VIEWPOINT

Reassessing the Data on Whether a Physician Shortage Exists

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Does the United States have enough physicians?—Yes.

For decades, experts have bemoaned a lack of sufficient primary care physicians in the United States. These fears came to a head during debate over the Affordable Care Act (ACA), when critics suggested that the millions of US residents gaining coverage under the ACA would further exacerbate the existing physician shortage. A 2011 American College of Surgeons report asserted that "even before [this] health care reform, the nation was headed for serious physician shortages and reform has only made it worse."[1] According to the updated report of the Association of American Medical Colleges (AAMC), released March 14, 2017, the AAMC still predicts a shortage of between 40 800 to 104 900 physicians by 2030.[2]

Some have questioned the accuracy of these projections. Yet the ominous forecast of a physician shortage has already motivated significant reforms. During the last 15 years, the number of medical schools in the United States—including those with provisional or preliminary accreditations—has increased from 125 to 145. Concomitantly, medical school enrollment has increased from 16 488 to 21 030 students, an increase of 28% since 2002, and is expected to increase even further by 2018.[3] Additionally, over the last 5 years, the number of Accreditation Council for Graduate Medical Education programs has increased from 9022 to 9977, an increase of 10.6%, and the number of active residents (currently enrolled in a program) has increased from 115 293 to 124 409, an increase of 7.9%.[4]

Since passage of the ACA, 22 million US residents have gained health care coverage and thousands of newly trained physicians have begun practicing.[5] Given these changes, it is worth reassessing the data on whether a physician shortage really exists.

Are Wait Times Longer?

As millions gained coverage under the ACA, many argued that the time to get a physician appointment would increase. A 2013 Commonwealth Fund survey found that 52% of adults could not get a same-day or next-day appointment with their physician.[6]

However, long wait times for physician appointments predate the ACA. The average time to an appointment with a US family practice physician in 2009 was 20 days; today, it is 19.5 days.[7] Since the 2006 implementation of "RomneyCare" (the ACA's predecessor) in Massachusetts, serial surveys have shown that wait times for appointments with Massachusetts primary care physicians have increased and declined without statistically significant differences. Specialist appointment wait times in Massachusetts have remained stable or decreased for all groups except orthopedic surgeons. Therefore, it is difficult to attribute longer wait times solely to an expansion of health coverage.

For Medicaid beneficiaries, data suggest that appointment availability has improved under the ACA. A study of 295 primary care practices in Michigan found that appointment availability for new Medicaid patients increased from 49% to 55% before vs after the state's Medicaid expansion, probably due to improved Medicaid funding under the ACA.[8] The study noted that even as more beneficiaries became eligible, "wait times for new Medicaid and new privately insured [patients] did not significantly increase."[8] Although US residents do wait a long time to get a physician appointment, this time has not increased since the ACA.

If ACA expansion in coverage did not increase wait times for a physician appointment, the structural factors that might cause long waits should be examined.

Does the US Have Enough Physicians?

On the supply side, are there too few physicians? A simple calculation estimating the number of physicians needed to care for all US residents suggests no physician shortage.

The United States currently has more than 900 000 active physicians. Of these, 441 735 are primary care physicians and 484 384 are specialists.[9] Approximately 12% of primary care physicians work part time, leaving slightly more than 388 000 full-time primary care physicians. Of these, nearly 80 000 are pediatricians.

According to recommendations from the Agency for Healthcare Research and Quality, the average physician panel size—the number of unique patients under the care of an individual physician—should be between 1500 and 2000. A recent Medical Group Management Association survey of primary care physicians found that the median panel size was 1906 and the average was 2184.[10]

Conservatively, if each of the 388 000 full-time primary care physicians cares for an average of 1500 patients, they could care for an estimated 583 million people. Today, there are 240 million adults in the United States. Even at the low panel size of 1500 patients, all adults could be cared for by 160 000 primary care physicians; at a panel size of 2000 patients, the United States would require an estimated 120 000 full-time primary care physicians. Similarly, the 73 million US children younger than 18 years could be cared for by an estimated 49 000 pediatricians, assuming that each provides care for 1500 patients, or by an estimated 36 500 pediatricians with panel sizes of 2000 patients. Add to these conservative calculations the care provided by the more than 50 000 part-time primary care physicians and there seems a significant surplus, rather than a shortage, of full-time primary care physicians.

