Finding equilibrium in U.S. physician supply

Cite this article as:
J E Wennberg, D C Goodman, R F Nease and R B Keller
Finding equilibrium in U.S. physician supply
Health Affairs 12, no.2 (1993):89-103
doi: 10.1377/hlthaff.12.2.89

The online version of this article, along with updated information and services, is available at:
http://content.healthaffairs.org/content/12/2/89

For Reprints, Links & Permissions : http://content.healthaffairs.org/1340_reprints.php

Email Alertings : http://content.healthaffairs.org/subscriptions/etoc.dtl

Not for commercial use or unauthorized distribution
To Subscribe: https://fulfillment.healthaffairs.org
Prologue: Increasingly, since 1965, the federal and state governments have become important financial partners in medical education. Aided by tax-financed subsidies, the United States has a bountiful supply of well-trained specialists and (to a lesser extent) general practitioners. Fitzhugh Mullan and colleagues at the U.S. Bureau of Health Professions recently estimated that the federal government alone provided a total mean payment of more than $70,000 for every medical resident in 1992 (‘Health Affairs, Supplement 1993). The heavy public subsidies that underwrite medical education raise questions about what society reaps in return. There is little question that U.S. physicians are among the best-trained in the world, but do their specialty choices, determined by the training institutions and the trainees themselves, parallel society’s needs? In this paper John Wennberg and his colleagues answer with a resounding “no” and assert that the United States cannot afford to continue this laissez-faire policy. They urge a fundamental examination of the nation’s medical workforce policies and suggest that policymakers explore the following ideas: an early retirement program for physicians, a restructuring of the economic incentives under which doctors practice, a reallocation of physicians to underserved regions of the country and the world, new opportunities in medical outcomes research and quality management, and a new program of lifetime learning, including the retraining of physicians in undersupplied specialties. Wennberg, a physician, is director of the Center for the Study of the Clinical Evaluative Sciences at Dartmouth Medical School. David Goodman, a pediatrician, and Robert Nease, who holds a doctorate in industrial engineering, are colleagues at the center. Robert Keller, an orthopedic surgeon, directs the Maine Medical Assessment Program.
Abstract: One essential component of health system reform is to bring the number of physicians in line with the needs of the population. The physician supply policies of prepaid group practice health maintenance organizations have been cited as one model to achieve this goal. Planning for physician supply should be an explicit public-sector activity and should not be left to the private sector, because some areas are not sufficiently populated to support competing providers under a managed competition scheme. A new model for planning for physician supply should include the following strategies: (1) erecting barriers to entry into medical practice; (2) encouraging early retirement; (3) restructuring economic incentives; (4) reallocating physicians to underserved areas in the United States and abroad; and (5) creating new areas of professional responsibility for physicians.

In the ongoing debate over health system reform, some advocate global limits on health care spending as a necessary public-sector strategy for containing costs. Others advocate managed competition as a private-sector alternative to foster the growth of managed care organizations that not only contain costs but also improve the quality of care and eliminate waste. In this paper we identify public-sector physician supply planning as a neglected but essential component of health care reform that can significantly improve the quality of care while lowering its overall cost.

There is good evidence that the workforce policies of the prepaid group practice form of managed care such as Kaiser Permanente or Group Health Cooperative of Puget Sound successfully contain costs. This “classic” health maintenance organization (HMO) model achieves its cost containment advantages by exercising private-sector population-based health planning. Classic HMOs serve a defined population, own their own hospitals, and offer access to all medical and surgical specialists. They invest less in acute hospital care and more in preventive and ambulatory services than do fee-for-service systems of care. They use fewer than two hospital beds per thousand enrollees, compared with a national average of more than four beds per thousand. Physician specialists are employed according to a population-based formula that is strikingly similar from one plan to another but markedly below the number of physicians per capita typical of the rest of the health care system.

Prepaid group practice HMOs have other distinct advantages not shared by unorganized fee-for-service care or by other forms of managed care such as individual practice associations (IPAs). Such HMOs are structurally well situated to promote high-quality care and medical innovation. Physicians working for salaries are free of the constraints that limit how fee-for-service physicians, including those working in IPAs, can use their time. Since their professional income does not require doing procedures, physicians can allocate their time among the many complex tasks required to manage a modern health care organization. The freedom from dependency on fees to generate revenues also means that prepaid group practice physicians can adjust to the changes in demand that inevitably occur when the preferences...
of patients determine the use of treatments.

