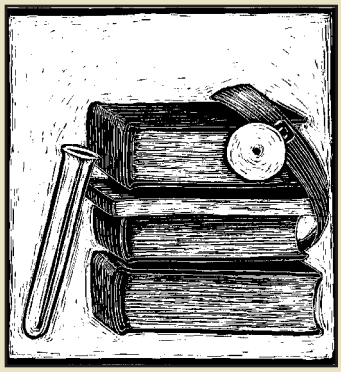
Lifelong learning

By Stephen P. Spielberg, M.D., Ph.D.



SUZANNE DEJOHN

The late Dr. Arthur Naitove understood that curriculum development is not an endpoint but a process.

The one-room schoolhouse is a wonderful symbol of education, and a few one-room schools are even still in operation. But the field of education has changed dramatically since the majority of children attended such schools—and it will keep on changing. So it should go without saying that medical education must undergo constant change, too. One reason is that biomedical knowledge continues to grow exponentially, but the time students can spend in class cannot expand infinitely. As a result, at DMS we are continuously evaluating our medical and scientific curriculum and its outcomes.

Our curriculum for M.D. students focuses on core competencies established by the Association of American Medical Colleges. We aim to equip our students with the medical knowledge and skills, the scientific background, the communication skills, the ability to navigate the health-care system in behalf of their patients, and the empathy and professionalism that they will need to be good doctors. It would be impossible to teach students everything there is to know now, much less, of course, all the knowledge that has yet to be discovered. So we strive not just to teach them facts but to help them develop a thirst and the skills for lifelong learning.

Vast: We know that students come to us with very different educational foundations than they did even a few years ago. The widespread use of computers and the ability to access vast amounts of data on the web (some of it valid, some less so) present huge opportunities as well as real challenges as we seek to enhance learning. Innovative uses of technology have been developed throughout DMS. Dr. Martha McDaniel and her colleagues in the Department of Anatomy have equipped the dissection rooms with computers that allow students to go from direct observation of human anatomy to detailed drawings and then to x-rays, arteriograms, and CT and MRI scans—the means by which they'll observe the same structures in real patients in the future. Drs. Leslie Fall and Norm Berman have developed a web-based pediatric education program called CLIPP; the program walks students through carefully structured cases to supplement what they experience in their clerkships. CLIPP is now being used at over half the medical schools in the U.S. Dr. Petra Lewis and colleagues are developing a similar web-based system for teaching radiology. And Dr. Joe Henderson has for many years been developing DVD teaching tools in the fields of genetics, HIV/AIDS, and bioterrorism. Other faculty have been reorganizing clinics and ward rounds to optimize educational experiences for both housestaff and medical students.

And we are even making changes in how we assess the effectiveness of all these interventions. Dr. David Nierenberg and colleagues are developing tools that assess the outcomes of curricular changes—ensuring that we are turning our medical students into the very best doctors they can be.

Recently, we mourned the death of a dear friend and faculty colleague, Dr. Arthur Naitove. His passing is pertinent to these observations on curricular change because he was a key architect of our current curriculum—yet he understood that curriculum development is not an endpoint but a process. His family established, in his memory, the Dr. Arthur Naitove Fund for Innovation in Medical Education. Innovation, evaluation, and further innovation will be the basis for our ever-evolving curriculum, and we are grateful to the Naitoves, and others who have contributed to this fund, for their support of this work.

Interface: We are also moving forward on several fronts in our graduate programs. A new Ph.D. program—the Program in Experimental and Molecular Medicine—will address the need to train biomedical scientists in translational research, focusing on the interface between bench research and the bedside (see page 9 for more on this program). Similarly, the M.S., M.P.H., and Ph.D. programs in our Center for the Evaluative Clinical Sciences are addressing another kind of translation, from medical knowledge to outcomes and health-care policy.

These efforts are right in line with an initiative of the National Institutes of Health, which has asked medical schools to come up with creative educational programs to train medical investigators skilled in translational research and able to collaborate effectively with scientists across the spectrum. We plan to respond to the agency's call for "clinical/translational" grant proposals and believe Dartmouth is particularly well situated to lead the way in this area.

Plans: And in all of our educational plans, we are fortunate to be part of Dartmouth College and to be able to take advantage of programs such as the Dartmouth Center for Advanced Learning (DCAL). We hope to partner with DCAL in designing, implementing, and evaluating all this educational change. We also see promise in joint learning beyond the walls of Dartmouth, thanks to technology. We can envision linking together our educational activities in the Upper Valley and beyond with more effective videoconferencing. We also hope to establish better links with our partners around the world, including at the Muhimbili University College of Health Sciences in Tanzania (see page 12 for more on this initiative).

If the world truly has become "flat," as Thomas Friedman so effectively argued in his best-selling book about globalization, then medical and scientific educators at Dartmouth have an opportunity to make the world a smaller and healthier place. Maybe that little one-room schoolhouse isn't such an outmoded symbol after all. ■

"For the Record" offers timely commentary from the dean of Dartmouth Medical School. Spielberg, a pediatrician and a pharmacologist, is in his third year as DMS's dean.