TEEN TIME: Through the Rural Health Scholars program, DMS students have been volunteering weekly at Lebanon, N.H., High School. They discuss health issues the teens will face as they become independent of their parents, such as health insurance.

THEN & NOW

A reminder of the pace of change, and of timeless truths, from the 1970 Mary Hitchcock Memorial Hospital annual report:

In 1970, the MHMH Business Office had "close to 40 people taking care of" all financial services, using "machines that turn out hundreds of thousands of punch cards, giving us information we once had to write by hand." Especially in the area of patient accounting, the report explained, "we've come a long way. . . . When private insurance was first introduced, it caused a flurry! . . . It has taken a lot of ingenuity to keep up with the paperwork required by third parties."

Health-care finances, and the institution, are far more complex today; the same functions require 220 full-time-equivalent positions.

Policy-makers get a look at how decisions play out

In January, nine New Hampshire policy-makers donned white medical coats and spent a day learning what it's like to be a doctor at DHMC. They weren't allowed to actually treat patients, of course, but they got to shadow physicians during inpatient rounds, outpatient visits, and even in the operating room. They were participating in Project Medical Education (PME), designed to give legislators and other policy-makers a better understanding of the complexities of academic medicine.

"One of our key goals in doing this is really demystifying the process of medicine," said Dr. Stephen Spielberg, DMS's dean, at the program's welcoming dinner. At a post-dinner "graduation," the policy-makers were all given a white coat, a statement of their medical school "loan debt," and a "residency assignment" for the following day.

The participants were excited and a bit nervous as they began their nearly three-hour clinical experience the next morning. But the real medical residents who were their hosts quickly put them at ease. Afterward, the policy-makers were eager to offer feedback about PME to DHMC officials.

Watching: "I expected maybe they wouldn't be too happy to have a politician watching them," said New Hampshire State Senator Robert Clegg. "It was just the opposite. Of course, surgery was interesting. The attending physician was more than happy to treat me like I was really a resident and explain everything he did."

"The one thing that stood out for me is how much attention these patients were getting," said Darwin Cusack, chief of staff to one of New Hampshire's U.S. Congressmen, Charles Bass. Cusack was also impressed with how well the physician he shadowed explained a patient's situation to a family member. "He went over it in technical terms first and then went over it all again in terms she could understand and made sure that she knew exactly what the state of play was and answered all of her questions."

Code blue: "I learned that you don't take the elevator" when responding to a code blue, said New Hampshire State Representative Fran Wendelboe. She described needing to hustle up the stairs as her team rushed to the aid of someone who had gone into cardiac arrest.

In addition to shadowing residents, the policy-makers learned about the complexities of financing graduate medical education, visited several labs, heard from physician-scientists about the important role research plays in patient care, and were introduced to the daunting process of diagnosing a puzzling case.

Act: DHMC's PME was based on a program of the same name run by the Association of American Medical Colleges (AAMC). It's designed to give policy-makers information so they can make insightful decisions on issues that affect academic medical centers. The AAMC program began in the wake of the Balanced Budget Act of 1997, "which posed the most serious threat to federal support for our missions in recent memory and which heightened a long-standing concern about the meager understanding most policy-makers have of academic medicine," according to Dr. Jordan Cohen, the president of the AAMC.

Legislators and government officials typically underestimate

MARK WASHBURN

Only one of these white-coated individuals is a physician (Dr. Worth Parker, fifth from the left). But all of them have an impact on health care—the others as New Hampshire policy-makers. They attended a recent shadowing program at DHMC.

the years of education and training required to become a physician, for example; have little appreciation of the degree to which educators are involved in research and patient care; don't understand how research improves patient care; and don't realize how much care academic medical centers and teaching hospitals provide for underserved and uninsured patients.

Without a full understanding of what such institutions do, legislators have no way to anticipate the impact that their budget cuts may have on academic medical centers.

Funding: In New Hampshire, funding for DHMC is in jeopardy partly because people don't understand what graduate medical education is, explains Gina Balkus, DHMC's director of government relations for New Hampshire. Balkus organized the PME program along with Dr. Worth Parker, DHMC's director of graduate medical education, and Frank McDougall, vice president of government relations for the Medical Center. It was such a success that they plan to offer it again in June.

"Legislators who took part in the program now understand the challenges we face as an academic medical center," says Balkus. In fact, Senator Clegg, who is the chamber's majority leader, has expressed an interest in establishing a loan forgiveness program for DMS graduates who agree to practice in New Hampshire's underserved areas. "This is a direct result of his participation in the PME," says Balkus.

Laura Stephenson Carter

INVESTIGATOR INSIGHT

In this section, we highlight the human side of biomedical investigation, putting a few questions to a researcher at DMS-DHMC.

Michael Beach, M.D., Ph.D.
Associate Professor of Anesthesiology

Beach, a medical statistician as well as an anesthesiologist, studies the impact that movie exposure has on adolescent smoking behavior. His other research interests are pediatric sedation safety and screening in underserved populations.

What made you decide to go into statistics?
It's fascinating—it has just the right amount of complex mathematics, computer programming, and application to real problems. And while many people think that statistical techniques haven't changed since the publication of Euclid's *Elements*, the field is quite dynamic. The analysis of longitudinal data and techniques for computing missing data are two of the more recent advances. Deleting from a statistical analysis patient records in which only some of the relevant data is missing can lead to errors of bias and loss of precision.

What clinical areas do you specialize in?
I spend some of my clinical time involved with pediatric anesthesia and some involved with ultrasound-guided regional anesthesia.

If you hadn't become a medical scientist, what would you like to be?
Probably a high school math teacher. I was a telephone solicitor for a summer, and I know that I wouldn't do that again.

What's the last book you read?
I recently read *Flyboys* and *Flags of Our Fathers*, both written by James Bradley. I am in awe at what those men did and what they endured as pilots and soldiers in World War II.

If you could travel anywhere you've never been before, where would it be?
Either Mongolia or Bhutan. I'd like to do some horseback riding in Mongolia and also see some of the festivals there.

What is the toughest lesson you've ever had to learn?
The one I haven't been able to learn is not to put off tasks until the very last minute.

What about you would surprise most people?
Not much, I hope.

Who was your scientific mentor?
As a statistics graduate student, I did my dissertation with Paul Meier. He was a pioneer in the development of tools to analyze censored data. The Kaplan-Meier curve is his most well-known contribution to the field.

What professional accomplishment are you most proud of?
I have had the good fortune to volunteer with Interplast (www.interplast.org), an organization that provides plastic surgery to patients in developing countries. I help provide the anesthesia care for children who primarily are having cleft lip or cleft palate repairs. These are children who potentially would grow up as adults with a facial deformity that we just don't see in this country because every child who has it gets it repaired. With Interplast, I have traveled to Nepal, Bangladesh, Timbuktu, and Vietnam.

What advice would you offer to someone contemplating going into your field?
I think the ability to read the medical literature critically demands that every physician have an understanding of some basic statistical concepts —not advanced methods. Almost all "statistical" mistakes are in the interpretation of the particular model that was used or test that was performed on the data of interest.

What's your favorite nonwork activity?
I've been trying over the last two years to get my private pilot's license. It's been a slow go, but I'm almost there. I also like to scuba dive, but I prefer very warm oceans rather than very cold lakes.