Medical Education Under Fire

An assessment of medical education by a panel of leading educators recalls Pogo's discovery that "we have met the enemy and they is us"

Rote learning and an emphasis on science that virtually excludes the humanities characterizes much of medical education in the United States and Canada. Furthermore, teaching, which is generally heavy on lectures, is often anything but exciting. "At present, most medical students are taught by methods that make them passive recipients of information rather than active participants in their own intellectual growth," according to a recent report from the Association of American Medical Colleges (AAMC). In a blunt assessment of medical education, an AAMC panel headed by Steven Muller, president of The Johns Hopkins University, challenges medical schools to change not only the way they teach students but also the criteria by which they select them for admission.

The panel's view of the value of current teaching methods is summed up in the statement that "Most medical schools should reduce considerably the time scheduled for the instruction of medical students," in order to leave time for the kind of independent study that prepares a person for a lifetime of learning. The panel, which spent 2 years gathering information about 127 medical schools in the United States and the 16 in Canada, has presented a stark picture of what might be called schools for technocrats in its report on "Physicians for the Twenty-First Century." * New physicians, they note, seldom enter medical school with much education in the humanities. In fact, only 10 percent of entering students are nonscience majors as college undergraduates. Once they get to medical school they may be subjected to hundreds of hours of lectures during the first two preclinical years, " . . . most medical students are taught by methods that make them passive recipients of information rather than active participants in their own intellectual growth," the report states. The number of lecture hours ranges from 468 to 1639, with little evidence that more is better.

The AAMC panel makes some unambiguous comments about the need for change.

For example, on the subject of undergraduate education, "The Panel does not choose to invoke the hysterical hyperbole of crisis; nor do we wish to impugn the high quality of much that is being done. However, we perceive a continuing erosion of general education for physicians, an erosion that has not been arrested but is instead accelerating." The panel suggests that would-be doctors spend less time on science courses in college. "To appreciate the many dimensions of human experience requires informed reflection upon the literature, the philosophy, and the arts that are included in the cultural heritage of all people in our society," it said, while observing that the medical school admissions process does little to encourage students to risk taking poetry rather than biochemistry in college.

Harvard University Archives

Francis Weld Peabody—Harvard

Was raising questions about medical education in 1927.

In a document prepared for the AAMC panel, officials of Johns Hopkins captured the way premed students have learned to look at college: "For them, college is not a place to sharpen critical skills, investigate options, and experience intellectual stimulation and growth. It is a mine field to keep them from achieving their goal of entering medical school." Although some medical schools, Hopkins among them, are trying a variety of new admissions plans, it remains true that the key to acceptance lies in a very high grade point average (76 percent of those accepted for the class of 1983–1984 had an average of 3.30 or higher) and a high score on the Medical College Admission Test (MCAT), which the AAMC itself administers. As every medical school applicant can figure out, the MCAT will have questions about physics and biology and math, but none about William Butler Yeats. Thus, the system itself perpetuates the very circumstance that it identifies as a problem.

The forces that create a demand for a strong science background in college are similar to those that lead to an emphasis on memorizing facts in medical school. Testing is one of them. Because most schools incorporate the two-part test of the National Board of Medical Examiners as part of their own grading system, an additional incentive to learn with test-passing as the principal goal is created. These National Board exams are multiple choice tests that show what a student memorized during the preclinical and clinical years before graduation.

The increasing volume of information a good physician should be expected to know is another force that drives learning by lecture. Every speciality argues, often persuasively, that a student's education cannot be considered complete if it is not part of the curriculum. Doctors must know something about genetics, and pharmacology, and neuroscience, and on and on as the schedule of required lectures grows longer and longer.

The problem in a discipline as fundamental as biochemistry is illustrative. Kurt E. Ebner of the University of Kansas Medical Center summed it up for the AAMC when he said, "New knowledge is accumulating rapidly in the areas of molecular genetics, molecular endocrinology, neurochemistry, and structural immunochemistry. Medical school departments of biochemistry are struggling with an information overload. [Stressing] the basic language and facts at the expense of problem-solving . . . has resulted in too much memorization, copious handouts, and the note-taking service. The laboratory has all but disappeared."

So, it would seem, has the teacher. According to AAMC figures, the trend toward handling lectures with a "parade of stars," each lecturing on his or her own specialty, only adds to the atmosphere of impersonal and passive learning. August G. Swanson of the AAMC reports that the average number of lecturers in a given biochemistry course is 15. Clarence S. Weldon of Barnes Hospi-

*Report of the panel on the General Professional Education of the Physician and College Preparation for Medicine. Available from the Association of American Medical Colleges, One Dupont Circle, NW, Washington, D.C. 20036. The study was supported by the Henry J. Kaiser Family Foundation.

tal in St. Louis told the AAMC panel that "The medical school curriculum has degenerated into a four-year 'peepshow.' " Moreover, the quality of teaching is not enhanced by the low status it holds in academic medicine where research, the education of graduate students, and the generation of income all confer higher prestige.

