Transforming Medical Education: Lessons from the U.S.

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In 2012 we were one of the leading medical schools in the U.S. to embark on a major educational reform.

Why? ⎤
How? ⎦ **focus on these first!**

What?

- new structure?

- new schedule?

- faculty?

Medical Education Reform

Why? } **Who is telling us we need to change?**
- **Ourselves?**
- **Ourleaders?**
- **Ourstudents?**
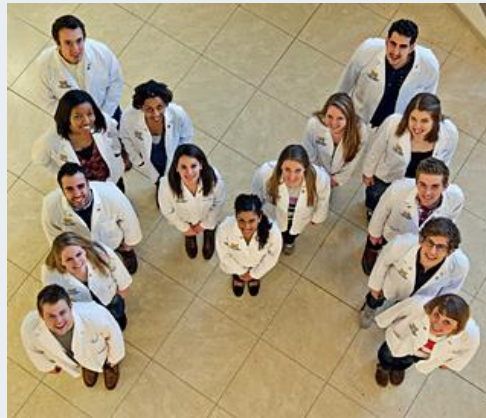- **Society?**

"Push-back" to Change:

Faculty

- *"change takes work; it's easier to just keep doing what we're doing"*
- *"our school is the best so why do we need to change?"*
- *"where are the resources (time, salary, etc) going to come from?? I'm already so busy!!"*

"Push-back" to Change:

Students

- *"why are you experimenting with me?"*
- *"are you creating more work for me?"*
- *"what is the value or purpose of this?"*

Why Medical Education Reform at UM

1. To much new information – far exceeding what could be covered within the confines of a medical school curriculum.
2. Medical education programs are structured in 'blocks' or 'courses': yet development must be integrated and longitudinal
3. Assessment tools are inadequate and incomplete with regard to what students will be expected to do.
4. The intensity of the practice environment and its associated requirements are disconnecting our instructors and assessors from our learners.
5. Society is asking for a different kind of health system and health practitioner.

- *To expensive!*
- *Variable quality and service*
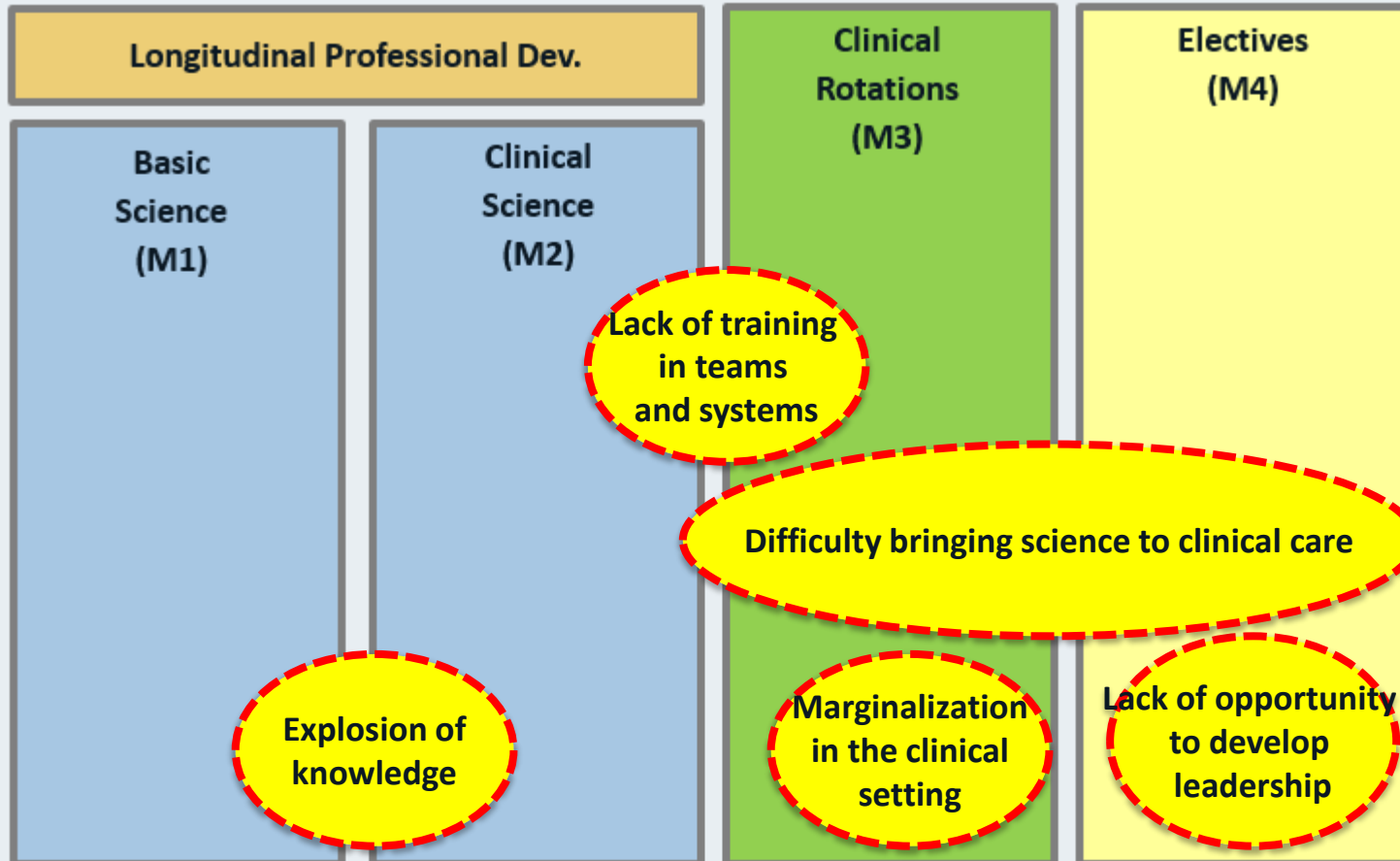
Medical Education Reform

