

Physician Surplus and Its Remedies

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*The problem with a kitten is that
One day it becomes a cat*
—Ogden Nash

Through the passage of time (and the passing of an examination or two), resident physicians transform themselves into unrestricted practitioners. Whether you see this as a good thing or not depends on your perspective. To the residents themselves, this metamorphosis is no less beautiful than a chrysalis becoming a butterfly. Others, though, may deem it a variation of the kitten/cat problem articulated by Ogden Nash—residents are nice, but they one day become attending physicians, and of them we have too many.

In the 1960s, flush with an expanding economy and Great Society ideals, the government embarked on a mission to mint more physicians. It rewarded medical schools for training doctors and paid residency programs for providing graduate medical education (GME). These systems are still in place today. Through an elaborate scheme, created ostensibly to compensate teaching hospitals for tertiary care and unpaid services, the government's Medicare program subsidizes the direct and indirect costs of GME. The word "subsidize" may give the impression that this payment is small. Even by government standards, it is far from that. In 1997, the Medicare GME allocations totaled about 7 billion dollars. Let's put this amount in perspective: it is enough to cover the tuition and living expenses of every medical student in the United States, with enough left over to send them all to business school as well.

At a time when increasing the number of medical practitioners received universal acclaim, this program was a boon to all. Hospitals got the cash. Residents got the jobs. And, society got the work done. Now we have a surplus, some say, and the governmental funding of GME is an open question.

It may be worthwhile wondering whether we do indeed have a surplus of physicians. This question may be hard to answer. Surplus labor is typically defined as an excess of job seekers, relative to the amount of work available. In medicine, this may not be the best definition. There is *always* work to be done; it is just not always clear whether there are funds to pay for that work. Most models of phy-

sician manpower demand ignore this issue and simply assume that we are practicing the right amount of medicine today and that supply should be calculated from that rate. This may be incorrect; an article in *JAMA* 281:446–453 1999, makes a good case that we may be doing too much. Although it is necessary to make some assumptions in any model, of course, the inferences drawn are especially dubious if even the aptness of the base line rate (let alone future variance) is questioned.

The prediction of future demand for orthopaedic services is especially difficult for two reasons. First, our professional mandate overlaps with those of our colleagues: neurosurgeons, podiatrists, rheumatologists, and chiropractors also treat "orthopaedic" problems. A shortage or excess in any of those fields will perforce alter the need for orthopaedic surgeons. Second, there is the issue of medical progress. You can imagine the effect on orthopaedic surgery if the COX-2 inhibitors successfully palliate all but the worst cases of arthritis. Similarly, if we discover a gene therapy for cartilage regeneration or osteoporosis prevention, our practice will change. Progress may simply put many of us out of business.

Consider the following: dentistry has shriveled, some may say, now that fluoride in the water has decreased the incidence of dental cavities. On the other hand, some fields thrive even in the face of such progress. Thoracic surgeons were threatened with extinction when tuberculosis waned. Who knew that cardiopulmonary bypass was coming? Likewise, general surgeons discovered all sorts of uses for the laparoscope, now that peptic ulcers (formerly their bread and butter case) are managed successfully by internists. Either fate, i.e., obsolescence or opportunity, may befall orthopaedic surgery. My sense is that with the aging of the population, there will be more arthritis, more hip fractures, and in short, a need for more orthopaedic surgeons. But let's assume that there is an impending surplus; if not among orthopaedic surgeons (who number less than 5% of all physicians) then, at least, in general medicine. What does it mean?

At first glance, a surplus of physicians may seem like a good thing. If many Americans go without medical care, having more doctors to provide that care would seem to be beneficial. Moreover, the principles of Economics 101 dictate that a large labor pool should depress the price of labor; that a "surplus" of physicians should make medical care cheaper. In practice, though, neither supposition has been proven true.

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Even though we have more doctors than ever, the traditionally underserved communities remain underserved, while the rich get richer. The Upper East Side of Manhattan does not need yet another doctor; nonetheless, many migrate there, even though the Bronx, a few miles to the north, is crying out for practitioners. And further, compared to rural Appalachia, the Bronx is a medical Mecca. Residents establish their practices where they want to live, where the financial opportunities lie, and not necessarily where the medical need exists.

As for the savings in professional costs from competition, we haven't seen this either. This is because the principles of economics do not apply in normal ways to medical care. In general, when the labor supply grows relative to the demand for labor, wages go down. But in medicine, we see a phenomenon of "supply-induced demand." That is, as the number of physicians grows, the amount of medicine practiced also grows. Doctors create or discover demand for their services. Weinstein (in the November 1998 issue of the *Journal of Bone and Joint Surgery*) presents the example of the comparative rates of back surgery in Sun City, AZ, versus Miami. After accounting for differences in demographics, the rate in Arizona is nearly double that in Florida. Interestingly, the ratio of orthopaedic surgeons per person between the two locations is also 2:1. It seems that more doctors means more medicine, not lower prices.