While these classic HMOs may be the superior model for organizing health care delivery systems, we do not believe that managed competition in the private sector is the best way to bring these advantages to all Americans. Public-sector planning is needed. At the national level, we need a policy that brings the supply of physicians more in balance with the numbers required by prepaid group practices. At the state and local levels we need public policies that promote population-based delivery systems along the lines of the classic HMO model. Here we discuss excess capacity in the supply of physicians and outline a public-sector physician work-force plan to set limits, to promote the reallocation of excess capacity to more productive tasks, and to achieve significant cost containment. Such a plan can bring improvements to the health care system regardless of the results of managed competition or global limits on budgets.

**Excess Capacity In The Supply Of Physicians**

The number of physicians in this country has been determined by factors that have little to do with patient demand and much to do with federal policy and the needs of training institutions. Federal policy based on a presumed physician shortage has led to an increased number of medical schools and medical graduates. The number of specialty residency positions has been determined by the training institutions themselves, aided by accreditation procedures that focus on academic standards, not on the number of medical specialists needed. The result is a graduate physician work force that is strongly influenced by the labor needs of the acute hospital sector—in particular, teaching hospitals. Sometimes, as for inner-city public hospitals, physicians-in-training are the primary source of patient care, providing services that society is not willing to pay for at full price. However, the motivations that determine the size of residency programs often concern prestige and status among educational institutions, the needs of the directors of the various residency programs, and the priceless advantage of the night and weekend coverage that a house staff offers the senior staff. Financial incentives also influence growth: Medicare, the largest source of funds for residency programs, bases its payments on the number of trainees.

The current specialty physician supply in the United States is more than sufficient to meet the demand for treatments that all physicians agree are necessary, regardless of specialty. The available supply of neurosurgeons, for example, is well in excess of the numbers required to perform necessary operations for patients with brain tumors or head trauma. Consequently, the excess capacity of neurosurgeons is invested in procedures for condi-
tions that other physicians would treat by other means. The impact of supplier-induced demand on procedure use rates is vividly apparent in studies in Maine showing dramatic increases in spine surgery occasioned by the immigration of neurosurgeons.\(^3\)

Another way to look at the adequacy of physician supply is to use the number of physicians required to meet the staffing requirements of prepaid group practice HMOs as a benchmark. We compared the physician staffing patterns of this HMO model with the number of physicians available in the national physician supply pool and found that a significant excess exists for virtually every specialty (Exhibit 1). For example, on a per capita basis, there are about 2.5 times more neurosurgeons, 2.4 times more general surgeons, and 1.4 times more urologists in the nation than would be needed based on staffing patterns in classic HMOs.\(^4\)

### Exhibit 1
Ratios Of Per Capita Numbers Of Clinically Active Physicians Compared With Numbers Of Physicians Employed By Classic HMOs, By Specialty, 1989

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pathology</td>
<td>3.1</td>
</tr>
<tr>
<td>Neurosurgery</td>
<td>2.5</td>
</tr>
<tr>
<td>General surgery</td>
<td>2.4</td>
</tr>
<tr>
<td>Neurology</td>
<td>2.0</td>
</tr>
<tr>
<td>Anesthesia</td>
<td>2.0</td>
</tr>
<tr>
<td>Cardiology</td>
<td>2.0</td>
</tr>
<tr>
<td>Gastroenterology</td>
<td>1.9</td>
</tr>
<tr>
<td>Ophthalmology</td>
<td>1.8</td>
</tr>
<tr>
<td>Pulmonary medicine</td>
<td>1.7</td>
</tr>
<tr>
<td>Nephrology</td>
<td>1.6</td>
</tr>
<tr>
<td>Orthopedics</td>
<td>1.5</td>
</tr>
<tr>
<td>Rheumatology</td>
<td>1.5</td>
</tr>
<tr>
<td>Hematology/oncology</td>
<td>1.5</td>
</tr>
<tr>
<td>Radiology</td>
<td>1.5</td>
</tr>
<tr>
<td>Urology</td>
<td>1.4</td>
</tr>
<tr>
<td>Infectious diseases</td>
<td>1.3</td>
</tr>
<tr>
<td>Endocrinology</td>
<td>1.3</td>
</tr>
<tr>
<td>Ear, nose, and throat</td>
<td>1.2</td>
</tr>
<tr>
<td>Obstetrics/gynecology</td>
<td>1.2</td>
</tr>
<tr>
<td>Dermatology</td>
<td>1.2</td>
</tr>
<tr>
<td>Emergency medicine</td>
<td>1.1</td>
</tr>
</tbody>
</table>