Can Physicians Care for All Patients in the United States?

Another way of determining if there are enough physicians is to approach the issue from the demand side. Each

year, there are 930 million US physician visits, 54.6% (507 million) of them to primary care physicians. If each primary care physician sees patients in 30-minute appointments for 6 hours a day (12 appointments per day) to ensure patients are thoroughly examined and visits are not rushed, then 43 million primary care physician workdays per year are needed (507 million visits divided by 12 visits per day). If physicians work an average of 200 days per year, then an estimated 215 000 active, full-time primary care physicians would be needed for all the primary care office visits in the United States. That number is nearly identical to the estimated 209 000 internists, family physicians, and pediatricians (160 000 + 49 000) needed based on the conservative panel size calculations.

From either a supply or a demand perspective, enough physicians are available for all US patients. Given this balance, and assuming these estimates are accurate, there is no obvious physician shortage.

Why Is There a Projected Shortage?

The AAMC report predicts a physician shortage based on 3 factors: declining physician working hours, impending physician retirements, and aging of the population.

The report suggests that physicians younger than 35 years are expected to work 13% fewer hours per week relative to earlier cohorts. This seems accurate considering that physicians who are aged 46 to 55 years work more hours than younger physicians.

Yet even if physicians are now choosing to work fewer hours, there are still enough physicians. If an estimated 215 000 primary care physicians are needed to care for all US residents, then millennial physicians could still work fewer hours and the 388 000 full-time primary care physicians in the United States could together cover all patients.

The report also suggests that a third of all currently active physicians will be of retirement age within the next decade, risking a significant decline in the number of available physicians. Most US adults nearing retirement age, however, are delaying retirement, so the number of retirement-eligible physicians who choose to leave the workforce will likely be lower than the projected. Additionally, even if a third of all current physicians retire, there will still be approximately 260 000 full-time primary care physicians (0.67 × 388 000) with no replacements, which should be more than enough.

The AAMC report also suggests that the aging population is likely to increase volume of care. Even though older patients do on average have higher health care demands, there are more efficient ways to address their health needs than simply increasing the supply of physicians. Health services that do not require a physician—such as annual wellness examinations, follow-up visits, closing of care gaps, and support for medication adherence—could be provided by nurse practitioners, care coordinators, and medical assistants. By reorganizing clinicians' responsibilities, physician time could be used more effectively.

What Are the Problems in Obtaining a Timely Appointment?

Why are patients experiencing long wait times and rushed office visits? The short answer is inefficiency. Many physicians control their schedules, often resulting in ineffective office scheduling and high rates of patient no-shows. To address this, physician practices should implement open-access scheduling, in which 20% to 50% of appointment slots are left open for same-day or walk-in patients. This strategy can increase office efficiency and reduce time to an appointment.

Wait times may also be decreased through utilization of virtual medicine for follow-up appointments. Text messaging, apps, and video calls can allow patients to quickly access routine, follow-up care without having to schedule an in-person appointment. In addition to enhancing patient convenience, virtual medicine also frees up office time for patients with emergent issues.

Although there appears to be an abundance of physicians in the United States, the system is still characterized by a maldistribution of physicians. Nearly a fifth of US residents live in rural areas, yet less than a tenth of primary care physicians practice there. Training more physicians will not solve this issue. Instead, it will be important to consider how physicians are incentivized to encourage more to pursue underserved areas, such as in rural health care.

There are many assumptions in these projections, as there are in projections by those who suggest a physician shortage. These calculations suggest that there are more than enough primary care physicians to care for the US population. Long delays in getting an appointment are due to system inefficiencies rather than supply. This is a management problem that should not be addressed by adding more physicians; doing so will only drive up health care costs and increase inefficiency.

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