

Medical Education Digest



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Physicians of the Future



Unless significant changes are made, a career in medicine may not be affordable or attractive, and those from lower socioeconomic groups may not pursue such a career. That was the conclusion of a working group of the Association of American Medical Colleges (AAMC) last year in its final report that examined medical student costs and indebtedness.

Michael E. Whitcomb, M.D., editor of *Academic Medicine*, which is the journal of the AAMC, believes that the cost and duration of medical education already is adversely impacting the efforts of medical schools to achieve greater diversity. He reports that sixty percent of matriculants come from the top quintile of earners. He further asserts that the realistic way to change this trend is to shorten the duration of medical school

and decrease the cost of medical education. Dr. Whitcomb reminds us of the 1988 article in *Health Affairs* written by Robert Ebert, the former Harvard Medical School dean, and health economist Eli Ginzberg that argued for the shortening of the medical school curriculum by one year. They suggested that the final year of the curriculum be integrated into the first year of residency. As a result, only six years would be needed for the preparation of a general internist or a family physician.

In the 1970s, almost a fourth of the existing medical schools had three-year programs as a response to federal incentives. These were discontinued mainly due to the belief of basic-science faculty members that there was inadequate time for their disciplines. However, Dr. Whitcomb states no evidence showed that a shortened program disadvantaged students in such programs. He believes that the time has come for medical schools to have more flexibility in their curriculum, allowing students who wish to shorten the duration of their medical studies by one year. This would also be a way to reduce the costs they incur for medical education and lessen the impact of such costs on their long-term financial status.

(Whitcomb ME. "Who Will Study Medicine in the Future?" *Academic Medicine*. 81:205-206; 2006.)

"Medical Education Highlights for Primary Health Care"

No More Doctors Needed



A study on the need for the production of additional physicians was conducted by researchers at Dartmouth Medical School through the support of a grant from the National Institute on Aging and the Robert Wood Johnson Foundation. The study concluded that efficient use of physicians would make the supply of medical students and physicians adequate until 2020. Dartmouth physician David Goodman, M.D., at the Center for the Evaluative Clinical

Sciences states that spending millions to expand the capacity to train more physicians will create an oversupply and will divert dollars from funds designed to improve the health of patients.

Dr. Goodman and his team advocate instead for the creation of large-group practices such as the Mayo Clinic. The Mayo Clinic, he asserts, uses fewer doctors and fewer resources in managing patients with chronic diseases when compared to other academic medical centers. He indicated that the Mayo Clinic uses an average of 9 physicians per 1,000 chronically ill patients compared to 28.3 at New York University Medical Center during the last six months of their lives. Quality of care is more important than the quantity of care, he reports. In addition, he found there are parts of the United States where people with severe chronic illness receive more care than areas with fewer physicians per capita. In fact, he concludes that patients receiving more doctor visits and treatments may actually be harmed by unnecessary care. According to Dr. Goodman, if patient care was more efficient, it would cost less and patients would be less subject to care that could do more harm than good.

(Goodman D. "Efficiency, Not More Doctors, Is Prescription for the Future." *Health Affairs*. March/April; 2006.)

E-Learning in Medical Education



A discussion by medical faculty from the University of Miami Miller School of Medicine and Mount Sinai School of Medicine states that e-learning is at least as effective as traditional instructor led classes such as lectures. However, students do not see e-learning as replacing traditional instruction but complementing it. The faculty discussants believe e-learning allows for

individualization (adaptive) and for enhancing the interaction of learners with others (collaborative). This form of learning technology transforms the role of the teacher. E-learning can be integrated into medical education, resulting in a shift toward the model of adult learning in which faculty members are no longer just content distributors but rather facilitators of learning and assessors of competency.

The authors define e-learning as Web-based, online learning, distributed learning, computer-assisted instruction, or Internet-based. The most important advantage of e-learning is its increased accessibility to information (ability to find what is needed when needed). Other e-learning attributes include ease in updating content (easier than with printed matter), personalized instruction, ease of distribution, distribution of standardization of content, and accountability. The availability of multimedia allows the learner to select from many media options, adapting to their learning diverse styles. Furthermore, evidence shows that computer-based instruction resulted in greater efficiency in learning and better retention. Other studies show that in both non-medical and medical settings, students consistently indicate considerable satisfaction with e-learning. Not insignificant is the finding that e-learning can be as much as 50 percent less costly than traditional instruction.

(Ruiz JG, Mintzner MJ, Leipzig M. "The Impact of E-Learning in Medical Education." *Academic Medicine*. 81:207-212; 2006.)



Allied Health Preparation for Premedical Studies

Of the 60,000 high school graduates who each year chose premedical studies, only about a quarter eventually enter medical school. Gilbert P. Hageman, Ph.D., associate dean at the College of Allied Health Sciences for the University of Cincinnati, suggests that premedical students consider majoring in subjects found in schools of allied health. Among these are genetic counseling, dietetics, medical imaging, pre-physical therapy, respiratory therapy, speech and language pathology, or clinical laboratory sciences. In addition to acquiring the traditional premedical requirements, in some of these fields, students spend time in the hospital laboratory or other clinical environments.

