There's a Shortage of Specialists: Is Anyone Listening?

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ABSTRACT

The author critiques the long-standing belief that there will be too many physicians, particularly specialists, a view put forth by the Bureau of Health Professions and the Council on Graduate Medical Education in the 1990s and held by many medical organizations, including the Association of American Medical Colleges. He cites his own research, which predicts, to the contrary, that the United States will experience progressively more severe shortages of specialists, and he quotes a wide variety of anecdotal evidence indicating that such shortages are beginning to appear already. He maintains that most previous workforce studies were handicapped by their use of micro-quantitative models. Instead, his research has been structured around four broad trends: economic expansion (which directly influences the demand for physicians), physician work-effort (which is declining), the provision of physicians' services by non-physician clinicians (which is increasing), and the growth of the U.S. population (which often has not been factored in adequately). It is the intertwining of these four major trends that reveals the impending shortages of physicians. He recommends that attention be directed to training more specialists, but cautions against a further dependence on international medical graduates to fill the gap. Instead, he calls upon academic medicine to expand the infrastructure for medical education. However, despite what he sees as a growing cacophony of voices expressing alarm about the developing shortages, he is concerned that academic medicine may not be listening.

"Hello? Is anyone there?" It's my eight-year old grandson checking to be sure that I'm paying attention. "Hello-o?" The same could be asked of academic medicine. Hello-o? Does anyone know that there's a specialist shortage? Or have our workforce receptors all been down-regulated by hearing for too long that there are surpluses of specialists, not shortages, and that what's really needed is more primary care physicians.

THE PERCEIVED SPECIALIST OVERSUPPLY

Concern about specialists has existed for more than 100 years. Even in 1895, Stedman lamented that "specialists were squeezing out family doctors as vines do the big trees."1 This sentiment festered in the 1920s,2 grew as specialization flourished following World War II,3-4 and intensified as medical schools expanded in the 1970s,5-7 when it was joined with a parallel concern that physicians were the cause of rising health care expenditures.5-6,8 Over the ensuing years, these dual concerns gained prominence,9,10,11
although, in fact, the growing supply of specialists had no effect on the number of primary care physicians per capita, which has been essentially constant for 50 years, and a growing body of economic evidence has failed to support the notion that physicians are a significant factor in stimulating health care spending. But such evidence was overwhelmed by apprehension that specialist supply was growing too rapidly and that surpluses would soon exist, a prediction made by the Graduate Medical Education National Advisory Committee (GMENAC) in 1981 and sustained by others since.

In the late 1980s, Schwartz and others examined this matter from the perspective of evolving trends and argued that surpluses of specialists would be very unlikely. Sadly, health workforce experts dismissed their "contrarian views" and, instead, embraced the notion of specialist surpluses as promulgated by GMENAC. This latter idea has flourished under the dual banners of the Bureau of Health Professions (BHP) and the Council on Graduate Medical Education (COGME), which together popularized the thesis that there would be 100,000-165,000 too many specialists by the year 2000. Supply would outstrip need by as much as 65%! And that became the mantra. Armed with the specter of looming surpluses, COGME proposed reducing the number of first-year residents by about 20% (to 110% of the number of U.S. medical graduates) and increasing the ratio of generalists to specialists by about 50% (to 50:50). Yet, on closer inspection, it became apparent that the models that projected these surpluses had methodologic weaknesses that ultimately precluded any valid conclusion. But methodologic considerations turned out to be of little importance. COGME's proposals didn't require statistics. They expressed "a social judgment, not a scientific judgment." Proponents viewed them as part of the "battle for the soul of medicine," which had become "balkanized by specialists," who were the "invisible drivers of health care costs." And so it was. While efforts to insert COGME's "110-50:50" proposal into the Clinton Health Plan churned forward, cartoons depicting unemployed specialists were etched into the popular culture, and medical school applications began their slow decline.

