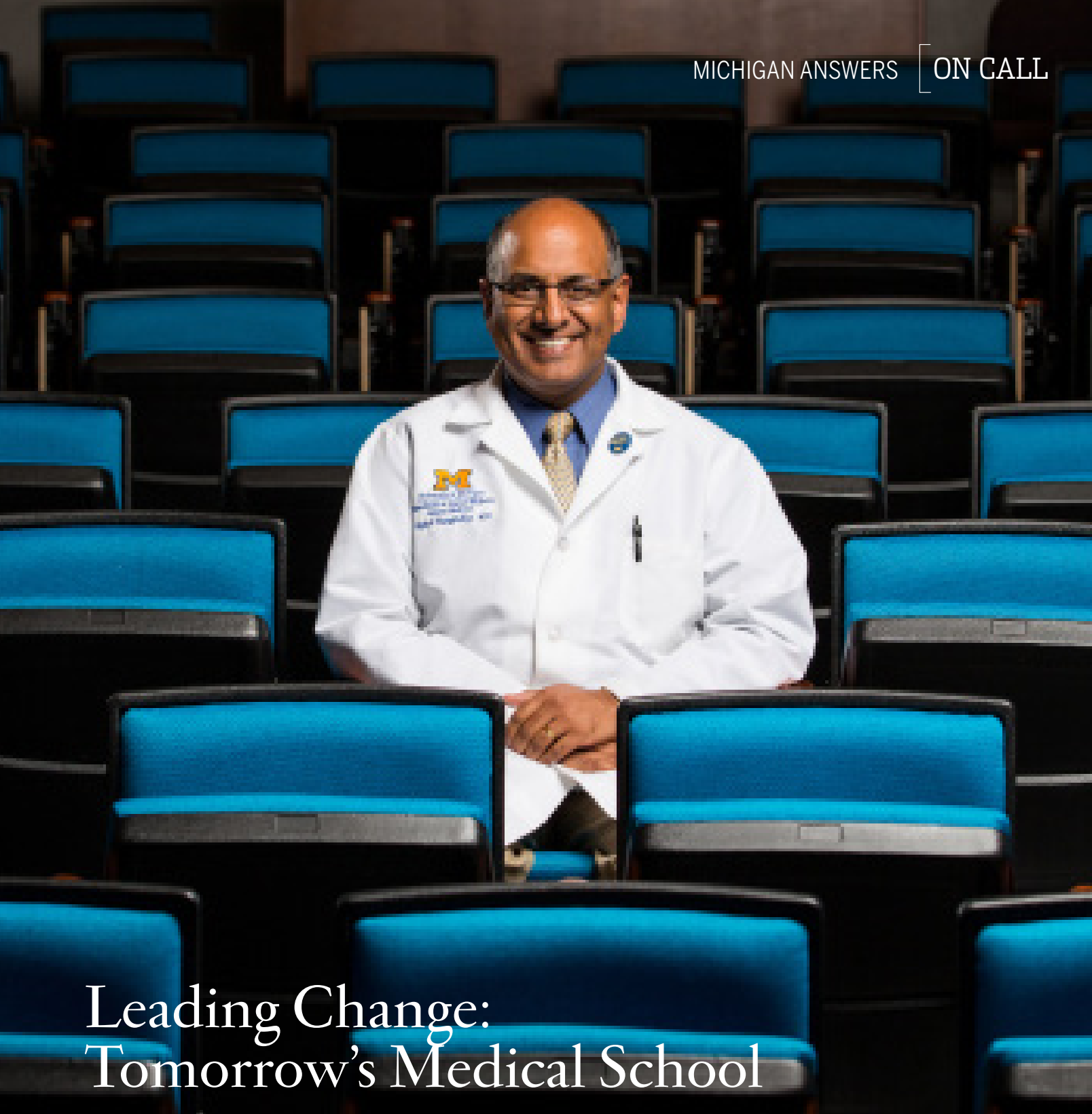

Leading Change: Tomorrow's Medical School

The University of Michigan is transforming its curriculum and is also among a select group of medical schools participating in the American Medical Association's "Accelerating Change in Medical Education," a competitive grant program designed to align medical education with our evolving health care system. Rajesh Mangrulkar, M.D., associate dean for medical student education, is principal investigator on the grant and is one of the leaders spearheading this initiative to build the medical school of the future. →

ERIC BRONSON, MICHIGAN PHOTOGRAPHY

Q: What is driving the initiative to restructure medical education?

A: Michigan is particularly inspired by our calling as a public university. We are one of the few top academic medical schools that are part of a public institution. So we feel immensely responsible for aligning what society needs with our educational system as we educate the physicians who will address these needs. [The initiative] is also driven by the fact that we have a much more complex health care system now than in prior generations. As we started to envision how we could improve health within this more complex care delivery system, we came to a fundamental conclusion that our current medical education architecture needed to be dramatically changed in order to meet those needs.

