'The Road Less Traveled'

Nontraditional Students Can Flourish in Medical School, Primary Care, Study Finds

By Barbara Bein

Posted: 9/22/2010, 2:30 p.m. -- Successful matriculation through medical school can be achieved through paths other than the traditional undergraduate premedical education track with its courses in organic chemistry, physics and calculus. In fact, medical students who major in the humanities or social sciences can perform just as well as those who enter medical school with traditional premed majors. And, perhaps not surprisingly, humanities majors are more likely to choose primary care specialties. Those are the key findings from a study published in the August Academic Medicine.

According to the study by researchers at the Mount Sinai School of Medicine of New York University in New York City, nontraditional and traditional premed majors had no significant differences in clerkship or commencement honors or in graduating with distinction in research.

The nontraditional majors did, however, gravitate to residencies in primary care and psychiatry and away from surgical subspecialties and anesthesiology.

"It is clear that relieving students of the burdens of traditional premed requirements in college will provide them the opportunity to pursue multiple and more diverse paths to success in medical school," the researchers said.

According to the study, medical education leaders have long questioned the value of traditional premed requirements for practicing physicians or scientists, but little has been done to challenge the prevailing wisdom.

"The belief that the premed science background -- including one year each of organic chemistry, physics and calculus -- is the best form of student preparation for medical school persists, and admissions committees' reliance on exceptional MCAT (Medical College Admission Test) scores prevails," the researchers said.

But students without such preparation can perform just as well, they found.

MOUNT SINAI'S HUMANITIES AND MEDICINE PROGRAM

The researchers reviewed the academic performances of 691 medical students who graduated from Mount
Sinai between 2004 and 2009. The graduates included 85 nontraditional students who entered the medical school through its Humanities and Medicine, or HuMed, program.

HuMed students are accepted into the program during their sophomore year and, after completing their majors in the humanities or social sciences, are guaranteed admission to the medical school. They are not required to take traditional premed coursework, and they do not take the MCAT. However, they must maintain a high overall grade point average and earn a grade of B or better in biology and general chemistry.

During the summer following their junior year, the students spend eight weeks at the medical school engaging in clinical service rotations, seminars in medical topics and an abbreviated course in organic chemistry and physics.

According to the study, there were no statistically significant differences between the 85 HuMed and the 606 other students on United States Medical Licensing Examination, or USMLE, Step 1 failures; on achieving exceptional performance on the Comprehensive Clinical Assessment at the end of the third medical school year; on honors grades in clerkships; or on rankings in the top 25 percent of the class.

However, there were some significant differences between the two groups. HuMed students had lower USMLE Step 1 scores, they earned a higher number of community service Medical School Performance Evaluation points, and they were more likely to take a nonscholarly leave of absence for academic or personal reasons.

Overall, the researchers said, HuMed students "have not missed some essential preparatory ingredient by acquiring an extensive liberal arts college education at the expense of the traditional premed science requirements and the MCAT."

In fact, they may experience some gains, including a greater interest in fields with more interpersonal connections between the patient and the physician, they noted.

Perry Pugno, M.D., M.P.H., director of the AAFP Division of Medical Education, said the results "validate the growing appreciation that there's more to being a physician than being a good 'scientist.'

"Those who are more interested in the social sciences may indeed feel more comfortable dealing with interpersonal competencies, for example, rather than 'hard science' competencies," he told AAFP News Now. "Recruiting for a more diverse medical school population will not hurt the quality of medical professional being produced and may indeed result in the recruitment of more people-oriented physicians."

DIFFERENT PATHS TO FAMILY MEDICINE

AAFP News Now spoke with two family physicians who took different paths to the specialty who say their humanities backgrounds have helped them build relationships with patients and provide compassionate care. They point out, however, that they did take additional time in college programs to complete science courses.

Heidi Meyer, M.D., the resident member-elect of the AAFP Board of Directors, is a third-year resident in the University of Arizona Family Medicine Residency in Tucson.

Meyer originally majored in theater at Northwestern University, Evanston, Ill., and had a career in musical theater that included a stint in the Broadway company of "Miss Saigon." She returned to college for premedical studies -- which included calculus, physics, organic chemistry and taking the MCAT -- and then entered the University of California, San Diego, School of Medicine.
"There is really nothing from my career in the performing arts that I don't use in my medical career," Meyer told AAFP News Now. "The ability to communicate well is the most important skill in medicine, and systems-based practice -- the ability to call a consult and work well with others -- is a basic competency in residency."

Meyer said her experience in connecting to people and audiences, as well as her broad-based education, led to her choice of family medicine. She said she believes that she and others who have followed nontraditional routes to medical school have excellent backgrounds for primary care.

"I am convinced that the primary care shortage would be reversed in a decade if we changed how we admit medical students and who we accept to medical school," she said.

Jennifer Middleton, M.D., M.P.H., is the director of practice improvement at the University of Pittsburgh Medical Center, or UPMC, St. Margaret Family Medicine Residency Program. She's also the assistant medical director at the UPMC St. Margaret Bloomfield-Garfield Family Health Center.

Middleton was an English major at Ohio State University, or OSU, in Columbus who took a fifth year to complete a second major in chemistry and then entered OSU's College of Medicine.

She told AAFP News Now that her English background and interest in people and relationships led to her choice of family medicine.

"When you get upper-level English classes and you have to critically analyze the culture in which the (book) was written and the literary canon, those skills translate into medicine. You have patients who come in with undifferentiated complaints, and you have to place (those complaints) in the context of their lives. Those critical thinking skills taught me how to think about patients and about solving problems.

"Patients want you to know them as human beings. To have that curiosity about people helps you to treat them better," Middleton said.

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