

## David Goodman, M.D.: Counting all doctors

By Matthew C. Wiencke

Five minutes after his parents brought him to the hospital in Colebrook, N.H., the two-month-old baby's heart stopped beating. He was fighting *Haemophilus influenzae* type b, a leading cause of bacterial meningitis in children under five years old. Dr. David Goodman and a team of nurses stabilized the baby, then bundled him into an ambulance for the two-and-a-half hour ride to Mary Hitchcock Memorial Hospital.

The year was 1984. Goodman was fresh out of residency and working with the National Health Service Corps as the sole pediatrician for all of Coos County—1,800 square miles in the wilds of northern New Hampshire. He saw patients from throughout the county—in the clinic, in the emergency room at Colebrook's Upper Connecticut Valley Hospital, at the local school, and in the county jail. What he remembers most clearly, though, is that long ride with that very sick baby.

After loading the equipment he'd need—an infant warmer, a monitor, and an intravenous (IV) pump—Goodman and one of the nurses climbed into the old ambulance. Searching around inside, he discovered that it had only two electrical outlets. He needed three.

Goodman pauses as he tells the story, leans forward, and says with quiet intensity, "Two out of three. Which one do you choose not to use?" He quickly decided not to plug in the IV pump, hoping the fluid delivery could be achieved through gravity alone. He knew, however, that getting a reliable flow without a pump would be hard, especially in an infant. On top of that, the infant warmer was old and not working properly. Half an hour down the road, the baby's heart stopped again. The ambulance rushed to nearby Lancaster Hospital, but it was too late. They could not resuscitate him this time.

"A complete tragedy," says Goodman, who later was asked by the parents to be a pallbearer at their baby's funeral.

Yet out of this tragedy came two good outcomes. Goodman worked with the hospital in Colebrook and the local community to raise \$9,000 for a new infant warmer. And the next year, when the first vaccine for *Haemophilus influenzae* type b (Hib) became available, the manufacturer donated enough to immunize every 18- to 36-month-old child in the hospital's service area. "I feel very confident that we had

**Grew up:** Framingham, Mass.; Narberth, Pa.; and Port Washington, N.Y.

**Education:** University of Vermont '77 (B.A. in biochemistry), State University of New York at Syracuse '81 (M.D.), Dartmouth Medical School '95 (M.S. in epidemiology and biostatistics)

**Residency:** Johns Hopkins University Hospital

**Early jobs:** Taxicab driver on Long Island, which taught him "interpersonal communication skills and microeconomics," and chauffeur for the owner of the Chrysler Building in New York City

**Hidden talent:** Can translate classical Chinese

**Favorite hobbies:** Walking, hiking, and kayaking

**Is the United States facing a serious shortage of doctors? Goodman says no. Others say yes.**

100% participation," says Goodman. Today, an improved Hib vaccine is routinely administered to infants aged 2 to 15 months.

Goodman loved being a rural doctor, but his practice in Colebrook didn't fill up as fast as he had expected. He realized that many families still took their children to a pediatrician in St. Johnsbury, Vt., an hour and a half away. He began to wonder about the importance of the local supply of physicians in a rural area and the relationship between physician availability and patients' perceptions of access, their use of health-care services, and their health outcomes.

He had a chance to explore these ideas further when he joined the DMS faculty in 1988 as an assistant professor of pediatrics. Soon after he

arrived, he began doing health outcomes research with John Wennberg, M.D., director of the Center for the Evaluative Clinical Sciences (CECS), and Elliott Fisher, M.D., a prominent health-services researcher at CECS. CECS provided fertile ground for Goodman to explore his questions about physician supply and patient access. And he appreciated Wennberg's intensity and mentorship; Wennberg, Goodman says, is "very, very good at picking out ideas that are most important from those that are merely good."

Goodman went on to earn a master's degree at CECS in 1995, and in 2003 he became the director and teacher of one of the program's courses, Advanced Methods in Health Services Research. He has also established himself as a leading expert on physician supply and the relationship between regional physician capacity and health outcomes. He has published numerous papers on these topics; has given presentations all over the U.S. and in Australia, Canada, and the United Kingdom; and has been a planning committee member and speaker for the International Medical Workforce Conference.

One particular issue has put Goodman in the limelight: whether the U.S. is facing a serious shortage of doctors. Goodman says no. Others say yes. The Association of American Medical Colleges (AAMC), the Council on Graduate Medical Education, and other organizations believe there is an impending shortage and are pushing for a 30% increase in medical school enrollments by 2015.

