lift limits on Medicare reimbursement to teaching hospitals for GME (the major source of financing for GME), national fiscal pressures make it unlikely that there will be much financial relief for the next several years.

The current effort by COGME has been relatively modest. Major funding has not been available for a comprehensive assessment or for new ongoing data collection. However, the new COGME report expected this fall is likely to call for increased investment in data collection, monitoring the workforce and periodic assessments. The current debate is likely to continue for several years.

### **Summary Data on the Physician Workforce in the USA**

- Number of active physicians (with residents): 796,210
- US Population (2001): 284,797,000
- Number of active physicians (with residents) per 100,000 population: 280
- Percent of active physicians (post-residency) who are IMGs: 23.9%:
- Percent of active allopathic physicians (post-residency) who are generalists: 31.5%
  
- Number of medical schools (2001): 125 (MD); 19 (DO) = 144
- Number of US medical school graduates (2001): 18,288
  - Allopathic graduates: 15,778
  - Osteopathic graduates: 2,510
- Canadian medical school graduates entering GME: 200
- IMGs entering GME (2001) 5,188

- A. Review recent physician workforce planning developments within the US.**
- a. Has there been a recent reassessment of the adequacy of the supply and levels of production?**
  - b. What led to this reassessment?**
  - c. What organizational/political process was used for this assessment?**

Over the past several years, a number of articles and reports have appeared challenging the prevailing wisdom that the nation faced an overall surplus of physicians and a shortage of generalist physicians. Many communities have also experienced difficulties accessing physicians in specific specialties and a number of specialties have begun to perceive that demand is exceeding current supply. In the early 1990s, many analysts and policy makers believed that managed care would reduce demand for physicians, especially non-generalists, in part based on studies in the early 1990s reporting low physician to population ratios in closed model Health Maintenance Organizations (HMOs). By the late 1990s, it was clear that most Americans had rejected efforts to tightly constrain access to physician services.

In March of 1999, the national Council on Graduate Medical Education (GME) issued a report entitled “*COGME Physician Workforce Policies: Recent Developments and Remaining Challenges in Meeting Goals*”. This report noted a number of changes in the health care delivery system, in the physician workforce and in the nation’s population and concluded that there was a need to reassess the supply and demand for physicians. In 2002, the COGME commissioned an assessment of the supply, demand and need for physicians through 2020, in order to decide whether to revise their policy recommendation established in the early 1990s. That recommendation was that the number of physicians that should be entering training each year should be equal to the number of US medical school graduates in 1993 plus 10% (to accommodate IMGs) and that 50% of new physicians should be entering generalist specialties.

In 2002, the Association of American Medical Colleges (AAMC) also issued a statement reversing prior policy statements that had expressed concern with potential surpluses of physicians. The statement called for more study of the supply and demand for physicians.

COGME is now considering a draft report that would reverse the call to decrease the overall number of physicians being produced in the US. The draft report would also end the recommendation for 50% of all new physicians entering a generalist specialty and instead urge that the specialty distribution of new physicians reflect the marketplace demand for physicians.

***B. In general, what methodologies and tools were used to forecast future supply, demand and/or need? Who conducted the technical assessments? Were there any new advances in methodology or tools for forecasting future supply, demand or need? Was a process established to reassess the adequacy of the forecasts on a periodic basis? Will there be an effort to systematically track supply and demand?***

The methodologies and tools used to conduct the recent re-assessment for the COGME were based on historical practice patterns for physicians and for the use of services. On the supply side, practice patterns, including the time spent providing patient care, number of patients seen, and retirement patterns were based on the actual experience in the mid-1990s by gender, age, specialty, location of medical education (USMG vs. IMG). Future demand was calculated by applying the historical use rates to the expected population by age, gender, insurance status, race and ethnicity and urban/rural status. Need was calculated as an adjustment to demand; it was assumed that the physician use rates of the uninsured would be equal to those that were insured, if coverage was available.

The models used for projecting future supply and demand were basically the same as earlier projections by the COGME and the federal government, however they used updated coefficients and more recent population forecasts. There were no breakthroughs in terms of new methodologies.

