

# A BOLD NEW CURRICULUM ALIGNS PHYSICIAN EDUCATION WITH OUR HEALTH CARE FUTURE

*your*MD  
OHSU CURRICULUM TRANSFORMATION



SCHOOL OF MEDICINE  
*Oregon Health & Science University*

Today's medical students will still be practicing in 2050.  
What students learn now will influence the shape of the future health care landscape.



# RETHINKING TRADITION

A century ago, Abraham Flexner proposed a model of medical education consisting of two years of basic science instruction followed by two years of clinical training. The model was largely adopted across all U.S. medical schools. While variants have evolved during the ensuing years, the approach hasn't changed much.

But the world sure has.

Cutting-edge technology, portable health care data, global online collaboration, social media, dramatic new research discoveries, personalized medicine, health care reform – the pace of medical change is breathtaking, and it's not slowing down.

On top of this, decades of educational research have upended ideas about how adults learn.

But how we train physicians has not kept up. It had to change. The OHSU School of Medicine has answered this call by developing a new medical curriculum designed to improve health care for everyone, ensuring future physicians are ready to thrive in this rapidly changing environment and are prepared to help shape the course of the continuing health care revolution.

Learn more at [www.ohsu.edu/newcurriculum](http://www.ohsu.edu/newcurriculum). Contact us at [somdeansoffice@ohsu.edu](mailto:somdeansoffice@ohsu.edu).

"We have taken what is unique about OHSU and Oregon – a pioneering spirit, innovation and a healthy dose of pragmatism – and incorporated this into a new curriculum ready for a new era, one in which genetics, health care reform, technology and more will exert strong influences on the health care environment. And we will lead those changes."

– Mark Richardson, M.D., School of Medicine Dean



# A CULTURE OF INNOVATION ALIGNED TO CHANGE

Our new medical curriculum is aligned with the health care trajectory and needs of Oregon and the nation. New technologies, new knowledge about health and disease and new ways to organize and finance health care delivery – along with an expanding focus on access, prevention and population health – are catalyzing profound change at every level of the health care system. Physician education is integral to sustaining this new environment, and to realizing improved individual care and overall population health at lower costs.

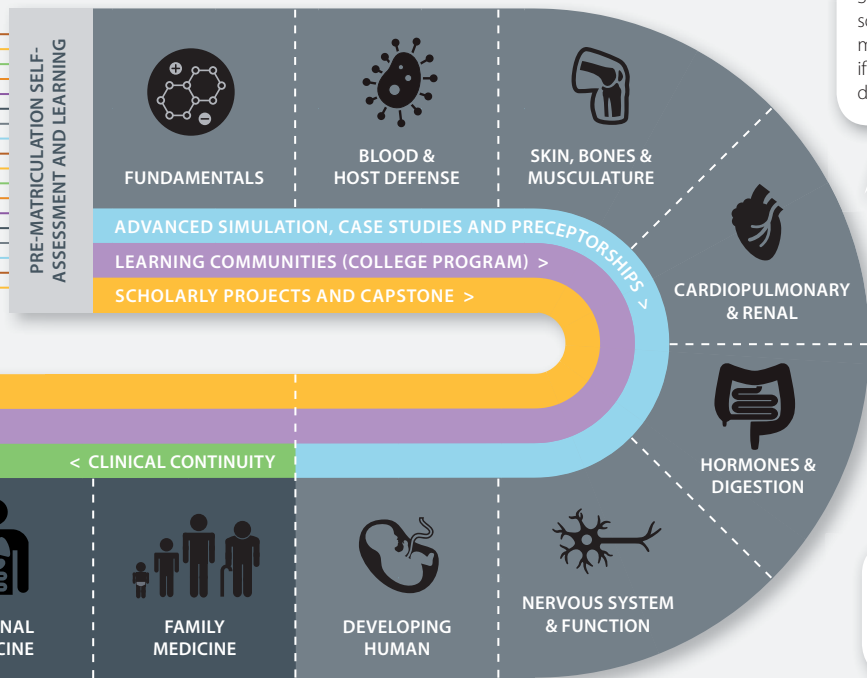


# THE JOURNEY

## CURRICULUM THREADS



## FOUNDATIONS OF MEDICINE >



Students may bypass some foundations of medicine components if competence is demonstrated.\*

Threads woven throughout the entire curriculum.

## < CLINICAL CONTINUITY

## CLINICAL EXPERIENCES



Individual learner progression allows for variable time to graduation.\*



\*These elements will be phased in after 2014.

# TO BECOMING A PHYSICIAN

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Our new curriculum recognizes that medical knowledge and technology will continue to expand rapidly and that future physicians must be experts not only at assessing and improving their own skills, but also at adapting to discoveries and technology changes, and leading a culture change that ensures the health care system of the future is always improving.

We're reinforcing this outcome by the very way we teach. We are moving away from primarily large lectures where students are passive in favor of active students learning in group discussions and through applied patient case-studies. The curriculum expands our use of simulation technology for role playing and practice. We're also expanding all our clinical immersion experiences, including offering new options in rural and underserved communities.

Our curriculum deliberately connects knowledge and its application. Students learn foundational science – anatomy, genetics, pharmacology, immunology – through an integrated prism of its application to clinical and social sciences. Woven throughout the curriculum are threads of quality, ethics, informatics, communications, safety, professionalism, clinical reasoning and more.

*YOUR M.D.* will be competency- rather than time-based, with a customized educational program for every student based on their individual learning styles and prior experiences. To graduate, a student will demonstrate competency in defined areas – such as delivering care

as part of an interprofessional team, demonstrating skills in lifelong learning, and integrating direct physical exam findings with laboratory data, imaging studies and genetic profiles to develop a diagnosis. If a student – for example, a nurse, physician assistant or someone with a background in science or medicine – enters the program already competent in some of these defined areas, they may complete medical school in less than four years.

