



Two Dartmouth researchers mapped anatomical changes in the brains of college freshmen and determined that the brain's structure continues to change significantly after age 18.

What's the right number of doctors?

Is the U.S. health-care system facing an impending shortage of physicians? The Association of American Medical Colleges (AAMC) and the Council on Graduate Medical Education (COGME) believe it is. Both point to the aging population, trends in physician utilization rates, and economic expansion as contributing factors. One COGME study estimates an 85,000-physician deficit by 2020. In response, the AAMC is recommending that medical schools boost enrollment by 15% over the next decade.

But David Goodman, M.D., and other researchers at Dartmouth's Center for the Evaluative Clinical Sciences have a different view. A study led by Goodman and published in *Health Affairs*, showed that the elderly Medicare population may not be facing a physician shortage.

Subjects: Goodman's team studied the ratios of physicians to Medicare patients at 79 academic medical centers (AMCs). All the patients—a minimum of 100 at each center—received the majority of their hospital care during their last two years of life in an AMC. To avoid differences in patients' health-care needs and preferences, which might affect the results,

Goodman limited subjects' health status (all had chronic disease), outcomes (all died during the period 1999-2001), and quality of care (all were treated at integrated academic medical centers).

The results showed large differences among the AMCs in the ratios of physicians to elderly Medicare patients. New York University Medical Center ranked highest in total labor, with 28.3 physician full-time equivalents (FTEs) per 1,000 patients—4.7 times higher than the lowest-ranked institution, Medical College of Georgia, which had 6.0 physician FTEs per 1,000. NYU also had the highest rate of medical specialists (15) per 1,000—6.3 times more than the lowest-ranked institution, Strong Memorial Hospital in Rochester, N.Y.

Many AMCs with low ratios (including DHMC, with 7.7 FTEs per 1,000) are in rural areas, but not all. Several urban AMCs also had low ratios, including the University of Cincinnati Hospital and the University of California at San Francisco; both had the same outcomes and quality of care as high-ratio institutions.

Furthermore, the number of physician FTEs at each AMC correlated closely with the overall number of FTEs caring for Medicare beneficiaries in the region around the AMC.

Most surprising to Goodman was the huge "variation in physician effort, even across academic medical centers, where we would expect . . . commonality in their approach to patient care.

Efficiency: "With 45 million uninsured, we need to find opportunities to improve the efficiency of care wherever we can," maintains Goodman. "And medical educational institutions should be investing not in producing more physicians," he continues, "but in improving physician training and investing more in lifelong learning." MATTHEW C. WIENCKE

Surgical advice

Between one-third and two-thirds of patients undergoing gastric bypass surgery—a treatment for severe obesity—develop gallstones. A study by DMS surgeon Brent White, M.D., found that the most cost-effective ways to prevent them are removing the gallbladder at the time of the bypass and treating the patient with the drug ursodiol for six months after surgery. "Surgeons . . . should consider either using ursodiol or performing a concurrent cholecystectomy," White advised at the annual meeting of the American College of Surgeons.



Fungal finding

A class of deadly fungal infections called Zygomycoses was the subject of a paper by Jack Brown, Pharm.D. "Zygomycosis appears to have become more common since the mid-1990s," he wrote in the *American Journal of Health-System Pharmacy*, "and has been identified in up to 6.8% of patients at autopsy." Brown summarized the taxonomy, epidemiology, pathogenesis, diagnosis, and treatment of these dangerous fungi. Patients at the highest risk of infection, he reported, are diabetics, intravenous drug abusers, premature infants, recipients of bone marrow transplants, and those who get certain therapies to remove excess iron from the body. ■



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Wearing his pediatrician hat, David Goodman sees young patients like this one. But wearing his health policy researcher hat, he studies the physician supply needed for the aging U.S. population.