There are other advantages to this choice as well. Those students not successful in gaining entrance to medical school have a built-in

second career. Others who cannot gain entrance the first or second year they apply will be able to practice the allied health profession for which they qualify before they are successful in earning a medical school acceptance. Another advantage is that medical school applicants who complete an allied health premedical program will have had a real-world experience in health care before they enroll in medical school. Premedical allied health majors who ultimately attend medical school may also develop a greater respect for other members of the health care team. Dr. Hageman recommends that allied health premedical majors be given preferential treatment in the medical school admissions process.

(Hageman GR. "Redefining the Premedical Major." *Academic Physician and Scientist*. 8-9; February 2006.)

Improvements in the First Year of Medical School

Often lacking from the first year of medical school is preparation in how to succeed in the curriculum. Michael L. Rainey, Ph.D., founder of the MEDPREP Program at Southern Illinois University, and more recently associate dean for academic affairs at Loyola University, states that most students think medical school is just like college except for a faster pace and more material to learn. Few believe they might fail a medical school course in the first semester of the program. In fact, about a third of the class ultimately contemplates the possibility of failing a first-semester course. In many medical schools, students start with concurrent courses in anatomy and biochemistry. Faculty members teaching these courses typically act as if their course is the only one the student is taking, making expectations often unreasonably high. Some of these students become sleep deprived, are unable to establish eye contact, and show clear signs of distress or even depression.



Dr. Rainey proposes that first-year orientation programs be extended to two weeks. The second week would be reserved for the acquisition of study skills from experts, note taking, study habits, test preparation, post-test analysis, and stress management. It would also include overviews of the classes and laboratories. In addition, the first year should be extended by at least four-to-six weeks without increasing course content to allow more time for each course, permit mid-semester breaks, allow for study time before tests, and allow for remediation time. He also suggested biochemistry be part of the premedical curriculum. Furthermore, he encouraged that there be more clinical opportunities in the first year, including the shadowing of residents and conducting discussions about ethics and professionalism to reinforce the reasons they chose a career in medicine.

(Rainey ML. "Some Modest Proposals for Improving the First Year of Medical Education." *Academic Physician & Scientist*. 7; February 2006.)

Evaluation of Technology-Delivered CME

It is not adequate to simply ask physicians attending continuing medical education programs if they like the presentation, nor is it acceptable just to document their attendance. We must also look at how CME programs influence physician performance, habits, and health care outcomes. This data will also help to improve CME on a continuous basis. Offering CME electronically provides the option of scheduling programs on demand through the use of Internet and email. Kirkpatrick has developed four levels of evaluation in a model that was developed in 1959 and is being suggested for use in CME.

These levels are

- Level 1: **Results** - Has CME influenced patient care and/or clinical practice? (Post-CME survey inquiring about the effects of programs on practice)
- Level 2: **Behavior** - Has knowledge and/or skills been transferred to practice? (Post-CME survey seeking to measure actions and choices)
- Level 3: **Learning** - Did attendees learn what they were supposed to? (multiple-choice exams and practical tests)
- Level 4: **Reaction** - Did attendees like the program?

(Rossett A. and McDonald JA. "Evaluating Technology-Enhanced Continuing Medical Education." *Med Educ Online*. 11:4 (<http://www.med-ed-online.org>); 2006.)

Communication Skills in the Surgery Clerkship

A third-year required surgery clerkship at New York University School of Medicine included three two-hour workshops that addressed communication issues in surgery. These included delivering bad news, patient education, and shared decision-making. The sessions included a 30-minute introductory lecture, 15-minute group discussion, 15-minute video critique, and 45-minute standardized patient exercise. This exercise included the standardized patient, student peers, and faculty. The sessions ended with a 15-minute summary. After seven required clerkships that NYU students must complete, this led to a 32-hour communication skills curriculum integrated into each of these clinical experiences.

Clerkship	Length in Weeks	Content	Strategies	Hours
Medicine	10	<ul style="list-style-type: none"> •Alcoholism •Cultural Competency •End-of-Life Care •Difficult Patients •Clinical Reasoning 	<ul style="list-style-type: none"> •Bedside Rounds •Structured Materials •Direct Observation and Feedback 	7.5
Surgery	10	<ul style="list-style-type: none"> •Patient Education •Bad News •Informed Consent •Shared Decision Making 	<ul style="list-style-type: none"> •Small Group Seminar •Videotape Review Practice with SP •Direct Observation and Feedback 	6
Ob-Gyn	10	<ul style="list-style-type: none"> •Sexuality •Domestic Violence •Genetic Counseling •Patient Education 	<ul style="list-style-type: none"> •Small Group Seminar •SP (Three Cases) Rated OSCE 	6
Neurology	10	<ul style="list-style-type: none"> •Dementia •Headaches •Seizure 	<ul style="list-style-type: none"> •Group Objective Structured Exams 	2
Ambulatory Care	10	<ul style="list-style-type: none"> •Behavior Change 	<ul style="list-style-type: none"> •Small Group Seminar with Role Playing 	1.5
Psychiatry	10	<ul style="list-style-type: none"> •Hostile/Violent •Seductive Patient •Depressed/Suicidal •Anxious Patient 	<ul style="list-style-type: none"> •Small Group with Role Playing •Practice with Standardized Patient •Direct Observation 	6
Pediatrics	10	<ul style="list-style-type: none"> •Asthma Patient Education •Developmental History •Adolescent 	<ul style="list-style-type: none"> •Three-case Faculty OSCE and Debriefing 	3



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