Our curriculum is focused on graduating physicians most needed by society, prepared to provide quality health care in varied clinical settings – from rural Oregon to international locales – and within multiple disciplines, populations and cultures.



# A PHASED APPROACH TO FULL IMPLEMENTATION

EDUCATIONAL DOMAIN

PRE-2014

FALL 2014

BEYOND 2014

EDUCATIONAL DOMAIN	PRE-2014	FALL 2014	BEYOND 2014
<b>Philosophy</b>	Teacher-centered	Cohort-centered	Learner-centered
<b>Content and pedagogy</b>	Discipline-based Large-group lectures Focus on acquisition of knowledge	Organ system-based Active small group and team-based learning Focus on application and integration	Flipped classrooms; guided, self-directed learning customized to each student's learning experiences  Content and systems designed to enable lifelong learning skills based on competency assessment and linked with improvement
<b>Overall program length</b>	Traditional 4-year model (2 years of foundational sciences plus 2 years of clinical sciences)	18-month applied foundational sciences; 24-month clinical experiences	Individualized to students, with flexible opportunities to allow acceleration and early graduation
<b>Learner assessment</b>	Traditional, periodic exam-based grading system	Exams plus frequent quizzes, feedback and advising  Assessment includes demonstration of application of knowledge and higher level cognitive processes, and reflection  Stand-alone competency-based assessments	Expanded rubric with student assessment taking place before and after learning  Badges that are earned based upon milestone and competency achievement  Intensive and interconnected competency-based assessments
<b>Advancement and progression</b>	Traditional time-based model	Traditional time-based model	Individual learner progression allowing for variable time to graduation
<b>Opportunities for individualization</b>	Elective courses	Clinical experiences and electives  Scholarly projects  College-focused small group learning	Entry at advanced stage  Ability to bypass curricular components if competence is demonstrated  Pre-assessment that allows customization for individual learner's needs and abilities
<b>Ability to use data within emerging health care models</b>	Focused on literature searching, evidence-based medicine, and use of electronic health record	Provide learners with data about their academic performance to target improvement with help of personal coach	Development of competencies, curriculum and assessment for using data and information in advanced health care models and other settings to drive improvement

# Q&A



*George C. Mejicano, M.D., senior associate dean for education at OHSU School of Medicine, was interviewed by the Commonwealth Fund about the M.D. Curriculum Transformation. Below are excerpts.*

**Q:** With your new approach, students will eventually enter and exit the medical school at different times, with graduation contingent on demonstrating competency in areas you've prioritized. What was the problem with the old way—that is, enrolling a cohort of students and teaching them foundational science and the skills of clinical practice in lockstep?

**A:** There are a number of issues, but the most important is that it assumes that all students are the same. We end up equating someone who has served as a medic in Afghanistan or a person who was a veterinary surgeon with a French major. It's just bad pedagogy. We need to be able to distinguish them—how they learn, what they need, and what their interests and skill sets are. Then we can customize their curricula.

**Q:** What's an example of a customized approach?

**A:** A person who is a practicing physician assistant (PA) decides to apply to medical school. They have been working in a pediatric clinic for two years as a PA. They could conceivably skip much of the basic science content because they took it already when they were earning their PA master's degree, as well as numerous rotations—such that they could graduate much earlier than a typical medical student.

**Q:** You're also seeking to better integrate basic science education with clinical practice—in part by having scientists and clinicians collaborate on the design of courses. What's been the problem with handling them discretely?

**A:** The separation, which has been going on for more than 100 years in most medical schools across the country, has led to all sorts of bad behavior and outcomes. The classic problem is the binge-and-purge mentality. I learn anatomy and that's all I'm learning. I take my final exam on Friday, and on Monday I've probably forgotten much of what I learned, but it doesn't matter because I'm on to the next thing. We hope that by showing the immediate application of basic science to clinical practice, more of the material will stick. That's why we're bringing biochemists, physiologists, radiologists, psychiatrists, pediatricians, and internists together to design our six educational blocks on organ systems.

**Q:** How might that play out in the classroom?

**A:** Let's take the kidney as an example. If I learn the anatomy of the kidney, how it functions, how the kidney clears the body of metabolites and certain drugs, and how chronic kidney disease manifests in real patients, the material will be more effectively bound together.

**Q:** You've said you're trying to create doctors that can meet future needs. How did you determine what a high-performing doctor would look like in the future?

**A:** We asked many people in a lot of different places what kind of doctor they would want to hire in 2020 or 2030. One person, the CEO of a health system that operates rural and suburban hospitals in Oregon, said he wanted two things: number one, people with emotional intelligence, and number two, people who are competent in predictive analysis, so they can look at populations of patients and predict which ones are going to have problems down the road.

# yourMD

OHSU CURRICULUM TRANSFORMATION

## A STATE-OF-THE-ART BUILDING FOR A STATE-OF-THE-ART CURRICULUM

The inspiring Collaborative Life Sciences Building is home to new classrooms and learning studios, research laboratories, student lounges, advanced imaging technology and a 20,000-square foot interprofessional simulation facility. It's also home to our new curriculum.

*YOUR M.D.* will phase in over four years, starting in 2014. Aspects of the curriculum will continue to evolve based on the needs of students, Oregon and the nation.

Read more at [www.ohsu.edu/newcurriculum](http://www.ohsu.edu/newcurriculum).

*The OHSU School of Medicine is honored to be part of the American Medical Association-led Accelerating Change in Medical Education initiative; we received a \$1 million award to support our curriculum transformation and are part of the 11-member consortium whose aim is to rapidly disseminate best practices in medical education across the nation and world.*