The report being considered by COGME calls for increased data collection and tracking of the supply and demand for physicians but there is no assurance that it will happen even if recommended by the COGME. Given the serious budget problems of government, medical schools and teaching hospitals, it is not clear where the funds would come from to systematically track supply and demand.

***C. What were the key findings of the re-assessment? How do the findings compare with prior assessments? If the results are different, why were they? What factors were viewed as having a major potential impact on future supply, demand and/or need?***

The new assessment conducted for COGME concluded that the nation is likely to face a significant shortage of physicians in the coming years and the shortage would be most significant for non-generalists. The draft report being considered by COGME forecasts demand to exceed supply in the range of 130,000 physicians by 2020 and forecasts need to exceed supply in the range of 180,000 physicians. These forecasts are based on the assumption that physician practice and career patterns and patient use patterns will be similar in the future to what they were in the recent past. The report further concludes that the prior goal of 50% of new physicians entering generalist specialties is inconsistent with current practice in the US and recommends no specific national goals for the distribution by specialty.

These findings are significantly different than earlier reports by COGME as well as a major report in the late 1970s by the Graduate Medical Education National Advisory Commission (GMENAC). These earlier reports as well as other reports and several published articles suggested that the nation was facing a surplus of several hundred thousand physicians by the year 2000 and beyond. The earlier COGME reports also called for 50% of new physicians to be in generalist specialties.

The key reasons for the sharp difference in the results of this analysis compared to prior studies, include the following:

- The population of the US grew more rapidly than expected and the census bureau forecasts an increase of 18% between 2000 and 2020;
- There has been an increase in the use of physician services, particularly for those over 45; and
- The physician workforce is aging reflecting a relatively stable level of new physicians since 1980; a growing number will be reaching retirement age over the next 20 years.

Several factors have the potential to have a significant impact on the future supply, demand and/or need. These include the following.

*a. Factors likely to add to the shortage of physicians:*

- Changing life styles for the newest generation of physicians, with the possibility that new male and female physicians will work fewer hours over the course of their career;
- A potential increase in non-patient care activities by physicians including research and administration and a decrease in patient care activities;
- A potential change in practice patterns for physicians over 50 including a reduction in hours worked prior to retirement and earlier retirement patterns;
- Possible increases in departures from practice due to liability concerns of physicians;
- Decreases in hours worked by physicians in training;
- Possible decreases in immigration of graduates of foreign medical schools;
- Possible increases in numbers of physicians limiting the number of patients on their panel (“boutique medicine”);
- Continuation of the rate of increase in the use of physician services by those over 45 which has been increasing for the past 20 years;
- Increased use of services by the baby-boom generation compared to prior generations;
- Expected increases in the nation’s wealth which would facilitate continued increases in the use of medical services;
- Advances in genetic testing which could lead to increases in the use of services as individuals learn they are at increased risk; and
- Additional medical advances likely to keep individuals with chronic illness alive longer without curing the illness.

*b. Factors that may limit future shortages:*

- Increases in productivity, such as through improved information systems;
- Increases in the supply and use of nurse practitioners, physician assistants and other non-physician clinicians;
- More effective utilization review and quality assurance efforts to weed out inappropriate or unnecessary services;
- Increases in costs and cost sharing; and
- Medical breakthroughs that decrease use of services.

***D. What new programs or policies, if any, have been proposed and which ones have been put in place as a result of the reassessment?***

Although no new formal policies have been put in place in the US, several new medical schools are under development or under discussion. A majority of medical schools in the US are sponsored by state governments and the interest in new schools are primarily from states in areas of the country that have grown significantly over the past 20 years. In addition, some medical schools responding to the growing concern with shortages may be increasing their enrollment.

In regards to specialty distribution among new physicians, even without any policy changes, a growing number of new physicians are selecting non-generalist specialties when compared to the early and mid 1990s. This seems to reflect the recognition that managed care was not going to decrease use of non-generalists and the reality that demand for non-generalists has been greater than demand for generalists.