Note: The exhibit gives the per capita ratios for selected physicians in the United States compared with the average for five prepaid group practice (classic) health maintenance organizations (HMOs).
How Should We Plan Physician Supply?

The ideal physician supply would be based on the number of physicians and the specialty mix needed to provide care in an economy in which patients are informed about what is known (and not known) about the outcomes of care and are free to choose among beneficial options according to their own preferences concerning risks and benefits. For some conditions, outcomes research and reform of the doctor/patient relationship can provide important clues about the number of physicians such an economy would support. Research funded by the Agency for Health Care Policy and Research (AHCPR) shows that treatment controversies can be investigated, medical theories evaluated, and the probabilities for the relevant outcomes measured. Moreover, information about how treatments work (and what is not known about how they work) can be conveyed to patients in ways that make it possible for them to choose according to their own preferences. The relationship between doctor and patient can be transformed from having decision-making power delegated to the physician to sharing information with patients and involving them actively in the choice of treatment; the physician’s preferences then can be disentangled from those of the patient.6

We have seen the effect of patient preference on the demand for prostatectomy in two prepaid group practice HMOs. The rate of prostate surgery dropped substantially among the populations served by Group Health Cooperative of Puget Sound and Kaiser Permanente in Denver when these plans adopted the shared decision model for choosing treatments for benign prostatic hypertrophy (BPH).6 Based on this evidence, it appears that the formula the plans used to hire urologists greatly exceeds the number required to provide the prostatectomies that patients actually wanted, even when there was no cost to the patient.7

Outcomes research and implementation of the shared decision model provide an opportunity to learn about the demand for physician services in a patient-centered practice environment. These strategies can work for a number of conditions ranging from noncancerous uterine conditions (where treatment possibilities include surgery, hormones, and watchful waiting) to angina pectoris (where treatment options include bypass surgery and drug therapy). However, as powerful and as important as these tools are in improving the rational basis for clinical decision making, there are two reasons why we cannot base workforce planning on the results of outcomes research and shared decision making.

First, the lead time for many evaluations is too long, and the advance of technology is too rapid. The recent introduction of a new prostate-specific antigen (PSA) blood test to detect early-stage cancer of the prostate exem-
plifies this problem. Early-stage cancer of the prostate grows slowly in most men; prior to the PSA test the cancer was usually discovered as an incidental finding when BPH surgery was performed. Some urologists in this country do not think surgery is indicated for this condition for most men and recommend watchful waiting. Others, particularly in the Pacific Northwest, advocate radical prostatectomy. To settle this controversy, clinical trials are needed; these will take many years to complete. In the meantime, since as many as 10 percent of men age sixty-five and older may harbor disease that is detectable by the blood test, the opportunities for intervention under the hypothesis that surgery works are virtually limitless.

Second, most medical resources are not deployed in situations in which medical discourse is organized well enough to support outcomes research and shared decision making. The treatment of stable angina, menopausal symptoms, arthritis of the hip, and benign prostate disease are among the exceptions. In most situations the supply of medical care is in equilibrium with a host of implicit theories that govern the rationale for its deployment.

The decision to hospitalize sick patients rather than to treat them in the clinic is a good example. A 50 percent increase in the capacity of the acute hospital sector decreases the threshold for admitting patients in a way that results in a 50 percent increase in hospital use. Even in medically sophisticated communities such as Boston and New Haven, this effect occurs without clinicians' awareness that their practices are actually different, despite an almost twofold difference in hospitalization rates. The time interval between revisits for a patient with mild heart failure, chronic lung disease, and many other chronic illnesses is another example. A halving of the interval between revisits for example, seeing a patient with mild congestive heart failure every six weeks instead of every three months accommodates a doubling of the supply of internists.

