

The Physician Manpower Crisis

The 1970 Carnegie Commission¹ report on medical and dental education set the stage for research on the physician workforce by declaring there was a looming health manpower deficit. Even before this report was published, Reuben A. Kessel², a professor of business economics at the University of Chicago, suggested that this deficit of physicians was, at least in part, an unintended consequence of the 1910 Flexner Report which had changed the standards of medical education, imposing the basic science curriculum he observed at Johns Hopkins in the first two years as the model for all medical schools. He argued that Flexner's focus on how medical students should be educated, rather than on what they should know and be able to do as a result of their education, however achieved, stifled educational innovation that would lead to more efficient ways to produce the desired output. He proposed that the basic sciences should be taught by regular academic departments before medical school and that the resources saved be used to expand enrollment of third and fourth year students. He also thought that the AMA positions antagonistic to anything but the fee-for-service model of marketing care delivery artificially restricted the availability of physicians and that their opposition to physician advertising served to maintain the high cost of medical care.

The nation responded to the claimed manpower crisis by building more medical schools, increasing enrollment, using more Advanced Placement Registered Nurses (APRNs) and more Foreign Medical Graduates (FMGs), developing new networks of care provision, and providing more funding for family practice departments and residents. Special pre-graduate programs to influence medical students to consider primary care and practice in rural and inner-city areas were instituted by the Student American Medical Association, beginning in 1968 with their Medical Education and Community Orientation (MECO) project and continuing with programs in Appalachian Health, Indian Health, Migrant Health, Health Team Training and the National Health Service Corps Primary Care Preceptorship Project. Jefferson Medical School in Pennsylvania developed a successful Physician Shortage Area Program (PSAP)³ in 1974 that involved selective admissions, additional financial aid, a family practice advisor, a third year clerkship in family medicine in non-metropolitan areas and a senior outpatient sub-internship in family medicine.

The claim of a health manpower crisis did not go unchallenged. By 1982 the AMA, long an opponent of any governmental meddling on what they considered their turf, was asserting that "The physician shortages proclaimed by the Bane report in 1959 and the 1970 report of the Carnegie Commission on Higher Education are no longer so apparent." They believed that the "shortage" was due to an increase in demand as a result of increased average real income and the expansion of care to the poor and elderly through Medicare and Medicaid⁴. They eschewed the "forecasting and planning approach" to managing health manpower as being prone to underestimation of the ability of the health care delivery system to adjust to its changing environment. Their position was that the physician workforce was responsive to market forces, citing studies showing that communities in the 10K-20K range increased their number of physicians in five major specialties from 3 to 18%, that 18 percent of the physicians in one sample changed their medical specialty during the period between 1974-1978 and 24 percent changed their practice setting. Although acknowledging that the effects of market forces on physician manpower might be seen long after they originally occur, they believed that the decreasing financial attractiveness of medical practice and increasing educational costs to students were beginning to affect the workings of the medical education system.

A 1983 report by the Graduate Medical Education National Advisory Committee (GMENAC)⁵ estimated that there would be an excess of 70,000 physicians by 1990 and recommended that U.S. Medical

schools decrease enrollment by 10% relative to 1978-79 levels while also restricting the intake of FMGs. (A study of the effects of reducing enrollment in the state of Texas⁶, however, concluded that it would have no significant impact on the availability of physicians over the next 15 years and might actually be counterproductive). A report by the American College of Physician Executives in 1997 stated there was increasing competition among physicians as well as hospitals for ambulatory care revenues due to the growth in enrollment of patients in integrated managed care networks. They projected a surplus of about 165,000 specialty patient care physicians by the year 2000 while they expected that the supply and demand for primary care physicians would balance out.

