

New Curriculum Maintains Traditions

By: Judi Engle

Although undergraduate medical education remains the intense four years that today's practicing physicians recall, fondly or otherwise, Wright State University School of Medicine is implementing a new curriculum. The revision adds components to better prepare students for tomorrow's practice environment but carefully preserves some important traditions.

The first two years of medical school have traditionally focused on basic science knowledge and the latter two applied that knowledge in a clinical setting while the student developed clinical skills. Wright State was on the forefront of innovation when it developed Introduction to Clinical Medicine (ICM), a two-year clinical course that began the first week of medical school. ICM still acquaints students with the basics for getting a thorough medical history and conducting a comprehensive physical exam. It still provides students one day a week to learn the "patient side of things." The concept, a Wright State tradition, also has gone mainstream, adopted by other medical schools across the country.

Under the direction of Bruce Binder, M.D., Ph.D., associate professor and vice chair of predoctoral medical education in family medicine, ICM has added a new component—simulated patients. Simulated patients are highly trained individuals who role play certain disease states and carefully observe technical skills and communication styles. Students spend about 20 minutes with the "patient" and then receive about 5 minutes of immediate feedback from him or her. The simulated patient points out areas for improvement in both communication and clinical skills. After the interaction, the student takes a short test that includes basic science and clinical components; the simulated patient "grades" the interaction through a similar short test. The process has

received high praise from students for its teaching effectiveness and is incorporated into each year of the curriculum. "We wanted to do more than a paper and pencil test of knowledge; we wanted to assess skills," explains Albert Langley, Ph.D., associate dean for academic affairs. The Simulated Patient Program has 37 trained individuals and includes a trainer and patient coordinator.

The revised curriculum also better integrates the basic and clinical sciences and places new emphasis on small group learning. Clinical faculty now teach in the basic science years, even in gross anatomy where they present relevant case discussions. Fusing scientific knowledge with clinical application happens in a shortened time frame in the new curriculum. "Before," says Dr. Langley, "when we would teach metabolic diseases, we might emphasize how enzymes work and what can go wrong. Now we add the clinical consequences of malfunctioning enzymes. It's better for students, and we see them entering their clerkship year much better prepared."

The integration includes a systems-based approach to learning through eight courses during the second year: cardiovascular, respiratory, renal, endocrine/reproduction, musculoskeletal/integument, gastro-intestinal, blood, and neuroscience. The courses vary in length and blend the academic disciplines, basic science and clinical, throughout the year. The new curriculum reflects the latest test structure of Step 1 of the U.S. Medical Licensing Examination (USMLE), taken at the end of the second year. Step 1 no longer tests by disciplines, such as anatomy, physiology, or pathology, and the system-based approach should improve students' performance on their first board exam as well as prepare them for clerkships.

Technology is taking center stage in the new curriculum. First-year students learn the principles

of medical informatics, how to access information from extensive resources for both science and clinical knowledge. They practice evidence-based medicine techniques throughout all four years, identifying through computer searches and using the best evidence from clinical literature to address a patient problem. Computer software programs provide learning resources for all four years, and communication between students and faculty is simplified through e-mail. Practice self-tests are available in key subject areas, and soon comprehensive course tests will be computerized. "The goal," notes Dr. Langley, "is to see the application of technology in education today, but also to prepare students for the technology in tomorrow's practice of medicine."

Another Wright State innovation was the use of community physicians as voluntary preceptors for students. "That innovation," notes Dr. Langley, "was once viewed by more traditional medical schools as the loss of control over the educational process. Today, medical schools across the country acknowledge that the use of community physicians provides invaluable, real life experiences for students. Many are scrambling to find community training sites."

Dean Howard M. Part believes that the role of community physicians in medical education is "vital to our students and to the profession. There is no substitute for the role modeling that voluntary faculty provide our students. Our students thrive in the community environment, and their experiences there will make them better physicians." The role of our community's voluntary faculty remains a hallmark of the new curriculum. There are some things that cannot be improved.