Brandon Clair '15 takes a patient history while his professor watches remotely, via iPad.

Empowered

Upstate's curriculum review opens doors to new directions in medical education.

The third-year Upstate medical student is assisting a primary care doctor take a patient history in the clinic. His professor is also observing to evaluate his communication skills and thoroughness. But they're not in the same room.

With the patient's permission, the student has enabled FaceTime on an iPad in the exam room while the faculty member is watching remotely from her own iPad.

The technology allows faculty to observe students as they did practice interactions in the clinical skills center, only now the patients and clinical settings are real and the faculty member doesn't have to be in an adjacent space.

"Medical schools across the country are using iPads for learning, record keeping, and information gathering, but we're the only place I'm aware of that's using them for student observation," says Ann Botash, MD '85, an Upstate pediatrician, and since October, associate dean for education in the College of Medicine.

The use of iPads in both the pediatrics and family practice clerkships began this fall, and is one of several innovations reshaping medical education at Upstate.

Bringing the idea to practice was a grass-roots effort of a group of faculty and staff, who secured funding through a SUNY Innovative Instruction Technology Grants initiative. The grant was spearheaded by Dr. Botash, who now chairs the New Directions Task Force, a committee of faculty, administrators and students charged with rethinking the curriculum in terms of innovation, patient centeredness, and student centeredness. Think of it as R&D for medical education.

Proposed curricular changes end

up before the Curriculum Committee, a new governance body responsible for the medical school curriculum led by Jennifer Christner, MD, who joined Upstate in August from the University of Michigan as associate dean for undergraduate medical education.

The creation of Botash and Christner's positions underscores an unprecedented level of institutional commitment to enhancing quality and excellence in medical education, says Lynn Cleary, MD, vice president for academic affairs and senior associate dean for education. "We've always had a tradition of teaching excellence and staying ahead of the curve, but creating a larger, more formal administrative structure devoted to quality medical education is a new vision for Upstate," she says.

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>
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and Engaged

It's a clear response to Upstate's LCME probation, specifically, the organization's criticism of Upstate's administrative oversight over curriculum and courses. But that's just the beginning.

Botash, Christner, and Cleary, along with William Grant, MD, associate dean of graduate medical education, and Paul Grover, PhD, associate dean of continuing medical education, comprise the Education Leadership Team, charged with evaluating the Upstate experience across the education spectrum. "Our commitment to educating the profession doesn't end with medical school," says Dr. Cleary.

More than just new committees and personnel, Botash believes the institution is undergoing a culture change. "The difference is that there is much more opportunity for engagement and empowerment on the part of faculty and students to initiate innovations in education. This has resulted in a shift to an exciting culture of change," she says.

Dr. Cleary says Upstate's LCME probation provided the catalyst for institutional re-examination, resulting in a new vision and commitment on the part of administrators and greater involvement and empowerment of faculty.

Curriculum reform is nothing new. In the last 30 years, medical education has undergone profound change, transitioning from large lecture courses and rote memorization to small group teaching and improved emphasis on clinical skills. Technological advances continue to provide both new opportunities and challenges (think electronic medical records) and forthcoming MCAT changes are prompting additional medical school curriculum changes.

Upstate's New Directions Task Force was formed in July 2011 (before the probation) with the intent to examine the curriculum for areas of improvement, and identify possibilities for integrating the curriculum across the basic and clinical sciences. Over the last 18 months, under the prior leadership of Michael Iannuzzi, MD, they've developed a template for a block schedule that rethinks the standard two-by-two model (two years of basic sciences, followed by two years of clinical training), which could be implemented as early as fall 2014.