The essential problem of physician surplus is difficult to define. The question of whether there is indeed a surplus is answered in large part by one's perspective. For me, the failure to see a drop in prices for medical care is not the problem of physician surplus; nor is it that this surplus tends to congregate away from the need. The problem of a physician surplus—in fact, I argue, the definition of such a surplus—is too much overall spending.

In 1997, health care spending was about one seventh of the country's gross national product (GNP), about one trillion dollars (\$1,000,000,000,000). Although the spread of managed care has decelerated the rate of growth in health care spending, both the aggregate amount and the percentage of GNP have never been higher and continue to grow. The problem goes beyond doctors and their fees. However, doctors are part of the problem in that they control the financial spigot, so to speak. They determine, in large part, the total amount of medical spending, although this amount is spent throughout the system. Physicians not only generate demand for their own services, they create a demand for ancillary services as well. In some specialties, the amount of ancillary spending exceeds the amount spent on the physician's fee by a factor of more than 10. Too many doctors lead to increased spending on physician's fees (the small problem) and too much ancillary spending (the big problem).

In orthopaedics, increasing the number of surgeons may lead to increasing the number of procedures performed. This will, of course, lead to more physician charges for surgery; but the net effect on total spending will far exceed the amount paid directly to the physicians. Consider, for example, the case of total hip replacement. Medicare pays its

physicians approximately \$2,000 for performing this surgery, but its DRG payment to the hospital is nearly \$20,000. Moreover, that amount does not include many related charges, such as anesthesia, medical consultants, and physical therapy. One more doctor doing hip replacements can do a lot of damage to a health care budget beyond the two thousand dollars he takes. Accordingly, to constrain total spending, one may argue, we must reduce the number of physicians in practice.

To reduce the number of physicians in the United States, the first solution that comes to mind would be to reduce the number of seats in medical schools: attack the problem at the source. It can be done. American medical schools constantly lament the high costs of educating students and rely critically on federal support to remain in business. If the federal government wanted to cut the number of graduates, it could simply rescind its support and the number of graduates would decline at once. Of course, this approach would not solve the problem. The rate-limiting step for the production of practicing physicians is not the graduation rate from medical school but rather the graduation rate from residency programs. Yet residency programs would be more than happy to import talent from abroad to compensate for a shortage of American-trained physicians. They do so already.

Unlike any other domain in which American expertise is supreme, medicine is unique in that it imports talent rather than exports it. Some graduates of our best schools of engineering, law, and business routinely move abroad spreading American know-how. On the other hand, although our physicians may be the best and their medical expertise unsurpassed, foreign-trained physicians flow here and not in the direction. This is probably because some residency positions, deemed undesirable by American medical graduates, provide needed services to the communities. These posts remain available although American medical students would not accept them willingly. Rather, international medical graduates (IMGs) are encouraged to come to the United States, fill these positions, and provide those services. The fact that these IMG physicians eventually leave these residencies, set up shop in town, and contribute to the overall physician surplus is evidently not considered by those making the decisions to hire them; and indeed, it is not their problem.

Given that the surest method to reduce the number of practitioners is to limit the number of residency slots, perhaps we should look toward the accrediting boards, the residency review committees, to reduce the total number of training positions. This has been enforced on a small scale, but probably will not continue. Residency review committees derive their power from their impartiality; they are judges of educational quality only. Their job is to evaluate the educational merits of a given program, not to forecast manpower needs or resolve problems of health care economics. No doubt, these committees could drastically reduce the number of residency programs in the country by simply making ever-increasing educational demands on hospitals. For example, they could close all residencies that

do not have a “well-stocked library” (or fail by some other equally capricious standard). It is unlikely, however, that residency review committees will take this step because this action will be perceived as political. Their credibility—and therefore, their existence—would be placed at risk.

One may also turn to the specialty societies to reduce the total number of residency positions; but they too are an unlikely source of help. The American Academy of Orthopaedic Surgeons, for example, is an *educational* organization. It exists solely to help educate practitioners toward the betterment of patients. Once it tries to limit physician supply, suddenly, it may appear more like a trade association or union. As such, it would run afoul of antitrust regulators. Its steps to control manpower may not be perceived as a move to ensure quality but rather to ensure its members’ incomes. Accordingly, such organizations are also hampered in their ability to weigh in on the manpower debate.