Q: What are the goals and philosophies behind this effort?

A: First, we believe this is not a curriculum revision. This is really a curriculum transformation, and, as such, it's also an organizational transformation. We believe every graduate at our Medical School must be able to lead change in health, health care, and health care science. With all the transformation and evolution in systems that we need to tackle, we can't just have graduates work within our current models. We believe Michigan graduates will be the ones who will dramatically lead the changes that are required — whether it be in science, clinical care delivery systems, education or one patient at a time. To do so, we are going to be completely restructuring the organization of our curriculum, reformulating the content and revamping the learning approaches our students will be exposed to. We're going to build in scientific inquiry, flexibility, and advising and mentoring students throughout.

Q: In what ways has the U.S. health care system evolved so the current national model for education is no longer adequately preparing physicians?

A: Aside from the fact that team-based practice is everywhere, the systems where those practices happen and where science is discovered are changing at a dramatic pace. The student has to be much more grounded in health care economics and health policies because those influence patient care and the clinical delivery and academic systems they are going to enter, and those all are rapidly changing as well. Patients are also very different now. With the aging of the population — which is going to dominate the patient demographics for these students when they enter practice — patients often have four or five complex chronic conditions interacting simultaneously. That requires a completely different thought process of what's going on with the patient. It requires a more deliberate connection to the patient so we can help motivate them to make behavioral changes. It requires working with other members of the care team. It requires thinking about drug interactions at a much more complex level. It requires thinking about individual genetic characteristics of the patient and their risk of illness and responses to therapy. Most importantly, this is not just about educating students to work in the current system or even the next health care system. Fifteen to 20 years into their practice, there will be even more dramatic changes, some of which we can't even predict right now. So the question is how do we make sure students are resilient, adaptable and able to lead change? The current structure served the 20th Century well, but we are in a dramatically different time now.

Q: What's different about being a teacher, student and physician of medicine in the 20th Century vs. the 21st Century?

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U-M medical students complete comprehensive clinical assessment (above) and walk in front of the Taubman Center (below).

A: As physicians, we're constantly trying to keep up with the exploding pace of new knowledge and trying to understand what we can't do that we should be doing. For 100 years, we've been giving students syllabi and textbooks and lectures, saying, "This is what you need to know." We really need to completely flip that – we first need to lay a good foundation of knowledge and concepts and combine it with the approach of developing them as master learners, where they are constantly asking questions, thinking about what they don't know, going out to get that information, and calibrating it with their scaffolding and other knowledge. That's a habit we want them to build from day one of medical school.

Q: How often, and when, has such a change taken place in medical education?

A: Over 100 years ago, the Flexner Report outlined what was a significant improvement in the ideal medical education program, actually built (in part) upon the Michigan approach at that time. That model consisted of providing a scientific fact-based curriculum in the classroom environment for two years, followed by application in the clinical setting for two years. [Our profession] has since tweaked and improved that structure, and it feels somewhat different now than it did 100 years ago, but the same overall approach has remained. So it's really the first time in 100 years that we're rethinking the entire architecture of medical education.

Q: What can you tell us about the new model at U-M?

A: As our goal is to graduate physician 'change agents' who will improve health care at a systems, science and patient level, our model is designed to achieve this goal. We will first create the "M-Home," a longitudinal learning community where a student will develop relationships with a smaller group of colleagues, staff and faculty that will follow them throughout their medical education. The M-Home is designed to foster a strong professional identity based on doctoring skills, professionalism and an understanding of one's values. Students will first enter a two-year foundation (the "Trunk"), integrating science and clinical experiences from the beginning, including current core third-year clinical rotations. This integrated approach will allow students to consistently learn and inquire about science in the clinical context — not just biomedical science, but social sciences, the humanities, economics and policy. After completing the trunk, students will proceed through "professional development branches," where they will complete advanced clinical and scientific training at a deliberate but flexible pace, so we can assess when they're ready to progress to the next stage. Underlying all of this will be leadership training, focused on teamwork, communication, critical problem-solving skills and the ability to be a systems thinker. [Students] will apply those skills throughout, but also in "Paths of Excellence," developing expertise and promoting change in a field that is critical to health care, such as health equity, global health, quality and safety, bioethics, health policy, the science of learning and the science of discovery.

Q: What are the next steps in this effort?

A: We're doing the implementation in a modular approach. We'll be doing some things in 2015, and then we'll make more dramatic changes to the architecture in 2016. We'll continue to implement pilots and experiments and then learn from them as we implement. So this is really a five-to-seven-year transformation. It's not going to be just "flipping the switch" to a new curriculum. We really believe Michigan is the place to lead this effort nationally. We were one of the original architects of the current curriculum, and we have a national leadership position in medical education. Our faculty, students and educational leaders are phenomenal. They are adaptable, resilient and up to the challenge of creating the model society needs. As a medical school, we have led transformation before in clinical care, science and education. So I would ask, "Why shouldn't Michigan lead the way again?"

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