"We want students to become lifelong learners

and anticipate the new curriculum will create a culture of learning that will improve our ability to promote and encourage these skills," explains Botash. "We expect to develop teams of basic scientists and clinicians teaching together. Courses are anticipated to be based on organ systems; clinical clerkships will incorporate basic science concepts. And themes related to student learning, patient, and community needs will tie the curriculum together. "

Any such curricular change would require the approval of the Curriculum Committee, which was created as a direct result of Upstate's LCME probation. "We're instituting more rigor and structure to how we do programmatic evaluation and to how we implement new curriculum, which will also allow us to make change in a more expedient manner," says Dr. Christner, who has been meeting with the faculty and course directors involved in the first two years of the current curriculum, both individually and through faculty retreats.

Student feedback is also integral and there are several student members on the Curriculum Committee. "More than ever before, the dean, administration,

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>
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Jenny Christner, MD, Lynn Cleary, MD, David Duggan, MD '79 and Ann Botash, MD '85

ADMISSIONS UPDATE

It's not just the medical school curriculum that's undergone review at Upstate, but the selection of medical students as well.

This fall, the College of Medicine instituted a new interview process from Canada called the Multi-Mini Interview, or MMI. Instead of a traditional hour-long interview with a faculty member and medical student, applicants rotate through seven stations for five minutes each, answering a mix of "traditional" and scenario-based questions, sort of the interview equivalent of speed dating. The process is designed to measure communication and critical-thinking skills from a variety of vantage points.

According to Jennifer Welch, Upstate director of admissions, the change was made in an effort to "standardize" the interview. The multiple assessment technique dilutes the effect of a single bad interview while the use of multiple interviewers minimizes the impact of any biases an individual interviewer may have. "With the old process, an applicant only spoke with two interviewers, so there were a lot of variables based on who those two people were," she says. Having seven interviewers—and seven opinions—provides more reliability to the assessment.

"We're finding there are some students that everyone agrees are wonderful and others that everyone agrees may not have the communication skills necessary to be a good physician," she says.

Upstate is an early adopter of the MMI in the U.S., one of 19 medical schools to have converted to the process nationwide, which is used by most medical schools in Canada and similar to the interviews conducted by many residency programs.

Ann Botash, MD '85, and Marisa Riverso '14 discuss a prospective student they've interviewed in an MMI scenario.

It was a busy fall. Applications were up slightly over 2011, with more than 4,900 applicants vying for the 160 positions in 2013 entering class. "We've gotten great feedback from faculty and applicants on the interview process and I'm confident we'll be bringing in an excellent class next fall," Welch says.

In addition to the switch in interview procedure, there are also changes in academic requirements on the horizon. Beginning with the class entering in fall 2014, the entry requirement has changed from a two-course organic chemistry sequence to an organic chemistry/biochemistry sequence.

The change is both a reflection of the skills students actually need to be successful in medical school as well as an anticipation of the new MCAT in 2015, which expands the sciences covered to include the social sciences.

"For a long time, the MCAT has very much been focused on organic chemistry and the hard sciences and its probably a good thing that it's branching out into the social sciences," says Welch. "We will see a different kind of applicant coming through."

and faculty members are making changes in the curriculum and in methods of teaching and learning based on real-time and creative feedback from students," says Cleary.

One change already implemented is the transition to computer-based testing throughout the medical school experience, providing faster feedback to both students and faculty. Currently, second-year students are taking all tests online; next year that will expand to first-year students as well. "Third- and fourth-year students already take all of the national board exams online—the paper tests aren't even going to exist any more—so we want to get everyone onboard and comfortable with computer-based testing," she says.

According to Christner, the College of Medicine is ahead of schedule in responding to LCME concerns and is preparing for a site visit in March. If successful, Upstate's probation could end as early as June 2013.

Administrators are not only optimistic about a positive outcome, but point to the silver lining of the experience. "What we've always tried to do is create the best possible experience for our students to learn medicine and become good doctors," says David Duggan, MD '79, interim dean of the College of Medicine. "We have some great new opportunities to do that because of the freedom the accreditation review gives us to make change. There's been terrific cooperation between the faculty and the administration to make these things happen, and we want to sustain and grow this innovative and exciting approach to improving our medical education program."