During that same period, I published the first in a series of articles challenging the "110-50:50" paradigm, as others also did. Although this new set of "contrarian views" was embraced by Senator Moynihan and communicated to his Senate colleagues, it was rejected by some academic leaders and federal bureaucrats, much as Schwartz's had been earlier. Major professional organizations endorsed COGME's proposals, reaffirming their endorsement of similar proposals made 20 years earlier. Indeed, the tenacity with which these ideas were embraced was quite remarkable, persisting even as the apocryphal surpluses failed to materialize. Equally remarkable is the stark contrast between these restrictive workforce policies and the public's enthusiasm for specialty care. Support for research through the National Institutes of Health, which has fueled specialization, now stands at more than $25 billion annually, and further increases are broadly advocated, including by many of the same individuals and organizations that favor reducing specialist supply. The health care services industry, which is propelled primarily by specialty treatment, now employs almost 10% of the U.S. labor force and has been the only stable sector during the current economic downturn.
And public clamor for access to specialists is a major reason that managed care, as originally conceived, has largely failed.

The consequences of efforts to restrict the number of specialists were less than many planners had envisioned, but they were appreciable. They include decreased support for specialty training in both the Balanced Budget Act of 1997 and the Veterans Administration; new barriers for international medical graduates (IMGs); and a rash of state legislation, such as the "Isenberg Bill" in California, which coerced educators to encourage medical students to choose primary care. Medical schools everywhere followed suit, in part reacting to state mandates but also in accord with the "generalist initiative" developed by the Association of American Medical Colleges in 1993. Students responded, and the desired shift to generalism was partially realized. But some students were confused by the dichotomy between what they were hearing and what they were seeing, and many specialty programs were weakened in the process. Paradoxically, even primary care became threatened as the Bush administration invoked physician oversupply as a justification for cutting Title VII training funds. Most damaging, however, was the lack of planning for a more distant future. And that brings us to the present.

**TRENDS REVEAL IMPENDING SHORTAGES**

In January 2002, my colleagues and I published an article in *Health Affairs* describing a new approach to assessing the future needs for physicians. It is an outgrowth of an analysis of the specialty workforce that a group of us had carried out for COGME on behalf of the Council of Medical Specialty Societies. Somewhat surprisingly, it revealed that most previous specialty studies had employed micro-quantitative models similar to those used by GMENAC and the BHPr, and, like theirs, proved to be methodologically flawed. In approaching the task anew, we focused, instead, on four broad trends. Principal among them is economic expansion, which directly affects the volume of health care services and, therefore, the demand for physicians. The others are the hours worked by physicians, which are declining; the services that are provided by non-physician clinicians, which are increasing; and the growth of the U.S. population, a factor that many previous studies failed to fully take into account. Our model demonstrates why the United States is headed for substantial shortages of specialists, while at the same time developing an overabundance of primary care providers.

**PERCEPTIONS IN THE MARKETPLACE**

Exercises such as this are important, but so are perceptions. I took the occasion of the publication of our *Health Affairs* article to ask friends and colleagues in Milwaukee and around the country to share their perceptions with me, and I listened. What I heard most was that specialists are in short supply and that primary care is "rather full," and I sensed a great deal of frustration. A national leader in nephrology characterized the situation in renal care as "getting desperate," and the author of a recent pulmonary/critical care study said, "No one talks about who is going to take care of these patients." This was echoed by a friend in California, who told me that one of his pulmonary/critical care
residents had received 13 job offers "in California!" Yes, even in California. And the California Medical Society has issued a report entitled And Then There Were None: The Coming Physician Supply Problem,\textsuperscript{60} which is replicated by a similar report about neighboring Arizona.\textsuperscript{61} Despite this, the same San Francisco-based research center that only six years ago called for a 20-25\% downsizing of U.S. medical schools\textsuperscript{62} (and the downsizing of nursing and pharmacy, as well) has concluded that California has "more than enough."\textsuperscript{63}

A similar story emerged from New York City, which has one third more specialists per capita than Milwaukee but where per-capita income is proportionately greater. A prominent internist described "a big demand in cardiology, hemeone, and GI and a growing need for intensivists, but close to an oversupply in primary care." These perceptions were confirmed by exit surveys of residents completing their training in New York,\textsuperscript{64} and the New York experience is replicated in other urban centers.\textsuperscript{65,66} In Milwaukee, the head of a large multispecialty group practice talked about aggressively recruiting specialists but having little success. Others told me of specific shortages in rheumatology, anesthesiology, and radiology. The situation is particularly acute for cardiac and GI proceduralists. One cardiology group that typically began recruiting fellows six months before graduation now solicits incoming fellows.\textsuperscript{67} And this situation is likely to continue. Solucient, a commercial health care forecasting company, has projected increases of 8-9\% in the demand for specialists in cardiology, heme-one, nephrology, pulmonary, and rheumatology over the next five years.\textsuperscript{68}

