"The U.S. health system is heading back on a course of increasing specialization and pressures to increase physician supply."

projections arrive at markedly different levels of advisable physician supply. This conflict was evident in the post-GMENAC period. Several analysts countered the GMENAC projections of an impending physician surplus by publishing studies indicating that patient demand for physicians, as measured by actual use of services, was still strong and likely to continue to increase. The demand modelers, working in the old retail-market framework, portrayed the GMENAC-style needs-based planners as paternalistic in telling the American people what they needed, rather than allowing the public to freely demonstrate its own manifest level of desire for physician services.

COGME had the good fortune of having the new, wholesale-market, demand-based studies arrive at estimates for physician requirements that were compatible with the GMENAC needs-based estimates. Although disparate in their methodology, both approaches indicated that the United States had too many specialists and too few generalist physicians. This was a blessed convergence of circumstances for the workforce planner: The market was going to give people the physician supply that they really needed.

A 1994 COGME report endorsed implementation of a stronger system of federal financing and regulation of GME, reducing the number of residency training positions and shifting a greater proportion into primary care fields. Other prominent agencies echoed the COGME recommendations. The general parameters of the COGME recommendations were drafted into a legislative proposal introduced to Congress as part of the Clinton health plan. Although many features of the Clinton plan were criticized, some of the most turgid rhetoric in Congress was reserved for the proposed regulation of GME. Sen. Daniel Patrick Moynihan (D-NY), chair of the Senate Finance Committee and protector of New York’s teaching hospitals, righteously declared that the proposal was a "sin against the Holy Ghost." Public planners of the GMENAC period may have been chagrined to have their work dismissed by the Reagan administration. How sharper than a serpent’s tooth for COGME-era planners to be scorned by a New York Democrat!

As the 1990s progressed, it appeared that the market was starting to have an effect even without enactment of new regulations. Medical students were responding to market signals about career opportunities. In 1996–1997 precipitous decreases occurred in the number of U.S. medical school graduates selecting certain high-profile specialties for residency training, such as anesthesiology and radiology. Conversely, the number of first-year residents in U.S. family practice programs increased. Although these changes also coincided with nonmarket-based initiatives, such as foundation and government interventions to create more primary care–oriented medical school curricula and culture, most observers credited
the changing market as the most influential force. Subsequent research provided additional evidence that regions with more competitive HMO markets were experiencing slower growth in physician supply and incomes.\textsuperscript{24}

The late 1990s were a heady time for market enthusiasts. The new managed competition marketplace was succeeding where regulators had been ineffective. The market was changing the primary care/specialist supply balance, constraining physicians' incomes, and possibly even dampening growth in overall physician supply. Moreover, these outcomes were being achieved not by the heavy hand of government regulation but by the self-regulating hand of a competitive market and the actions of private physician wholesalers. Ruthless HMO executives operating in the private sector might even do what no government regulator dared: commit the sin against the Holy Ghost and downsize the physician workforce through active policies of disemployment.

\textbf{Health care 2000: the collapse of the wholesale market.} A curious thing happened in the new millennium: Managed care faltered. Between 1999 and 2000 enrollment in HMOs dropped by almost half a million. Medicare experienced an exodus of participating HMOs. Premiums for HMOs and less-managed insurance plans alike began to rise at rates triple that of overall inflation.

Analysts have offered various reasons for the demise of tightly managed care. One common theme is that employers and health plans simply became exhausted trying to manage the health care system.\textsuperscript{23} Managing a health system is hard work, and among the hardest tasks is tackling basic issues of health-system capacity such as physician supply. In the battle between physicians and the tight-fisted (and frequently scandalously profiteering) private wholesalers of physician labor, physicians won. This is not to say that physicians haven't been bloodied in the process, with wounded incomes, sunken morale, and perhaps even some market fatalities in terms of physicians opting for early retirement or alternative careers. But as the dust from this fracas begins to settle, it appears that the U.S. health system is heading back on a course of increasing specialization, rising physician incomes, and pressures to increase overall physician supply.

The mid-1990s decrease in specialty residency match rates and the increase in primary care match rates were short-lived phenomena. After the peak year of 1997, family practice residency programs experienced a steady decline in the number of first-year residents. Conversely, specialty programs rebounded.\textsuperscript{26} Recent surveys on job opportunities indicate bountiful positions for newly trained specialist physicians.\textsuperscript{27} Some observers are calling for a ramping up of specialist supply.

