



Surgical workforce:

An emerging crisis

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Partly as a result of earlier assessments that projected an oversupply of surgical specialists, the number of surgeons trained in the nation's graduate medical education system has remained static for the past 20 years. However, the number of people living in the U.S. has steadily climbed over this time frame. At this point, U.S. population growth has far outpaced the supply of surgeons. As a result, the U.S. is beginning to see signs of an emerging national crisis in patient access to surgical care.¹

Thanks in large part to George F. Sheldon, MD, FACS, and the American College of Surgeons Health Policy Research Institute, evidence of surgical workforce shortages is well documented. Workforce shortages affect nearly all surgical specialties. According to 1996 and 2006 data on workforce numbers produced by the Dartmouth Atlas, general surgery, urology, ophthalmology, and orthopaedic surgery declined 16.3 percent, 12 percent, 11.4 percent, and 7.1 percent respectively.² Looking to the future, between 2005 and 2020, the Bureau of Health Professions projects an increase of only 3 percent among practicing surgeons, with declines projected in thoracic surgery (-15 percent), urology (-9 percent), general surgery (-7 percent), plastic surgery (-6 percent), and ophthalmology (-1 percent).³ In addition, the *Archives of Surgery* published an analysis last April that showed a decline of more than 25 percent of general surgeons between 1981 and 2005 in proportion to the U.S. population.⁴ To be sure, declines are present in both rural and urban areas; however, declines in rural areas appear to be the starting point for shortages at crisis dimensions.

Among Americans receiving health care, 54 million Americans do so in small and rural hospitals.⁵ Although some of the rural workforce challenges in those areas relate directly to the difficulty in recruiting surgeons to rural areas, some are also the result of a lack of workforce reinforcement. The level of on-call time is greatest in rural areas; some general surgeons are forced to take call 24 hours a day, seven days a week. In addition, older surgeons in rural areas know that retirement of a less stringent workload may

be further off than planned. Surgeons in rural areas also have a lower day-to-day volume of the types of procedures they are expected to perform at any given moment, making them less certain about the quality of care they will be able to provide and increasing liability woes. As a result of these concerns, some surgeons choose to relocate for the relative professional security of a more populated place to practice.

Reasons for shortages

There are many reasons for the surgical workforce shortage. The long-term outlook for the future of surgery contributes to the difficulties in recruiting surgeons: prospects of reduced payment combined with higher practice costs, bigger liability premiums, and the heightened threat of being sued; a crippled workforce leading to demands for more time on call; heavier caseloads with less time for patient care; and a U.S. health care delivery system that is in flux. Given the rigors of a surgical residency, it is understandable that would-be surgeons are deterred from making the extra sacrifices necessary to enter the surgical workforce.

Not only are fewer medical students entering the field of surgery, but large numbers of aging, established surgeons are either decreasing their workloads or retiring. According to the American Medical Association's *Physician Characteristics and Distribution in the U.S.* (2007 edition),⁶ approximately one-third of the surgical specialists who are key to ensuring adequate emergency call coverage are age 55 or older (general surgeons, 32 percent; neurosurgeons, 34 percent; and orthopaedic surgeons, 34 percent). Hence, it is critical that our nation's medical schools and training institutions start producing more surgeons in these specialties (see Table 1, this page).

Other professional trends add to the imminent workforce crisis as well, including the growing movement toward subspecialization. Program directors, professors of surgery, and other individuals

Table 1: Aging U.S. physician workforce, general surgery compared with primary care

| | |
|---|----------------|
| Total active general surgeons | 26,769 |
| General surgeons younger than age 55 | 15,426 (57.6%) |
| Age 55 or older | 11,343 (42.4%) |
| Family practice physicians, age 55 or older | 36.7% |
| Internal medicine physicians, age 55 or older | 32.3% |

Source: AAMC, Center for Workforce Studies. 2008 Physician Specialty Data, November 2008.

who are familiar with residency matches report that approximately one-half of all general surgery residents go on to pursue fellowships and subspecialization.⁷ As their scope of service becomes narrower, a new and alarming trend has emerged: many surgeons no longer feel qualified to manage the broad range of problems they are likely to encounter in an emergency department or rural setting.

Working toward solutions

The American College of Surgeons regularly educates members of Congress and congressional staff on the workforce challenges facing surgery, as documented by the ACS Health Policy Research Institute. Most recently, the College presented a statement on workforce to the U.S. Senate Committee on Finance, highlighting the workforce problem and offering ideas for legislative solutions (available at www.facs.org/AHP/testimony/workforce031209.pdf).