Although hospitals are the logical targets for any program seeking to reduce resident training slots, there are some reasons why they would not take this action on their own accord. The reasons are simply financial. First, using residents for hospital labor is the cheapest modus operandi. Despite the welter of laws and regulations regarding residency training, the law articulated by the 13th Amendment (abolishing slavery) does not seem to apply. Because residents are compensated not only with money but also with well-needed credentials for licensure, they are willing to work long hours under oppressive conditions for very low wages.

The low wages of residents drive the so-called “80-40 rule.” According to the 80-40 rule, a hospital in need of workers faces two employment options: it can either hire a resident to work 80 hours at \$40,000 a year or a paraprofessional at \$80,000 to work only 40 hours. (Of course, to supply an equal amount of work, two such workers would be required, at a total cost of \$160,000, namely, *four* times the price of one resident.) Moreover, the residents are likely to be more highly motivated. They can be threatened with professional sanctions. In addition, canons of ethics may demand greater effort, diligence, and attention to detail.

The second financial hit is that the hospital, which is paid to train residents, would lose its GME payments if it exchanged residents for other workers. To help hospitals wean themselves from their dependence on resident trainees, the New York Medicare GME Demonstration Project was established by the Health Care Financing Administration. This program was established only for hospitals in New York state (where 15% of all residents train). Congress has since passed legislation that will apply this concept nationally. The gist of the program is the following: hospitals will cut the number of residency positions, and, in return, they will receive a decreasing fraction of the Medicare subsidy than they would have received had the positions been kept. This payment would begin at 100% of the GME subsidy in 1998 and decrease over a 5-year period of time, at which point, the subsidy would end. Other details are stipulated, such as the preservation of primary care training slots.

Some commentators have likened this program to the

agriculture subsidy program in which farmers are paid not to grow crops. I think it is better to view this as a methadone clinic for hospital administrators; they are eased into sobriety rather than being forced to give up their addiction to free labor cold turkey.

There are many reasons why this program will not work. Indeed, many of the initial participants have dropped out. The reasons cited are varied, but it is my belief that this program is not working simply because the incentives are insufficient. Consider the predicament of Hospital X. It serves an underinsured population. Its outpatient clinic is essential to the health of its community. It currently staffs this clinic with a resident physician who was imported from abroad, rich at \$40,000 a year, willing to work whatever hours are required. Its other alternative is to staff the clinic with two expensive nurse practitioners. If the hospital employs the resident, its net cost is below zero because the GME subsidy exceeds its expenditure. The resident is thus a profit center for the hospital. Contrast that with hiring nurse practitioners who could each cost in excess of \$100,000, once benefits are included. In this scenario, the hospital could be a quarter of a million dollars worse off using nurses instead of a resident. The administration of Hospital X is hardly assuaged with subsidy payments, even if they are very generous, totaling tens of thousands of dollars a year.

Now it is not hard to imagine that some fiscal conservatives would respond to this logic dismissively and try to cut the payments unilaterally: “If they won’t cut spots in return for these generous subsidies, then let’s make them do it without any subsidy at all,” the argument goes. This is philosophically legitimate but tactically impractical. As Tip O’Neill, the late Speaker of the House, pointed out, “All politics is local.” One cannot cut residency positions in general; one must cut specific hospitals, serving specific communities, who have, of course, specific and vocal representatives. Remember the quagmire caused by the military’s attempt to close “unnecessary” bases? The abolishment of the GME subsidy for resident training may induce a hospital to abolish its clinics. This action will harm the local community, and Washington would be blamed. The residency demonstration offers political cover. Under this program, cuts in training physicians would not be dictated by the Congress, but rather they would be initiated through enlightened self-interest by the hospitals themselves. So far, it has not worked, though.

The next step to be taken in this imbroglio is hotly contested and politically polarized. The right wing, chanting its “limited government” mantra, notes that it was bureaucratic intervention (the remedy for the physician shortage in the 1960s) that caused the current surplus. Accordingly, economists on the right have advocated complete deregulation of health care economics claiming that governmental intrusion cannot ameliorate the problem, but rather only worsen it. Others to the left have campaigned not for intervention, but for invasion: a complete governmental takeover. They argue for a single payer regime with strong central planning. They

base their argument on the belief that that health care is not a typical commodity, and therefore, market rules cannot be used. They contend that too many citizens will be spanked by the “invisible hand” before market equilibrium is reached.

I believe that fine-tuning the supply of practitioners of each individual specialty area is probably ill advised. (Students are better than bureaucrats at discerning where the opportunities lie.) On the other hand, since the government purchases more than one third of all health care, and since

the total number of physicians influences the amount of medicine practiced and the total amount of money spent, it may be in the government’s interest to regulate the total number of physicians. I am not sure; controlling supply is, after all, just another form of rationing. Still, if the goal is to limit the number of residency posts in an equitable fashion, the government will have to invent incentives more effective than those offered by the residency demonstration project. As currently constructed, these incentives are inadequate.