The relationship of faculty to students—or lack of relationship—that is often missing in the basic medical sciences is also inadequate on the clinical side, the AAMC said, making such seemingly obvious recommendations on the subject as this: "Those responsible for the clinical education of medical students should have adequate preparation and the necessary time to guide and supervise medical students during their clinical clerkships." Urging a return to the days when a mentor relationship was common, the panel declared that "The practice of having a large number of faculty members, each of whom spends a relatively short period of time with medical students, should be examined critically and probably abandoned."

The AAMC represents all 127 U.S. medical schools as well as 327 teaching hospitals and its policy councils carry considerable weight. The panel's statement that it does not "choose to invoke the hysterical hyperbole of crisis," is not entirely consistent with the tone of its report. Anyone reading "Physicians for the Twenty-First Century" could reasonably say that medical education is, indeed, in a state of crisis and that the likelihood of producing physicians who both are technically competent *and* compassionate is slim.

But historical perspective provides some reassurance. Although the issues being raised are valid—and serious—they are not new. Medical educators, it seems, have deplored the state of medical education for decades. Fear that students are being taught too many facts at the expense of understanding has been the focus of concern right along. One of the best examples comes from the AAMC itself which published a study in 1932 that sounds remarkably like this year's report.

An AAMC summary of its 1932 study shows the extent to which "Physicians for the Twenty-First Century" is an echo of the past. A plea that medical students be taught to think rather than memorize is made with a call that medical education be freed from its "present rigidity and uniformity." It criticized the emphasis that was placed on teaching students with an eye to passing multiple-choice examinations and observed that good doctors should have a broad liberal arts education in college, not one narrowly confined to premed science courses. The 1932 study deplored "cookbook" methods of teaching and opined that students are required to spend too many hours in courses where they are stuffed with "too many details, often of temporary, miscellaneous, and inconsequential value. . . . "

Going back a little further, these same issues were cogently presented in 1927 in an article in the *Journal of the American Medical Association*† by Francis Weld Peabody, one of the stellar Harvard physicians of the era. Said Peabody, whose article was drawn from a lecture he gave every year to medical students, "The most common criticism made at present by older practitioners is that younger graduates have been taught a great deal about the mechanisms of disease, but very little about the practice of medicine—or, to put it more bluntly, they are too 'scientific' and do not know how to take care of patients."

Peabody raised a telling point when he said, "One is, of course, somewhat tempted to question how completely fitted for his life work the practitioner of the older generation was when he first entered on it, and how much the haze of time has led him to confuse what he learned in the school of medicine with what he acquired in the harder school of experience." Although everyone wants humane and caring physicians, no one wants them uninformed, so medical school is for learning medicine. "To begin with," Peabody declared, "the fact must be accepted that one cannot expect to become a skillful practitioner of medicine in the 4 or 5 years alloted to the medical curriculum. Medicine is not a trade to be learned but a profession to be entered."

Where then does that leave us? Perhaps with nothing as much as the observation that the problems are inherent to the very nature of medical education and just as worth worrying about now as they were half a century ago.

Peabody himself predicted the pattern of reexamination that is now taking place and called it "fortunate" that systems of education are "constantly under the fire of general criticism" from one source or another. If criticism is not coming from the outside, "the medical profession itself may be counted on to stir-up the stagnant pool and cleanse it of its sedimentary deposit." Just so.

—**Barbara J. Culliton**

†*JAMA*, 19 March 1927. Reprinted in *Connecticut Medicine*, January 1968, vol. 32 (No. 1).

Big Boost for AID Population Budget

Congress has passed an emergency spending bill that includes $290 million for overseas population assistance in the next fiscal year. This is the largest single increase the Agency for International Development has had for its population program—$50 million over last year, and $40 million over the presidential request.

So far, it appears that a crisis in U.S. support of population programs, threatened by the Administration's tough new antiabortion stance, has been avoided. (Government lawyers are still puzzling over the meaning of the new policy.) Continuing American support for the United Nations Fund for Population Activities has been assured by an earmarking provision, and the accompanying resolution asserts that "no funds shall be denied" to nongovernmental organizations whose activities are conducted in accordance with U.S. laws. In other words, there is no prohibition on funds to organizations that sponsor family planning programs that include abortion services.

Legislators who oppose abortion have apparently been satisfied by formal reiterations of existing U.S. policy—that is, no U.S. money will go for abortion services, and the policy will be enforced by ensuring that American contributions to international agencies are kept in separate accounts.—**Constance Holden**

Ohio State Offers to Buy Back Its Telescope

In an effort to prevent its radio telescope from being dismantled to make way for a golf course, Ohio State University has offered $54,000 to buy the land on which the instrument stands. The offer is the latest move in a struggle to save the telescope that began in late 1982, when Ohio State's neighboring seat of higher learning, Ohio Wesleyan University, abruptly sold the land to a country club as part of a large real estate deal. Ohio Wesleyan owned the land and operated the instrument jointly with Ohio State.