These imbalances between supply and utilization are subtle and not easily amenable to guidelines and outcomes research. They are based on a plethora of unspoken hypotheses that will not be rationalized easily. At best, outcomes research and the implementation of shared decision making can help to create islands of rationality in a sea that will always have strong currents of supplier-induced demand. Private-sector planning in HMOs achieves cost containment advantages over fee-for-service systems by setting physician and hospital bed supply ratios at low levels. Public policy must also seek limits through population-based planning.

Why not adopt the hiring ratios of the prepaid group practice HMO as the first approximation for need? Although these ratios are not based on knowledge about the amount of resources required to optimize the health of the population served, there is evidence that they are safe for patients. In the case of BPH treatment, even the relatively low number of urologists per
capita hired by the HMO was more than enough to meet demand for prostate surgery once the patients were empowered to select the treatments they wanted. The available evidence suggests that prepaid group practices produce outcomes that are as good as or better than those produced in fee-for-service settings. These HMOs provide the only examples we have of population-based systems of care that are in “equilibrium” with fee-for-service markets: The growth and stability of such HMOs mean that many people are satisfied that their health care needs are being met. While it may not be clear why their staffing ratios work, the fact that they pass the empirical test of the market speaks to their relevance for health reform that emphasizes managed care. If these ratios can be achieved more widely, aggregate costs will fall, regardless of the success of other policies designed to keep costs down. For all of these reasons, it seems reasonable to conclude that these ratios are both safe for patients and in the public interest.

Can Managed Competition ‘Clear’ Excess Capacity?

Under managed competition the American people would be offered a choice between managed care and traditional fee-for-service care. The effectiveness of IPAs and related models of managed care in controlling overall costs, limiting capacity, and improving quality has not been clearly established. IPAs differ from prepaid group practice HMOs in that they neither own their own hospitals nor hire physicians covering the full breadth of specialty services according to private-sector health planning. The supply of hospital beds and specialists in a community in which IPAs are organized is an environmental “given.” IPAs must depend on selective contracting, practice guidelines, and other forms of case management to control utilization. They are much more vulnerable to the excesses in current levels of supply than classic HMOs are.

If implementation of managed competition goes according to theory, prepaid group practice HMOs would dominate IPAs and unmanaged fee-for-service care in a market where competition is based on cost and quality. As these HMOs grow, the disparity between the numbers of physicians per capita that they hire and the per capita numbers available to the rest of the economy becomes increasingly severe. Costs become increasingly difficult to manage under the IPA model, and eventually classic HMOs will prevail.

But will implementation go according to theory? There are two reasons to think that it might not. First, the policy, if successful, would result in massive unemployment among American physicians. If the hiring practices of prepaid group practice HMOs had been in force throughout the United States in 1988, more than half of all specialists would now be unemployed. It is difficult to imagine how a model for reform that has such a negative
impact on these powerful professional constituencies could proceed to this end. Could managed competition sustain the political backing necessary to rely on this mechanism as the means for reducing excess capacity? Public policies in Canada that have sought more modest limits have failed because of “shroud waving,” a tool used by physicians to convince the public that failure to meet professional goals will result in death or serious harm to patients. The prospect of unemployment on the order required for full implementation of the classic HMO model would create an irresistible force for reversal of the public policies required to sustain managed competition.

Politics is not the only limit, however. Demography also conditions the prospects of this model for reform. At least 40 percent of the American people live in areas where the population is not concentrated enough to support competition between HMOs that control their own hospitals and provide most specialty services. The opportunity for managed competition to clear excess capacity in these places would have to depend on IPAs or other models of managed care, whose ability to control the per capita supply of physicians is much less certain. Indeed, the task would be exacerbated by the success of classic HMO competition in urban areas that would force unemployed physicians to seek out patients in areas without such HMOs.