One place that these problems are being felt is in emergency rooms, where it is increasingly difficult to fill call schedules, particularly with surgical subspecialists. Another is in longer waiting times for patients, even in cities with medical schools.\textsuperscript{69,70} In fact, medical schools are having difficulty retaining and recruiting specialists, and many, like our own, are under pressure from rising compensation levels in the community. Merritt, Hawkins and Associates, a recruiting firm, noted that salaries of specialists have risen and that some recruits are being offered signing bonuses.\textsuperscript{65} Despite this, jobs are unfilled. Since the mid-1990s, the American College of Radiology has chronicled a progressive rise in available radiology positions while the number of job seekers has progressively fallen.\textsuperscript{71} A recent American Hospital Association publication called the radiologist situation a "developing crisis,"\textsuperscript{72} and our chair of radiology put it very directly: "Shortages across the country are acute, and I see no immediate improvement."

**REALITY BEHIND THE PERCEPTIONS**

This situation really should be no surprise. The prevalence of conditions requiring specialty care is increasing. Disorders that previously were untreatable flash on the radar screen for definitive therapy. Hip and knee replacements are now routine. Our chief of orthopedic surgery remarked that he has never received as many job-opportunity calls, and similar stories emanate from neurosurgery, urology, and other surgical disciplines. In my own specialty of heme-one, patients are living longer. That's been our goal. But as patients with diseases such as leukemia and colon cancer survive longer, they require more care. A friend who heads a lung cancer treatment program lamented to me, "What
will we do when our patients live twice as long?" The supply of oncologists, which only five years ago was believed even by the oncology community to be on track with demand, is already woefully inadequate. And insufficient supply is replicated among many of the pediatric subspecialties for all of the same reasons. One pediatrics subspecialist said, "It's not just a problem, it's a crisis." Such crises are not simply because there is a growing prevalence of disease or a growing spectrum of technology. They exist because an expanding economy redefines what it is that warrants attention.

Dermatology reveals another part of the story. About half of the dermatologists in a recent survey said that there were too few, and, with waiting times for patients exceeding one month and recruitment times for partners nearing two years, their perceptions seem to fit. Several dermatologists attributed this to increased numbers of women physicians and early retirees, but they also noted a shift to "cosmetic/appearance medicine," a term that will surprise some but that captures a general trend in what society seeks from physicians. It engages not only dermatologists but also otolaryngologists and plastic surgeons, and analogies can be found in other specialties. One dermatologist commented that he "deplores this trend," but it accounts for more than 10% of dermatology practices. Medicine is often heroic, yet much of what we do is not life-saving, nor would some even be contemplated in less economically advanced nations. Yet it's valid from the perspective of our patients, whose expectations are linked to how they perceive their standard of living and whose desires ultimately determine the use of available resources.

Anesthesiology reveals a different facet. Only a few years ago, the world heard about the glut of anesthesiologists, and training programs collapsed, but now the question is "Where have all the anesthesiologists gone?" Two prominent anesthesiologists blamed it on a workforce study patterned after GMENAC that, like GMENAC, underestimated the need for anesthesiologists. Its findings reverberated among "well-meaning bureaucrats, politicians, think tanks, academicians and specialty societies" who believed that decreasing access to specialists was necessary to control costs. And trainees fled. The reverse reasoning underpinned the perceived "shortages" of primary care physicians, as organizations rushed to hire as many as they could in order to care for the increased numbers of patients that they hoped managed care would send their way. But most of these patients already had primary care doctors, often the same ones who were being recruited. In reality, there were neither surpluses in anesthesiology nor shortages in primary care. The gyrations in both reflected market transients, not secular trends.