\textbf{The Need For A Firm Regulatory Grasp}

The United States is moving back toward a retail market for physician labor. Defined-contribution employment-based health insurance, fixed-value vouchers for Medicare beneficiaries, and increased out-of-pocket payments represent a retreat from public planning and organized forms of private health care manage-
ment alike, toward an individual market based on ability to pay.

Some observers are celebrating this latest incarnation of the invisible hand in health care, hoping once again that individual demand for care will guide the system to its proper functioning. But if one thing is clear from the past 100 years of history of the U.S. physician workforce, it is this: The notion of untainted individual consumer demand for health care and physicians is a delusion. Supplier-induced demand abounds, anticompetitive regulations persist, production of physicians is totally reliant on taxpayer funds, and most care will continue to be collectively financed by means of private and public insurance. The U.S. health care system is embarking on a period of increased costs and inequity, with little promise that this trend will confer benefit to the health of Americans.

Regulation and planning are required. They are required not because there is anything inherently good about the heavy hand but because regulation is the only way to achieve socially desired objectives for the health care system. Markets are not designed to achieve social equity. They cannot answer the question of what health care is really needed as opposed to what is simply desired. Markets do not necessarily achieve systemwide cost control.28

History also reveals the many imperfections of physician workforce planning. The technical challenges to planning are formidable. In truth, the complete health production function equation will never be solved in a way that specifies the physician-supply term with a high degree of precision. Too many variables are uncertain in the equation: What services need to be delivered? Which services definitively improve the public’s health? What assurances are there that physicians are devoting themselves only to necessary services and not to inappropriate services, or are performing necessary services with adequate quality? What system factors are influencing patterns of care and productivity? What are the costs associated with differing levels of physician supply? Even if the equation were solvable, judgments would still need to be made. For example, are additional costs associated with increased supply worth the expense?29

The daunting features of the planning calculation often create what Morris Barer and Greg Stoddart have termed “analysis paralysis.”30 Policy making is deferred while awaiting the “right” answer to the question of “how many physicians?” However, the complexity of the health production function equation also has its liberating features. If one acknowledges that health is a multifactorial outcome, getting the number of physicians exactly right no longer has such portentous ramifications for health outcomes. Physician supply becomes simply one of many uncertain variables that can combine in many ways to affect health.

Tremendous variation exists across U.S. communities in the supply of physicians. Yet very little is known about how this variation may or may not be associated with differences in access to care and health outcomes. The little research that has been performed does not reveal a clear association between physician supply, particularly of specialists, and better population health status.31
Appropriately using the heavy hand of regulation means appreciating that the hand is not designed for fine movement and micromanagement of the workforce. Its strength is not in deciding exactly how many urologists are needed in Topeka. The regulatory hand needs to have a firm grasp on setting boundaries, maintaining physician supply within broad parameters while allowing a role for market forces and local planning processes to determine the exact deployment of physicians.

This regulatory approach was in fact the strategy adopted by COGME. COGME settled for defining a range of physician requirements: 60–80 generalists and 80–100 specialists per 100,000 population. These numbers permitted some flexibility around supply targets and did not prescribe the exact composition of specific specialties within the generalist and specialist categories.

The Policy Decisions At Hand

Although most COGME recommendations were never implemented in federal regulations, Congress did enact one important piece of physician supply legislation in the aftermath of the COGME proposals. The 1997 Balanced Budget Act (BBA) included a provision capping the number of residency positions funded by Medicare at the number in place at that time. This policy has effectively halted growth in residency positions, since almost no hospitals and training programs have indicated a willingness to increase positions without receiving more Medicare GME dollars. With residency training output now stabilized, the expansionist era of physician supply that began in 1963 will come to an end within the next ten years, when the number of practicing physicians per capita plateaus. This relatively crude regulatory action of 1997, motivated more by congressional concern about the need to reduce short-term Medicare spending than by careful consideration of long-term workforce planning objectives, has profoundly affected the future of U.S. physician supply.

Congress will come under increasing pressure to repeal the resident funding cap. The rhetoric will be familiar: The market is "demanding" more specialist physicians, and, by the way, taxpayers should foot the bill for expansion of specialist training. How might Congress respond?

Congress could assert that if the market is demanding more specialists, then the market should figure out how to pay for their training without asking for additional taxpayer dollars. The nation does not in fact have any federal regulations that prohibit training programs from adding new positions and training more physicians. All that is limited by regulation are the federal funds to pay for additional positions. Congress could indicate that it was content to maintain its support for the current number of residency positions and expects the costs of educating additional physicians to be borne by the additional trainees themselves, by their training institutions, by private insurance plans, or by some combination.