Public-Sector Health Planning To Deal With Excess Capacity

Instead of relying on private-sector strategies to reduce excess capacity, we offer a set of broad goals for public-sector intervention to reduce the supply of clinically active physicians in the United States while improving the quality of care and containing costs. Exhibit 2 presents a schema for a national physician work-force plan that specifies the possible points of intervention. Interventions at Points 1-3 affect the rate of entry into the pool of practicing physicians; Point 4 governs the rate of exit through retirement; Point 5 seeks to balance the rewards between doing procedures and counseling patients; Points 6 and 7 seek reallocation of excess capacity to underserved areas; Points 8-10 define new areas of professional responsibility that offer opportunities to improve the quality of care and promote innovation while reducing the aggregate costs of care by reducing the numbers of clinically active physicians.

**Barriers to the rate of entry.** Barriers to entry are the traditional tools for health care planning and a necessary part of any strategy to control the overall supply and specialty distribution of physicians. But control of entry will prove an inefficient strategy for reducing the supply of physicians toward the classic HMO standard. We have examined the opportunities for achieving this standard for specialists by modifying the number of residency positions available in the United States. Exhibits 3-5 examine trends in the
numbers of urologists, neurosurgeons, and radiologists per capita, compared with the classic HMO standard under various targets for reducing the numbers trained.\textsuperscript{13} The exhibits make clear what many have long suspected—that significant changes in available supply take a very long time, even with drastic changes in the supply pipeline. For example, if radiology residency programs were completely eliminated, it would still take about twenty years before the numbers per capita in the national economy approached the numbers now hired by prepaid group practice HMOs. Under the same policy it would take more than twenty-five years for the supply of neurosurgeons and about seventeen years for the supply of urologists to approximate the numbers employed by these HMOs. With residency positions cut in half, in twenty-five years the number of radiologists would still exceed the classic HMO standard by 50 percent.

These scenarios, which are typical of the situation for virtually all specialties, help to sharpen awareness of our nation’s dilemma. It is neither feasible nor desirable to implement a public policy that reduces the training of new specialists so that even the best residency programs face extinction. The effects on the evolution of the specialties—the loss of succession and the power for renewal and scientific advancement that the presence of young physicians-in-training provides—would have a severe negative impact on the future of American medicine. Yet it would be foolish for the nation to continue the current laissez-faire policy. We thus argue for national work-force planning that adjusts the numbers of graduating special-
Exhibit 3
U.S. Supply Of Radiologists In Excess Of Number Required By Classic HMOs, Based On Various Assumptions About Number Of Residents Produced

Percent excess supply of radiologists

<table>
<thead>
<tr>
<th>Percent excess supply of radiologists</th>
<th>Present</th>
<th>5 years</th>
<th>10 years</th>
<th>15 years</th>
<th>20 years</th>
<th>25 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>150</td>
<td></td>
<td></td>
<td></td>
<td>10% cut in residents</td>
<td>50% cut in residents</td>
<td>100% cut in residents</td>
</tr>
<tr>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Projections based on research by the authors.
Note: The zero percent line represents the target based on physicians needed to staff prepaid group practice (classic) health maintenance organizations (HMOs).

Exhibit 4
U.S. Supply Of Neurosurgeons In Excess Of Number Required By Classic HMOs, Based On Various Assumptions About Number Of Residents Produced

Percent excess supply of neurosurgeons

<table>
<thead>
<tr>
<th>Percent excess supply of neurosurgeons</th>
<th>Present</th>
<th>5 years</th>
<th>10 years</th>
<th>15 years</th>
<th>20 years</th>
<th>25 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>250</td>
<td></td>
<td></td>
<td></td>
<td>10% cut in residents</td>
<td>50% cut in residents</td>
<td>100% cut in residents</td>
</tr>
<tr>
<td>200</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>150</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Projections based on research by the authors.
Note: The zero percent line represents the target based on physicians needed to staff prepaid group practice (classic) health maintenance organizations (HMOs).

...ists downward while preserving the best of the nation’s residency programs.

**Early retirement.** Voluntary early retirement is a common practice among the military and civil servants and an increasingly important strategy in the private sector for reducing excess capacity. It would be hard to argue that at a time when many U.S. industries are undergoing massive restructuring, excess capacity in the health care industry should go unchal-
While we do not specifically advocate this strategy (it would be exceedingly difficult to design and administer a program that is fair to all parties), a program to promote early retirement will be difficult to keep off the table for discussion.