Some of these solutions include recruitment efforts, such as supporting current residency programs and promoting the development of additional residency programs, particularly in rural

areas (see Table 2, this page). The College is also working to develop incentives for medical students who are interested in pursuing a surgical career, as well as alleviating some of the current burdens facing medical students, residents, and young surgeons. Specific examples of solutions include the following:

- Preserving Medicare funding for graduate medical education and eliminating the residency funding caps established in the 1997 Balanced Budget Act
- Fully funding residency programs through at least the initial board eligibility
- Including surgeons under the Title VII health professions programs, including the National Health Service Corps program, making them eligible for scholarships and loan assistance in return for commitment to generalist practice following training
- Alleviating the burden of medical school debt and promoting rural/underserved care through loan forgiveness programs that stipulate work in rural/underserved areas
- Extending medical school loan deferment to the full length of residency training for surgeons
- Allowing young surgeons who qualify for the economic hardship deferment to utilize this option beyond the current limit of three years into residency
- Increasing the aggregate combined Stafford loan limit for health professions students

In addition, the College supports legislative efforts that retain and reinforce surgeons in rural areas and emergency rooms. Again, these solutions focus on incentives, as well as making efforts to alleviate the obstacles confronting surgical care. Solutions to retain and reinforce surgeons include the following:

- Create a new health professional shortage area (HPSA), separate from the traditional primary care HPSA, focused specifically on surgery with bonus payment structures for surgeons who provide services in designated areas
- Allow surgeons access to Medicare's disproportionate share program, currently restricted to hospitals, when they operate on patients they see in the emergency department or as a result of care provided under the requirements of the Emergency Medical Treatment and Active Labor Act (EMTALA)

Table 2: Number of first-year ACGME residents/fellows, 2002–2007

| | 2002 | 2007 | % Change |
|-----------------------|-------|-------|----------|
| General surgery | 2,423 | 2,439 | 0.7 |
| Neurological surgery | 94 | 143 | 52.1 |
| Obstetrics/gynecology | 1,191 | 1,214 | 1.9 |
| Ophthalmology | 366 | 398 | 8.7 |
| Orthopaedic surgery | 604 | 634 | 5.0 |
| Otolaryngology | 188 | 269 | 43.1 |
| Plastic surgery | 162 | 187 | 15.4 |
| Thoracic surgery | 131 | 99 | -24.4 |
| Urology | 177 | 214 | 20.9 |
| Vascular surgery | 91 | 119 | 30.8 |
| Family practice | 3,196 | 3,102 | -2.9 |
| Internal medicine | 8,129 | 8,635 | 6.2 |
| Pediatrics | 2,517 | 2,697 | 7.2 |

Source: AAMC, Center for Workforce Studies. 2008 Physician Specialty Data, November 2008.

- Provide tax relief to surgeons who perform EMTALA-related care, which could be based on overhead costs as related to the Medicare physician fee schedule
- Adjust Medicare practice expense pools for each specialty to account for uncompensated care related to emergency department or EMTALA-related care as is done for emergency medicine
 - When hospitals pay stipends to surgeons who take emergency call, Medicare should recognize these costs as is currently done for critical access hospitals
 - Provide liability reform for surgeons who perform EMTALA-related care
 - Expand the Federal Tort Claims Act to include surgeons who provide services to patients who are referred through their primary care physician at a community health center

Finally, Congress is well aware that unpredictable and unreliable reimbursement exacerbates workforce challenges. The ACS will continue to strongly advocate for Medicare physician payment reform.

Although not all of the solutions to the surgical workforce crisis can be solved with legislation, the College is working hard to develop legislative solutions wherever possible. Achieving the goals set in the ACS Statement on Health Care Reform⁸ as well as the solutions mentioned in this article will go a long way toward addressing the causes of the surgical workforce crisis on the federal level.

State-level fixes

Surgical workforce issues are receiving greater attention in the states these days. Physician shortages, especially those in small communities or rural areas, have forced state policymakers and medical societies to assess the intensity of the problem and, in some cases, consider potential solutions.

At least 22 states have sought to study the workforce issue in recent years. In some cases, the focus of these studies has been on the shortage of primary care physicians, with less attention to specialty shortages.⁹ Other studies provide a more balanced review of the availability of physicians regardless of specialty. All of them, however, conclude that their respective states are experiencing or will experience a shortage of physicians.

Standard solutions reflect the following themes:

- Build more medical schools to increase the number of medical students with concurrent increase in residency training slots
- Recruit physicians to practice in the state
- Expand loan payment assistance and scholarship programs
- Create incentive programs for physicians to establish practice in rural areas

The following sampling of how states have engaged in addressing physician workforce issues can give a broad overview of the problem.

Colorado

In 2005, the Colorado Health Institute conducted a survey of physicians as part of the licensure renewal process. The intent was to collect, analyze, and disseminate Colorado physician workforce data to determine the age distribution of responding physicians, factors weighed in selecting with practice locations, primary care availability, and time spent in direct patient care. Colorado reflects national trends in these areas, including pending shortages of primary and specialty care. The report is available at <http://www.coloradohealthinstitute.org/resourcePublications/publications.aspx>.

Connecticut

The Connecticut State Medical Society conducted a physician workforce survey in 2008 with the following intentions:

- Assess Connecticut physicians' satisfaction with their careers in medicine and their lives as physicians
- Identify problems associated with the supply of physicians in certain specialty areas in the state, determine possible causes of those problems, and assess their potential effect on patient access to care
- Examine the professional liability environment in Connecticut and assess its relationship to practice patterns and patients' access to care
- Determine physician opinions on health care reform and, specifically, initiatives to improve access to medical care
- Measure the use of technology in Connecticut physicians' practices

The survey revealed that 19 percent of the 1,077 respondents are contemplating a career

change, and 10 percent plan to move their practice outside of the state because of the practice environment. Work-hour increases have occurred for 47 percent of the respondents over the past three years, with urologists, neurosurgeons, and oncologists indicating they have increased their work hours substantially.