It is doubtful that physician supply would in fact increase without additional government funds, given the utter dependency of training institutions on
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Medicare GME dollars to pay for residents' salaries and related training expenses. The most likely outcome of a continued Medicare GME cap would be to highlight the absence of a self-regulating physician-supply marketplace that can augment the current level of production without major new governmental subsidies.

Another option for Congress is to remove the GME funding cap and resume its tradition of writing blank checks for medical education. As I have suggested above, a policy of government funding devoid of government regulation and planning is a peculiarly American approach to financing medical education bereft of policy integrity. Resuming this business-as-usual approach would perpetuate the many irrationalities of the traditional system of Medicare GME funding.

A third option—and the one that I consider most compelling—is for Congress to use a renewed debate about the adequacy of the nation's physician supply as an opportunity to create a more rational and accountable system of federal physician workforce regulation and funding. The first step in this process would be to tie federal financing of GME much more explicitly to long-term objectives for the supply and distribution of physicians. Many proposals in recent years have suggested thoughtful ways to restructure federal GME funding. Congress should next demand answers to the hard questions of whether the current complement of physicians is effectively serving the public's needs, and what the cost and benefit would be of further increasing the number of physicians per capita.

Unlike most nations, which have long accepted that government must play a decisive role in regulating and financing medical care, the United States has maintained a mixed health care economy that blends private and public financing and market forces and government regulation. Medical education, like the health system overall, depends heavily on Medicare, Medicaid, and other tax-financed programs. Despite this public funding, the body politic tends to regard the heavy hand of regulation as an unseemly intrusion into health affairs and directs a long gaze toward the invisible hand—or at least toward where it visualizes the invisible hand to be. Yet the need for public planning and regulation of the physician workforce is unavoidable—as unavoidable as lack of consensus on whether the planned number of physicians is ever exactly "right". A more realistic acceptance of these truths would be an important step toward sensible physician workforce policy in the United States.

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NOTES
8. In Garrison Keillor's mythical community of Lake Wobegon, "all the children are above average.
13. COGME, Physician Distribution and Health Care Challenges.
16. John Wennberg and colleagues went one step further in their projections, performing specialty-specific analyses based on HMO staffing patterns that suggested that some specialties would soon have two to three times more physicians than that required by a managed care market. See J.E. Wennberg et al., "Finding Equilibrium in U.S. Physician Supply," Health Affairs (Summer 1993): 89–103. The authors even suggested a plan to gently remove superfluous physicians from the patient care market by retraining them as health services researchers, a proposal that made many policy scholars carefully weigh the advantages for the health care system against the threat to the prestige of the field of health services research.
22. O. Fehr, "Funding Graduate Medical Education in the Year of Health Care Reform," in Information Trading: How Information Influences the Health Policy Process, ed. M.E. Lewin and E. Lipoff (Washington: National Acad-
eny Press, 1977), 27–48. Moynihan's statement is from Congressional Record (13 August 1994): S1667. The Moynihan passage in greater length is as follows: "Do we want fewer doctors in order that there be better health? This has never been debated, never been explained. It just keeps coming out in this legislation. There is a staff member somewhere who wants this. And no matter what we do, we keep getting it. This is hubristic. This invites the wrath of the gods. This invites the death, the closing of a great moment of medical discovery, unprecedented on Earth. In the history of medicine, no such thing has happened in the advances in the last 30 years made in the United States. This is, if I may say, a sin against the Holy Ghost."
The bill in question was S. 2357.


26. Pugno et al., "Entry of U.S. Medical School Graduates."


28. Market competition tends to be viewed as a success for consumers if it drives down prices. For example, if competition makes computers more affordable and consumers buy more of them, this outcome is viewed as a market success for consumers. No one is particularly concerned if the upshot of this market dynamic is greater overall national expenditures for computers. In health care, because of the collective financing of the majority of expenditures through private or public insurance and the resulting concern about affordability of total costs, cheaper prices are not always unmitigated social good. If lower prices lead to more services being consumed and an increase in total spending for health care (regardless of whether this occurs as a result of exogenous consumer demand in response to lower prices or of supplier-induced demand from physicians intent on maintaining incomes), it is not self-evident that this outcome is in the public interest. Uncertainty about the value of this outcome is accentuated when evidence about the health value of the additional services delivered is in question.


30. Ibid.


32. COGME, Recommendations to Improve Access to Health Care.

33. Some states, such as California, also took a more active role in workforce regulation.