Restructuring economic incentives. Adoption of the shared decision-making model should be a national goal. The work-force plan, therefore, calls for a fee schedule that rewards physicians equally for time invested in counseling patients, diagnosing disease, and doing procedures. While the Medicare program and its Physician Payment Review Commission (PPRC) are already moving in this direction, efforts should be accelerated and made applicable to all Americans now in fee-for-service systems of care, not just Medicare enrollees.

Reallocation to underserved U.S. regions. One of the most persistent and dysfunctional health policy myths is the belief that the best way to get physicians to locate in underserved areas is to produce such an excess in supply that physicians will move there because they cannot survive economically elsewhere. A national work-force plan that seeks to reduce overall supply will need a proactive way to meet the needs of underserved urban and rural areas; thus it is time to rethink and expand the role of the National Health Service Corps (NHSC), to build it into an institution of public service that is attractive to the idealism of young physicians. By linking national service firmly to a medical school loan forgiveness program, the NHSC is also a strategy for removing medical school indebtedness as an economic motive in the choice of medical specialty.
Reallocation to underserved areas elsewhere in the world. The work-force plan should create an opportunity for U.S. physicians to help to modernize the health care systems in certain third-world or Eastern bloc countries. American physicians have a long tradition of helping other nations. The desperate need in medically underdeveloped parts of the world is a natural humanitarian outlet for our excess capacity.

New areas of professional responsibility. Building an innovative, population-based, and patient-centered health care system requires that physicians undertake many essential tasks that are not fairly reimbursed in fee-for-service medicine; for the physicians who undertake them, they are now pro bono work rather than part of everyday professional responsibility. The work-force plan thus calls for creating three “new” compartments within which reimbursed professional activities can take place: (1) The “community services” compartment is created for professional tasks involved in disease prevention and education, sometimes in the clinical setting, but also in the community— in the schools, prisons, chronic disease hospitals, and other places where professional activities supportive of the public health of populations occurs. (2) The “systems-building activities” compartment is created for those professional tasks concerned with the infrastructure for medical practice, including doing outcomes research to improve the scientific basis of everyday practice, learning how to better organize care to produce better outcomes at a lower cost, and developing practice guidelines for the use of new or established treatments. (3) The “lifetime learning and retraining” compartment is for time spent in learning new skills and concepts as well as midcareer retraining.

The construction of these compartments for professional activity would open up broad opportunities for innovation and improvement in the quality of care. We have in mind that at any time a large proportion of providers—say 10 percent—would be engaged in a variety of important tasks: working in the schools to educate teenagers about acquired immunodeficiency syndrome (AIDS) or the risks of smoking; working on a project to reduce operative mortality rates from bypass surgery or to immunize children; or participating in crucial outcomes studies that build the scientific basis of medicine. Physicians would participate in educational programs as teachers or students. Some would be enrolled in courses to learn new skills such as how to conduct outcomes research or quality management; others would go back for postgraduate studies to learn a new specialty that is lacking in their area or elsewhere; some might be learning to perform a procedure that shared decision making reveals is needed.

Activities undertaken in these new compartments cost less to finance than do the many discretionary services physicians prescribe when practicing medicine. By making it possible for a significant proportion of the
fee-for-service work force to be engaged, on a rotating basis, in tasks other than medical practice, the numbers of clinically active physicians can be reduced toward the prepaid group practice standard. While spending time in building systems of care, surgeons do not require the support of the large staff they need while operating, radiologists do not require as much capital equipment, and internists do not need office staff. Learning and innovating can be friends of cost containment.

Reform along these lines would also create new demands and offer new opportunities for academic medical centers. It would focus their attention on the need to support preventive medicine, promote outcomes research, and participate in the system-building tasks of quality management. It also would focus the attention of educators on the work-force needs for caring for the populations of their own regions; the apparent losses in role and prestige associated with the scaling down of undergraduate medical education and the training of new residents would be offset by the new responsibility for organizing programs in lifetime learning and for retraining physicians to undertake new specialties when the need arises.