Why?

How?

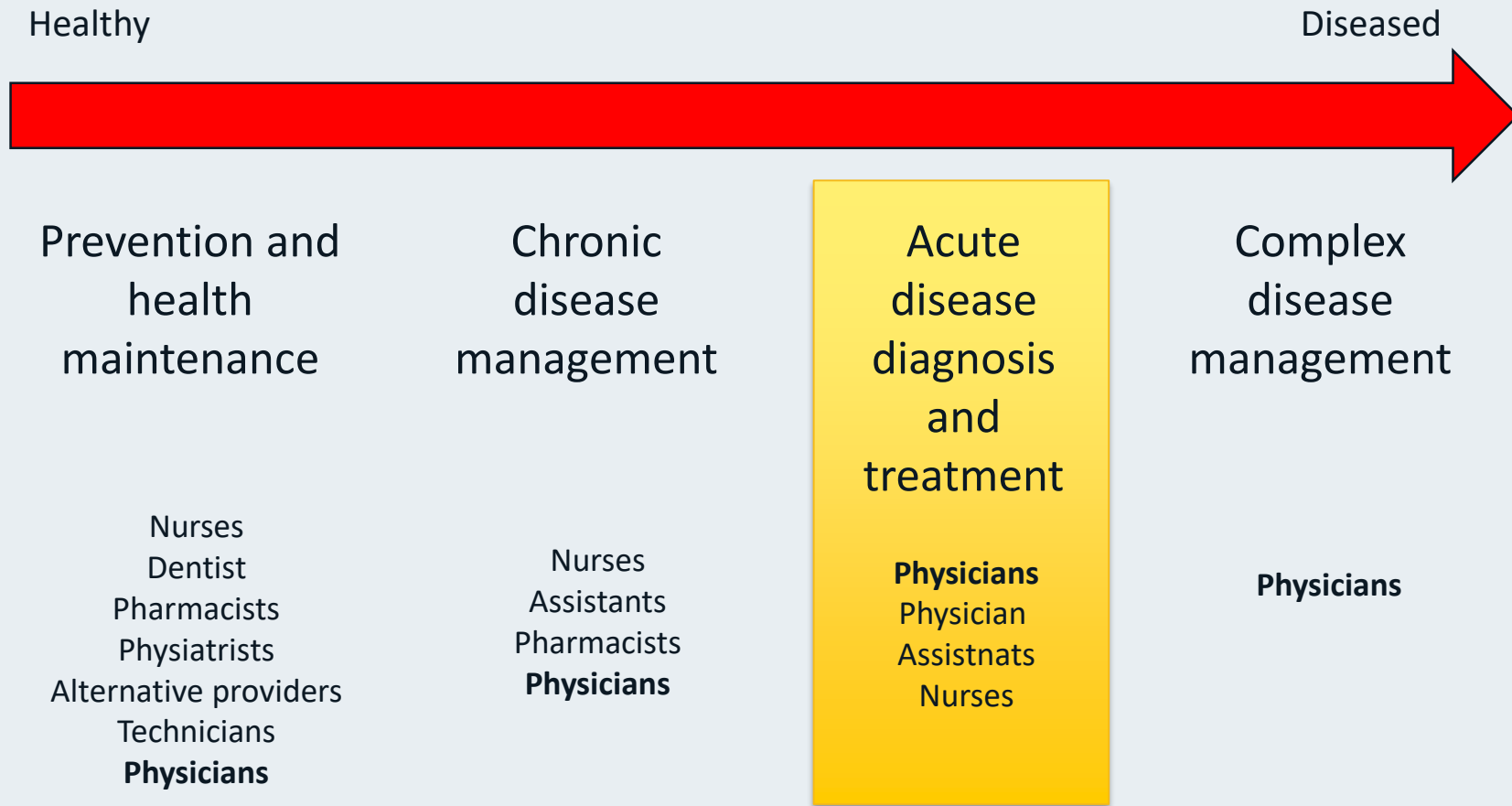**Overcommunicate to make the case for change**

- **Wide faculty engagement in design**
- **Student engagement**
- **Early consensus on the problems you are trying to fix**

UM: What are the problems that we're trying to fix?