The Connecticut report is available at <http://www.csms.org/>.

Florida

In early 2008, Joseph Tepas, MD, FACS, and Resident Member Darrell Graham, MD, undertook a more limited workforce survey, with 15 practicing surgeons from the ACS Jacksonville Chapter and 65 from the Florida Chapter— representing most of the general surgeons in Jacksonville and approximately 25 percent of the available general surgeons in the Florida Chapter of the ACS—participated. Highlights of the study are as follows:

- Within 10 years, half of the respondents will have retired from practice and will no longer be taking call.

- More than half of the “senior” practitioners who have been taking emergency call and who plan to retire within 10 years are taking call on average five nights per month.

- Approximately 30 percent of the surgeons who have been established in Florida for less than 10 years are working more than 10 nights of call per month.

- Whereas some level of call stipend is provided, it is not uniform and those who receive it believe it is an inadequate reflection of the responsibilities of emergency room support.

Following initial review of the completed surveys, Drs. Tepas and Graham asked every state legislator (senators and representatives) to complete a brief survey indicating their awareness of surgical workforce/on-call problems and their recommended solutions. Very few responded, and of those who did, most thought there was not an immediate concern in their districts. To request a copy of this survey, contact Dr. Tepas at Joseph.Tepas@jax.ufl.edu.

Georgia

The state government and the Medical Association of Georgia have written a number of workforce reports over the past few years. In fact,

for many years, there has been a state agency, the Georgia Board for Physician Workforce (GBPW), focused on these issues. The GBPW is responsible for advising the governor and the general assembly on physician workforce and medical education policy and issues. The 15-member board works to identify the physician workforce needs of Georgia communities and to meet those needs through the support and development of medical education programs. Specific responsibilities include monitoring and forecasting the supply and distribution of physicians in Georgia; ensuring an adequate supply, specialty mix, and geographic distribution of physicians to meet the health care needs of Georgia; coordinating physician workforce planning with state funding for medical education; and the development and support of medical education programs required to meet physician workforce needs.

In October 2006, the GBPW released *Update on Georgia's Physician Workforce, Follow-Up Report to Is There A Doctor In The House?* The update discussed significant physician workforce issues facing the state including the aging of the population along with rapid population growth, minimal or negative growth in critical specialties such as obstetrics/gynecology, a state of decline in general surgery, and continued growth in medical education debt. On the medical education issue, the report recommended that the state build sufficient capacity in all levels of the medical education system and ensure adequate funding for medical education.

To access a copy of this report or use the GBPW physician database, visit <http://gbpw.georgia.gov/02/gbpw/home/0,2515,49259818,00.html>.

Massachusetts

The Massachusetts Medical Society has been conducting annual physician workforce studies since 2002. These surveys provide a snapshot of the practice environment in the state. Some interesting findings in the 2008 study of almost 1,100 physicians include the following:

- 42 percent of practicing physicians are considering a career change

- 18 percent of physician respondents are considering a move out of the state if the practice environment does not change


- 55 percent report that the amount of time needed to recruit physicians has increased, and 40 percent say that retaining existing physician staff had become more difficult

- More than 70 percent of physician respondents report difficulty in referring patients to specialists

The studies have also yielded a running scorecard by year of the specialties classified as facing critical or severe shortages. In 2008, specialties facing severe shortages included dermatology, emergency medicine, general surgery, neurology, neurosurgery, oncology, orthopaedics, psychiatry, urology, and vascular surgery. Specialties classified as in critical shortage included family medicine and internal medicine. The 2008 study is available at http://www.massmed.org/AM/Template.cfm?Section=Research_Reports_and_Studies.

State legislatures in 2009

A quick review of state legislative activity at the end of February indicated that only one state—Hawaii—is considering legislation this year that would directly address physician workforce issues. The Hawaii bill was introduced to assess a separate \$60 physician workforce assessment fee at the time of renewal of medical licenses. Funds collected will be deposited to the John A. Burns School of Medicine special fund to support activities related to physician workforce assessment and planning. Some of these activities would include maintaining accurate physician workforce assessment information and providing or updating personal and professional information maintained in a secure database. At press time, the bill was still in committee in the state senate.

That only one state is considering legislation related to physician workforce issues is likely related to the fact that many state legislatures are dealing with severe budget shortfalls (at least partly as a result of exploding Medicaid costs) and are waiting to see what actions Congress takes toward health system reform. It does not, however, mean that state legislatures are not concerned about the issue; rather, it reflects the very serious impact the economy is having on the states. 

Conclusion

Repairing the surgical workforce shortage will require considerable political will. Many of the solutions the College has identified are large in scope and envelop the structure of our health care system and the interests of many stakeholders. Certainly, it is time for policy researchers and policymakers to begin addressing these difficult issues, bearing in mind that no stakeholder has more to lose than the surgical patient.

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