Such a policy would remove barriers to innovation in medicine. The idea that physicians, by virtue of their initial choice of specialty, should have a lifetime license to surgically or medically treat a particular organ such as the prostate, the heart, the tonsils, or the uterus—regardless of the progress of information and technology—is clearly faulty. It is a rare high-tech industry that neither provides for retraining its workers nor engages their talent in developing and evaluating new products and improving the quality of existing ones. Innovation demands the capacity to reallocate and adapt.

How To Implement The New Scheme

The Council on Graduate Medical Education (COGME) has called upon Congress to establish a National Manpower Commission to set limits on the numbers of medical school graduates, residency positions, and opportunities for international medical graduates to enter U.S. markets. Since the COGME proposal helps the goals of managed competition as well as those of global budgets, it should receive wide support. Given the large subsidies that the federal government now extends to the nation’s medical schools and academic medical centers, their compliance with the work-force plan should also be expected. We recommend that the Clinton administration give immediate priority to this task.

In the parts of the country where managed competition can produce classic HMO forms of managed care, private-sector health planning may be the preferred strategy to achieve most of the goals we have outlined for reallocating the existing work force. In other places, achieving a flexible
work-force policy requires new public policy thinking. A regional public-sector organization is needed to take responsibility for managing the health work-force plan—to contract with physicians in the region to undertake the qualified tasks and to make certain that there is a commensurate downscaling of the delivery system. The organization must have a budget with which to make its contracts. We suggest a “tax” on insurance funds used to reimburse fee-for-service physicians (for example, Medicare Part B and Blue Shield) to create a budget for the regional organization to use in system building, community service, and lifetime learning compartments. The tax would be sufficient to create the budget necessary to achieve the desired reduction in the work force engaged in active clinical practice.

We suggest that the federal and state policies needed to establish and manage a public-sector physician work-force plan be worked out as part of the administration’s effort to achieve a broad-based approach to health care reform. The work-force plan and efforts to impose global expenditure limits should be linked. In the absence of limits on the supply of physicians, any policy that limits aggregate expenditures is an invitation to conflict between government and the medical profession. However, by changing historical trends in the production of physicians, reducing the numbers of clinically active specialties, and offering opportunities for fee-for-service physicians to participate in health system-building tasks that now can only be accomplished easily by salaried physicians working for classic HMOs, government avoids this conflict. The work-force plan also should be linked to federal efforts to improve the scientific basis for clinical decision making through outcomes research. A strong federal commitment to progress in this field is a prerequisite for innovation.

**Summing Up**

We have laid out a strategy for a national physician supply policy that is compatible with and complementary to a broad spectrum of reform efforts, whether based on managed competition, regulation with a global budget, or some hybrid that combines features of both. Our plan holds a reasonable prospect for reducing aggregate health spending. It is also pro-innovation: It offers the opportunity to reduce the tendency to supplier-induced demand inherent in the current fee structure, making it possible for physicians practicing in the fee-for-service sector to adopt the shared decision model; it also makes it possible for physicians to participate in activities outside of traditional medical practice.
NOTES


4. Staffing patterns of classic HMOs were obtained as described in Kronick et al., “The Marketplace in Health Care Reform.” Since the number of primary care specialists was inconsistent among classic HMOs, probably reflecting their different strategies for substituting nurse practitioners and physician assistants for primary care physicians, these specialties were not included in our tabulation. The ratios are not adjusted for age differences, which might decrease the discrepancy for certain specialists such as urology while increasing it for others such as obstetrics and gynecology.


7. Classic HMOs typically do not impose coinsurance or deductibles for patients who undergo surgery.


11. U.E. Reinhardt, “Health Manpower Forecasting: The Case of Physician Supply,” in Health Services Research: Key to Health Policy, ed. Eli Ginsberg (Cambridge, Mass.: Harvard University Press, 1991), 234-283. The per capita rates of specialists in the national economy used to calculate the staffing requirement ratios discussed in the text are based on the total U.S. population and thus include those Americans who already belong to prepaid group practice HMOs. The gradient between the two economies is thus in reality greater than our ratios suggest and will become even greater if these HMOs gain greater market penetration.


