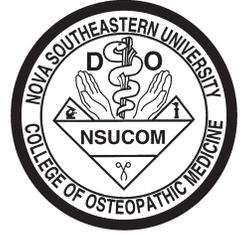


# Medical Education Digest



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## Nontraditional Medical Students Being Admitted on the Rise



**W**hile the mean age of medical students today is about 24, approximately 10 percent are 27 years of age or older. Today, medical students are admitted in their 30s or 40s, and in addition to having families, were in other careers. Fifty percent of the 140 students who enter Mount Sinai Medical School in New York were non-science majors. Of these, one fourth were in the school's special Humanities in Medicine Program.

These students tend to be older and realized that it is not necessary to have a biology major to succeed in medical school. The former dean of the Mount Sinai Medical School and new dean at the new Hofstra University School of Medicine reports that these nontraditional students are more self-confident. They bring an integrative and adult vision of the world of medicine, excel in the clinical environment, and are more comfortable dealing with people.

Leslie Kahl, dean of students at Washington University School of Medicine in St. Louis, Missouri, indicated that they are more focused and goal-oriented. They also help traditional students envision opportunities for their future. However, it was pointed out that there

are some disadvantages to admitting older students to medical school. Among them is the possibility of not having the same reserves to draw on as their younger, more narrowly focused counterparts. Another is the fact that their greater life experience may make it harder for them to conform to the hospital pecking order.

The dean of Hofstra University School of Medicine indicates that some admissions committees may question whether admitting an older student is a good use of a limited number of places in the class. But he then brings up that while women physicians tend to work less hours than men, does that mean medical schools should not admit women?

*(Jauhar S. From all walks of life—nontraditional medical students and the future of medicine. New England Journal of Medicine. 359(3). 224-227; 2008.)*

*“Medical Education Highlights for Primary Health Care”*

## Continuous Certification in the Osteopathic Profession



All specialty boards in osteopathic medicine were directed by the American Osteopathic Association (AOA) Board of Trustees to offer a time-limited certification in July 1992. Even those physicians who before that time had received certification that was valid for life were eligible to sit for recertification examinations. This

reflects the attitude that testing a specialist once in his or her career was inadequate and that recertification was important to protect the public by assessing physician competence from time to time. This also included concern about the quality of health care, medical errors, and patient safety as pointed out by the Institute of Medicine in 2000.

Osteopathic medicine now has 18 AOA-approved certifying boards—the first of which was the American Board of Radiology established in 1939. One year later, the American Osteopathic Boards of Surgery, Ophthalmology, and Otolaryngology, as well as Pediatrics, were established. The last board to be established was in 1982—the American Osteopathic Board of Preventive Medicine. As of December 2007, there were 20,985 osteopathic physicians having certification from the AOA, with 984 certificates being issued in 2007 in specialty and subspecialty areas.

Every three years, those holding a certificate from an AOA specialty board are required to complete at least 50 credit hours of continuing medical education in their specialty.

*(Ayres RE, Scheinthal S, Ramirez AF, Bell EC. Osteopathic certification evolving into a continuous certification model. Journal of the American Osteopathic Association. 108 (3. 159-165); 2008.*

# Sharks

## Analyzing the Need for Premedical Education Changes



Jules L. Dienstag, M.D., dean for medical education of Harvard Medical School, states that current premedical education requirements are so removed from human biological principles that they offer little value to premedical or advanced human biology. He also questions whether a full year of organic chemistry is needed to study biochemistry.

Furthermore, premedical science courses do not prepare medical students for the sciences fundamental to medicine at the advanced molecular level. In addition, it should be expected that students preparing for medical school need to be better prepared for an era when informatics and genomics are revolutionizing medical science and health care. Students should be stimulated to synthesize information across disciplines defying the “sacred compartmentalization into departmental silos.”

A Harvard Medical School working group reassessed medical school admissions requirements advocating for increased rigor on more biologically relevant interdisciplinary courses. These courses should foster analytical thinking, quantitative assessment, and analysis of complex systems in human biology. The current chemistry sequence in premedical education should be two years providing a foundation in general chemistry, organic chemistry, and biochemistry. This would allow completion of introductory biochemistry before medical school.

The second semester of organic chemistry should be integrated with the basic principles of biochemistry, with an emphasis on protein structure and function. College math should be biologically relevant without attention to deriving theorems having little relevance to biology. There should be groundwork provided in probability and statistics to understand scientific and medical literature. Furthermore, time needs to be given to engage in liberal arts study, including literature, arts, humanities, and social sciences with a foundation in analytical writing and communications skills.

*(Dienstag JL. Relevance and rigor in premedical education. New England Journal of Medicine. 359(3). 221-224; 2008.)*

# Job Satisfaction of Faculty Members

A survey of how basic science and clinical faculty members at 10 medical schools feel about their medical school positions was conducted by the Association of American Medical Colleges (AAMC) and the Collaborative on Academic Careers in Higher Education in the spring of 2007. The survey found that 62 percent of faculty members who responded were either satisfied or very satisfied with their schools, and 68 percent were satisfied with their departments. More than 75 percent were satisfied with the autonomy they had, while 80 percent felt the quality of patient care was also satisfactory. However, only 29 percent felt their work was appreciated by the dean.

Most of the faculty satisfaction was associated with colleagues, while there was less satisfaction related to the institutional environment, including lack of communication from administration. While 78 percent indicated they would choose an academic career again, only 65 percent said they would do so at the institution in which they were working. The AAMC recommended that medical schools regularly collect data regarding faculty satisfaction to help make their institutions better places for faculty to work.