When asked about the AAMC's position, Goodman's eyes widen and his voice goes up in pitch, belying his usual calm demeanor. In the

Matthew Wiencke is the assistant editor of DARTMOUTH MEDICINE magazine.

late 1990s, AAMC officials believed the U.S. had a *surplus* of physicians, Goodman points out. But in 2005 they decided there was a *shortage*. “How did that happen so quickly?” Goodman asks. Then he answers his own question: “It happened because a small group of people [at the AAMC and other organizations] declared it so.”

But policy should be based on evidence, not belief, says Goodman. “And [the AAMC] cannot reconcile [its] position” with workforce research. He quickly adds that he is friends with AAMC leaders and researchers and doesn’t believe they’re ill-intentioned. But he contends that there needs to be more dialogue from all points of view on the issue.

The AAMC’s view—outlined in a paper in *Academic Medicine* by Edward Salsberg, director of the AAMC Center for Workforce Studies—is that a physician shortage will occur by 2020 because of several facts: that the U.S. population is growing quickly, especially the over-65 contingent, which uses more health services than younger people; that one-third of active physicians are over age 55 and are likely to retire by 2020; and that the next generation of physicians is not likely to work the long hours that current physicians do.

In response, many medical schools are planning to increase enrollment over the next five years. But Goodman—who doesn’t argue with the paper’s facts, only its conclusion—says that simply pumping out more doctors won’t fix things. Many experts—physicians, patient organizations, purchasers of health care, even the Medicare actuary’s office—say the U.S. health-care system is not functioning well and is not financially sustainable, Goodman points out. “So why would we plan on the assumption that [the system] is going to be the same as today, only bigger?” he asks. There are proven ways to improve health, he adds, but training more physicians is not one of them. He would like to see more evidence-based health workforce planning. “We need to hold ourselves to the same standards of evidence that we would for a new drug or a new test. Why do we suddenly throw this all away when we’re talking about [the] health workforce?” he argues.

In a recent essay published in the *New York Times* op-ed section, Goodman wrote: “By training more doctors than we need, we will continue to fill more hospital beds, order more diagnostic tests—in short, spend more money. But our resources would be better directed toward improving efforts to prevent illness and manage chronic ailments like diabetes and heart disease.” His piece drew much media at-



**Physician workforce researcher David Goodman agrees that the U.S. health-care system needs fixing, but he doesn’t believe producing more doctors is the way to do it.**

attention and resulted in interviews with *Newsday*, *Business Week*, NPR’s *Marketplace*, and the like. He also received more than 50 letters in response to the piece, and half of the *Times*’s letters page a few days later was devoted to his essay.

Goodman’s op-ed piece drew on several of his studies, including a 2006 paper in *Health Affairs* that reported on inefficiencies in the delivery of care to elderly Medicare patients. The study found that multispecialty group practices, like the Mayo Clinic and Dartmouth-Hitchcock Clinic, which integrate their services

with a hospital, use fewer physicians and do a better job. (For more on this study, see [http://dartmed.dartmouth.edu/spring06/html/disc\\_doctors.php](http://dartmed.dartmouth.edu/spring06/html/disc_doctors.php).)

Goodman was also the lead author of a 2005 American Academy of Pediatrics (AAP) workforce report. It recommended maintaining the current numbers of U.S. medical students and pediatric residency positions but distributing doctors differently, including to rural and other underserved areas. The AAP was the first specialty medical society in the U.S. to state that the country should not increase physician-training rates, Goodman says.

**W**ith all these activities, Goodman has “really brought an evidence base to what many people have felt to be the case for a long time—and that is that simply by producing more doctors, we’re not necessarily improving the population’s health,” says Fitzhugh Mullan, M.D., a former assistant U.S. surgeon general who is now a professor of medicine and health policy at George Washington University. (For a **WEB EXTRA** Q&A on Goodman’s workforce research, see [http://dartmed.dartmouth.edu/winter06/html/faculty\\_focus\\_we.php](http://dartmed.dartmouth.edu/winter06/html/faculty_focus_we.php).)

In addition to doing research, Goodman sees patients, served for several years as the chief of DHMC’s allergy and clinical immunology section, and teaches both CECS and M.D. students. He is held in high regard by students. “His somewhat soft-spoken demeanor complements his intellectual rigor by drawing students into his critical thinking,” says Tracy Onega, a CECS doctoral student. “Dave’s like an intellectual Mr. Fix-It. If you get bogged down . . . in a conceptual conundrum, Dave will help you find clarity and resolution.”

But Goodman hasn’t forgotten his roots amid the rigor. Ultimately, he hopes that his research will improve the distribution of health-care resources. That it will bring better pediatric care to underserved areas. That babies like the one who died in 1984 might live. ■