This is not to say that surpluses of physicians in some specialties do not exist. A colleague characterized ophthalmology as already "oversubscribed," and recruiters agree. It is slightly less evident because some ophthalmologists have pursued refractive surgery, but that appears to be tailing off, and the future is clouded by competition from optometrists, who now have prescriptive privileges and who have expanded their roles in eye care. An overlap of roles is also affecting cardiac surgery. In the words of one prominent surgeon, "Coronary artery surgery is going into the dumper as interventional cardiologists stent the masses," although volumes remain high.
as more elderly patients require surgery. Demand for obstetrician—gynecologists also appears to be leveling off, but it's a delicate balance. Birth rates are inching down, but the number of older women is inching up, and so, too, is the proportion of female ob—gyns, who tend to practice fewer hours. So the balance may tip again.79

Psychiatry is a special case because its jurisdiction has never been fully defined, sharing the responsibility at different times with psychologists, social workers, the legal system, the clergy, and others.80 Nonetheless, a leader in the field talked about "a serious and increasing shortage of psychiatrists nearly everywhere except in the larger urban centers." He noted that managed care is pushing psychiatrists to shorter and fewer visits and that family physicians are prescribing more frequently, which "masks the lack of appropriate numbers of psychiatrists." And nobody believes that the profound shortages of child psychiatrists will be solved any time soon.81 A wild card in all of this is psychologists, who have obtained prescriptive privileges to a limited degree in the military and who have recently succeeded in doing so in New Mexico.82-83

PRIMARY CARE

The greatest secular trend is the progressive movement of care away from primary care physicians to nurse practitioners (NPs) and physician assistants (PAs) on the outpatient side55,56,57 and to hospitalists on the inpatient side.84 More care is also being given by alternative medicine providers,55-56,85 and more health plans are covering this care, largely in response to consumer demand. Although the American Academy of Family Physicians continues to express concern about inadequate numbers of primary care physicians,86 studies in collaboration with the BHPPr indicate that, for the first time in 30 years, the per-capita supply is increasing.87 Indeed, if one third of residents continue to train in primary care, the supply will exceed even COGME's lofty requirements,87 a circumstance that I projected in 1994 while arguing that 50:50 would be excessive.12 This abundance could diminish if interest among students continues to erode.88 But a change in the opposite direction seems more likely, as the ranks of non-physician clinicians swell55 and as they assume larger roles in primary care.89,90 Therefore, I'm not surprised when I hear that primary care is "rather full" or when I read surveys that show a paucity of available jobs. In fact, the current abundance of generalists has prompted some subspecialty groups to recruit internists with specialty interests to make up for the lack of medical subspecialists.65

THE INESCAPABLE CONCLUSION

The stories that I've heard trouble me as a physician, but they reassure me as a planner, confirming the conclusions that my colleagues and I reached from our trend analysis.50 They reflect the natural results of economic expansion, which stimulates medical innovation, increases expectations, and reorders personal priorities.52 Growth of the economy propels both the utilization of health care and the specialization of health care services. Not that this is free of tension. The desire for health care always exceeds the available resources, causing countervailing efforts to moderate spending, a complicated process that tends to overshoot in both directions and that is showing the strains of having
been reined in too tightly. We are now experiencing a bump in the economy, although one can only imagine how much more severe it would be without a vigorous health care sector. Yet we've had bumps before, and they merely became averaged into the long-term trends that link economic expansion and the demand for physicians' services.50,52

What I am hearing, and what our trend analysis teaches me, is that this nation is facing a growing shortage of specialists. The "bulge" in supply that we projected eight years ago12,29 has passed, but even more quickly than we had anticipated, and there simply will not be enough physicians to satisfy future demand. We need to begin planning to expand our medical schools and to build more, and we will have to deal vigorously with the declining numbers of applicants. We must wean ourselves from depending on IMGs to fill the gaps, and we will have to... Hello-o, is anyone listening?

FOOTNOTES

Note added in proof. Echoing the experiences of Merritt, Hawkins and Associates,65,66 the recruiting firm Cejka and Company recently reported soaring starting salaries and offers of nontraditional working arrangements (e.g., job sharing) for physicians in many of the specialties, but noted that "the urge to hire in primary care is less compelling."91 At the same time, a "comprehensive workforce study" performed by the Massachusetts Medical Society was interpreted as showing "unequivocally that Massachusetts is facing a crisis situation in the number of (specialty) physicians available to deliver patient care."92

REFERENCES


47. Nation CL. Changing Directions in Medical Education, Sixth Report: 1999 Update on Systemwide Efforts to Increase the Training of Generalists. Oakland,


52. Getzen TE. Health care is an individual necessity and a national luxury: applying multilevel decision models to the analysis of health care expenditures. J Health Econ. 2000; 19: 259-70. [Medline]