*(U.S. medical school faculty job satisfaction. Analysis in Brief. Association of American Medical Colleges. 8(5); July 2008.)*

# Traditional Lectures Vs. Computer-Assisted Instruction in Dermatology

The University of North Carolina Medical School performed a study of 73 medical students to determine whether there was a difference in medical students being able to recognize the morphology of dermatological entities, learn relevant terminology, and perform a skin examination using an online tutorial compared to the use of traditional large-group lectures. Approximately half of the group (36 students) attended a 30-minute lecture but were not provided access to the tutorial. The other half had access to the tutorial but not to the traditional lecture. Students were placed in one of the two groups through random selection. Both groups of students were responsible for the same material. All 76 students were given the same examination requiring them to view color images of skin lesions, to which they had to assign the best descriptive term such as papule, cyst, pustule, telangiectasia, petechia, and erythroderma.

While the mean score for those who took the tutorial was 65.5 percent versus 59.6 percent, there was no statistically significant difference between the two groups. Thus, it was concluded that while the study was small and brief in duration, the tutorial was as effective as the traditional lecture method.

*(Jenkins S, Goel R, Morrell DS. Computer-assisted instruction versus traditional lecture for medical student teaching of dermatology morphology: a randomized control trial. Journal of the American Academy of Dermatology. 59:255-259; 2008.)*

# Learning Effective Prescribing Practices

For the past 10 years, the Association of American Medical Colleges (AAMC) has been developing the Medical School Objectives Project (MSOP) to enhance the relevance and improve the quality of medical education. A July 2008 AAMC report provided recommendations from academic and industry experts in drug therapy as well as pharmaceutical research and development to address the following:

- What should medical students learn in order to become knowledgeable, safe, and effective prescribers of medication?
- What is the ideal environment for learning about the optimal prescribing of medications?
- What kind of educational experiences would allow students to achieve these learning objectives?

The report included medical knowledge, patient care, interpersonal and communication skills, professionalism, problem-based-learning and improvement, and systems-based practice. The MSOP provides an outline of what such a core curriculum might look like. It reported that a particularly effective approach to achieving the desired competencies is to offer structured instruction in clinical pharmacology/therapeutics in year four of medical school in addition to core instruction during the medical basic pharmacology course in year one or two. Society expects that at the beginning of residency, graduates of medical schools should prescribe medications safely and effectively, and with the appropriate skill and knowledge.

*(Contemporary issues in medicine: education in safe and effective prescribing practices. Medical School Objectives Project Report X. Association of American Medical Colleges July 2008.)*

# NYC Health and Hospital Corporation Offshore Medical School Agreement

**S**t. George's University School of Medicine, a profit-making institution in the Caribbean, signed a 10-year, \$100 million agreement providing up to 600 medical students from the Grenada institution with clinical clerkships. The training will be provided in the 11 New York City public hospitals. Medical schools in New York City fear this will create a scarcity of third- and fourth-year clerkships, and in order for them to compete for clinical training sites for their students, they may have to increase their tuitions. St. George's will be providing these hospitals with \$400-425 weekly for each student and an annual fee of \$50,000 to those hospitals that take at least 24 students. Traditionally, the NYC medical schools sent students to the city hospitals without charge, although recently some such as NYU began paying a single fee of \$250,000. NYU indicated it would cost the university \$2.8 million a year if the \$400 per week per student formula was imposed on it. St. George's admits about 1,000 students yearly compared to NYU with 160.

In 1985, the State of New York barred St. George's students, indicating the school's program was too fragmented. However, after making changes, the state's ruling was reversed. The medical director of Bellevue Hospital, who defended the St. George's arrangement, said some of that hospital's best physicians went to medical school in Mexico and then came in through the back door. An editorial in the *New York Times* suggests that NYC medical schools may find themselves having to bid for training sites and having to raise their tuition by \$20,000 to pay for access to clinical clerkships.

*(Hartocollis A. New York medical schools balk at deal given to Caribbean university. New York Times. C12-13; August 5, 2008 and Editorial. A22; August 7, 2008.)*

## Using Virtual Patients at Med Schools

**C**omputer-based simulations or virtual patients complement clinical training. They fill gaps in clinical clerkships by providing students experiences with diseases they may not experience during a two- or three-month period. The longitudinal care of patients with a chronic illness like diabetes over nine years, for example, can be simulated in several hours. In addition, they can be used to teach topics that are as diverse as communication skills and bioterrorism. Studies have shown that virtual patients are not only well received but also improve both cognitive and behavioral skills better than traditional teaching methods. However, because virtual patients employ complex programming and multimedia, they require considerable resources, which are prohibitive to those institutions with substantial educational technology.

A Harvard Medical School and Beth Israel Deaconess Medical Center study in 2005 acquired information about virtual patient simulation from 108 out of 142 U.S. and Canadian medical schools that were contacted. Of those that responded, 82 (or 76 percent) indicated they were not using virtual patients. The study obtained information from 26 (or 24 percent) of the schools through their completion of a series of questions. Twelve medical schools entered 103 cases with information about 111 virtual patient simulations, or an average of 8.6 cases for each of these schools. Most of the virtual patient programs were Internet accessible, with half supported by more than one funding source, and included elements of learner-centered instruction. The survey indicated that collaboration in this technology is widely endorsed by the medical schools.

*(Grace H, Reynolds R, Candler C. Virtual patient simulation at U.S. and Canadian medical schools. Academic Medicine. 82(5): 461-451; 2007.)*



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