The draft COGME report does not include any recommendations for major new programs at this time to increase medical education capacity. Key recommendations include:

1. A withdrawal of the prior recommendations to discourage expansion of the physician supply and to increase the percent in generalist specialties;
2. A voluntary, modest increase in US medical school production of between 10 and 15% of current enrollment (between 1,900 to 2,850 graduates per year) by 2015;
3. An increase in the use of nurse practitioners, physician assistants, and other non-physician clinicians;
4. Increased investments in efforts to improve the productivity of physicians, including through improvements in information technology;
5. Increased physician workforce tracking, data collection and studies to inform public policy and private decision making; and
6. A major, comprehensive study of the supply, demand and need for physicians within 4 years.

***E. What role is envisioned for IMGs in meeting the nation's physician workforce needs? Is this role different than in the past? What criteria/factors are being considered when deciding to increase medical school capacity versus increasing the inflow of IMGs?***

The issue of IMGs has been periodically discussed in the US but there is no formal US policy in terms of physician workforce planning. While there is some sentiment that allowing thousands of foreign educated physicians to immigrate to the US every year drains valuable and urgently needed resources from less developed countries, the US also recognizes the valuable contribution IMGs make to health care in the US, especially to under-served populations.

Many of the IMGs in training in the US are on a "J-1" visa which is designed to help developing nations learn of medical advances in the US, and they are generally required to return to their native country after completing training. Until recently however, it was relatively easy for these physicians to continue in training for many years and there were many opportunities for them to obtain a waiver of the requirement they return to their native country. The most common reason for a waiver was practice in federally designated physician shortage area. In fact, Congress passed legislation in the 1990s that specifically allowed every state the authority for up to 20 waivers each year. (This was raised to 30 per state in the late 1990s.)

These types of programs have contributed to IMGs playing an important role in serving the under-served in the US. This is one of the factors that has kept IMG levels high, generally, above 5,000 entrants into GME per year compared to the approximately 18,300 US medical school graduates in 2001.

It is also worth noting that current reimbursement policies for Medicare that provide teaching hospitals with more than \$8 billion dollars per year do not favor US medical school graduates over IMGs. Further, immigration regulations set no limits on the number of physicians that can enter the US to enter residency training. However, since 1997, Medicare has set a limit at each hospital on the number of residents for which it would provide reimbursement. This has had the effect of limiting the total number of residents.

***F. What are the cost implications of increasing medical school capacity compared to increasing the inflow of IMGs? Were the cost and/or the time needed for medical education a factor that was considered in the policy discussion?***

If increasing the number of US medical school graduates requires the development of new schools, which is expected, then the cost will be significant. To the extent that the nation's existing medical schools can increase their current capacity by 10% to 15% without major new construction or adding significant new faculty, the cost will be less, but this modest increase is not likely to be sufficient in the long run. In general,

increasing the total supply by increasing US medical school capacity is likely to more costly than increasing the number of IMGs entering at the graduate training level.

However, this has not been an explicit factor in consideration of IMG policies or for that matter in the discussion as to whether to add capacity to US medical schools. Perhaps this is because there is no single organization or level of government that is responsible for medical schools and for IMG policy. Most of the decisions as to whether to add capacity to US medical schools are made at the state or individual school level while decisions related to IMG policies are the responsibility of several federal agencies.

***G. Were there any recommendations or new policies designed to increase productivity, increase the use of non-physician clinicians or reduce demand for physician services to help meet future need?***

Although there has been no explicit, comprehensive national policy on productivity or the use of non-physician clinicians, over the past decade there has been a sharp increase in the number of non-physician clinicians. Along with this increase in number, there has been a significant expansion in the scope of practice of nurse practitioners (NPs), physician assistants (PAs) and other non-physician clinicians in most states. As of 2000, there were nearly 150,000 NPs, PAs, and midwives practicing in the U.S.; three times their numbers in 1990. By 2020 there are likely to be between 250,000 and 300,000 in practice.

The draft COGME report includes general recommendations to expand the use of non-physician clinicians and to take steps to improve productivity, such as expanded clinical information systems. However, it remains to be seen whether these recommendations will be formally issued by COGME and whether specific new programs and policies will be developed.

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