These predictions of a “physician glut” did not materialize in the current era. Market forces do not appear to have adequately contained the discrepancy between physician supply and demand within an acceptable time frame. In 2016 the National Center for Health Workforce Analysis, a part of the U.S. Department of Health and Human Services, using a microsimulation model with data from 2013 as a baseline, projected the supply and demand for primary care practitioners in the year 2025 for each state⁷. They expect there to be 239,460 primary care physicians in 2025 while the expected demand is 263,100 (due mainly to population growth and an aging patient group), a shortfall of 23,640 doctors. Thirty-seven states are anticipated to have a shortage of primary care physicians with 12 of them having a deficit of 1000 or more doctors. The greatest deficits are expected to be in the South (especially Florida with a need for 3,060 more than supply and Texas with a need for 1760 more than supply) while 13 states and the District of Columbia are expected to have an oversupply of primary care physicians (especially Massachusetts, with 1,230 more physicians than needed).

The Association of American Medical Colleges hired IHS Markit Ltd., a global information provider, to use a microsimulation model to infer discrepancies in physician supply and demand for the year 2030 using the 2016 level of care as a baseline⁸. Their projections were presented in terms of ranges of possibilities under different assumptions about changes in demographics, changes in insurance coverage, the amount of use of physician extenders in care delivery and changes in impediments to health care equality for under-served populations. They concluded that there would be a shortfall of between 42,600 to 121,300 physicians by 2030. Primary care physicians would fall short by between 14,800 and 49,300 while non-primary care specialists would have a deficit of from 33,800 to 72,700. Surgical specialties were expected to accrue a deficit of from 20,700 to 30,500 members due to an aging population coupled with an aging surgical workforce and a failure of surgical specialties to increase the number of new recruits. The National Council for Behavioral Health⁹ in 2017 noted that the number of psychiatrists working with public sector and insured populations had declined by 10% from 2003 to 2013 due to an aging workforce, low rates of reimbursement, burnout, excessive documentation requirements and restrictive regulations about sharing clinical information. Fifty-five percent of the states have a shortage of child and adolescent psychiatrists and 77% of counties are under-served. Part of the problem with this specialty is that 40% of the psychiatric workforce provide services in cash-only private practices.

Projected numbers of physicians available and needed for different categories of physicians and places allow one to identify the *targets* for potential intervention. But additional knowledge about the physician workforce and *how its features are determined* are needed by the four entities that have a vested interest in the physician career space:

- ◆ **Medical students** need to know what options are available to them in the medical field; to know the activities and characteristics of each of these options; to know how each of them “fits” the self with regard to personal characteristics such as abilities, personality, values

and interests (which also means that they need to know their own standing on these various dimensions); and to know how to make their way through the educational opportunity structure in order to attain their goals.

- ◆ **Medical schools** need to know how to select an array of different kinds of students that will, on the one hand, be capable of making it through the rigors of medical education and performing the required tasks of a physician, while, on the other hand, producing an output array of graduates who meet the array of different needs of their communities. They also need to know how to provide the kinds of teaching-learning environments that will allow different kinds of students to acquire the knowledge and skills appropriate to their different specialties and work settings. These needs presuppose that the medical school knows what kinds of graduates they want to produce in what quantities, what their communities and funding sources expect of them and that they are responsive to these expectations and not just to self-serving and guild interests.
- ◆ **Institutions and organizations that deliver health care services** need to know where to obtain the array of person-power they require in order to meet the array of demands for services in their catchment area. They also need to know the incentives that might work to attract different kinds of physicians to their facilities and the ways they might alter the activities and characteristics of their work settings to mitigate undesirable features or prepare physician-recruits to cope with them.
- ◆ **Administrative units of government** at local, state and national levels need to know how to allocate their available funds in order to help different kinds of medical care providers to meet the needs of their constituents in various locals, especially those characterized by low income and rural location. They need to know what contingencies they may most appropriately require for allocating funds to communities or health care facilities, what kinds of incentives they may make available in order to attract the needed kinds of physicians to their state or region, and how to craft legislation that will actually help them to achieve their health care goals.

Of course these different entities also need other kinds of information to make their decisions (e. g., amount of demand for different kinds of services, impending alterations in organization of health care delivery, changes in disease frequencies and new treatment options that may be in the offing, degree to which paramedical personnel may be substituted for physicians, etc.). But they all need to know how to find different kinds of students or physicians, how to select them, and how to influence or coax them into the kinds of activities and settings where they are needed.