U.S. needs a new system
Education needs a new system

Healthy   Diseased

Prevention and health maintenance	Chronic disease management	Acute disease diagnosis and treatment	Complex disease management
Nurses Dentist Pharmacists Physiatrists Alternative providers Technicians **Physicians**	Nurses Assistants Pharmacists **Physicians**	**Physicians** Physician Assistnats Nurses	**Physicians**

Medical Education Reform

Why?

How?

What barriers to you need to identify early?
- **Faculty time and incentives**
- **Faculty development**

Student empowerment and engagement

Creating Agents of Change.

Student Advisory Committee

The University of Michigan Medical School aims to include as many voices as possible in curriculum reform. The Student Advisory Committee (SAC) allows students interested in medical education to offer input to the faculty members enacting curriculum change.

The SAC consists entirely of medical students elected by their classmates. It includes two students from each of the M1 - M4 classes, and one MSTP student.

SAC representatives act as liaisons between the rest of the student body, the work groups, and the Steering Committee. The SAC's responsibilities include
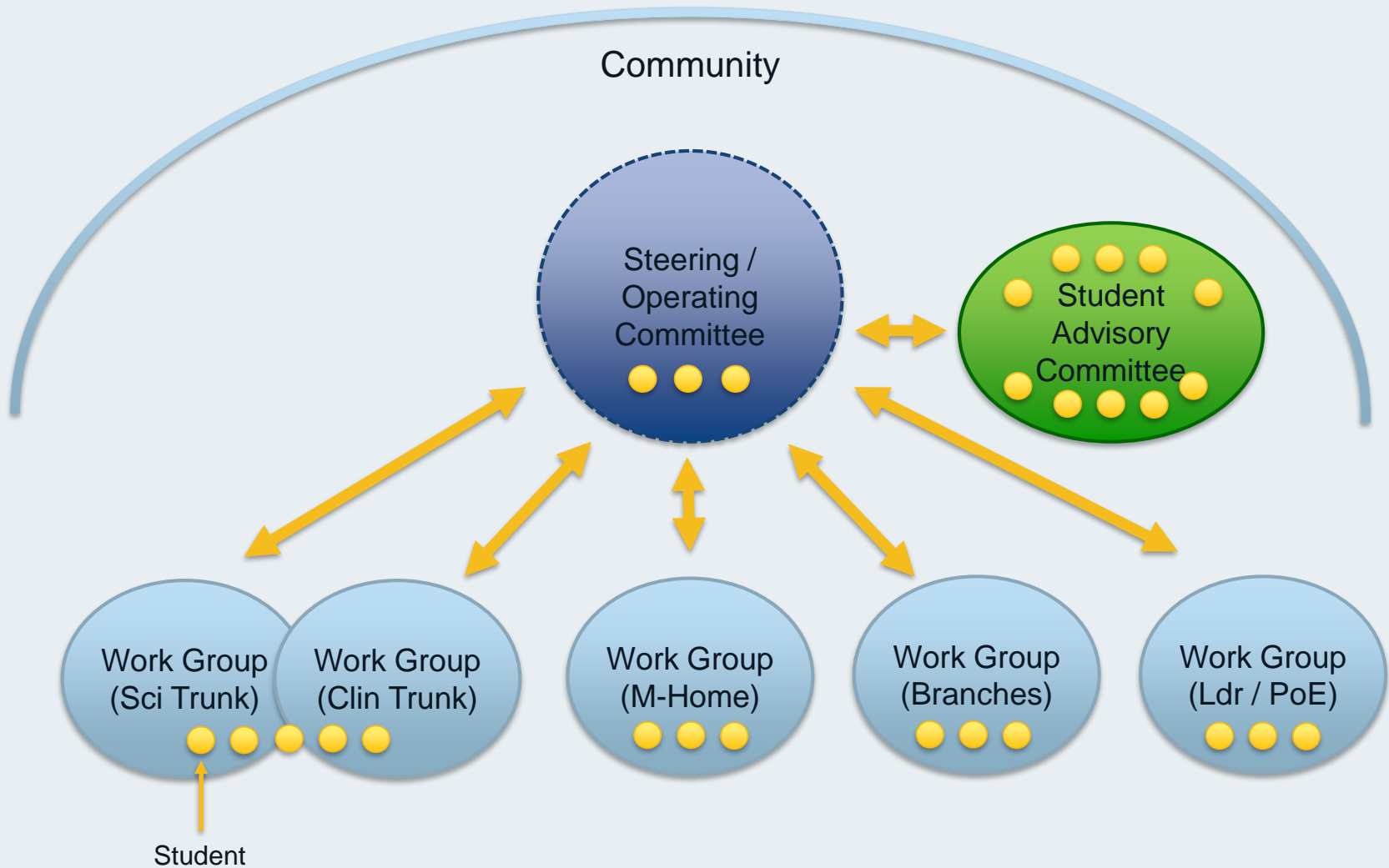
- keeping students informed about proposed curricular changes (via regular town halls)
- obtaining feedback from the student body (via surveys and focus groups)
- maintaining open communication between the student body and the curriculum reform leaders
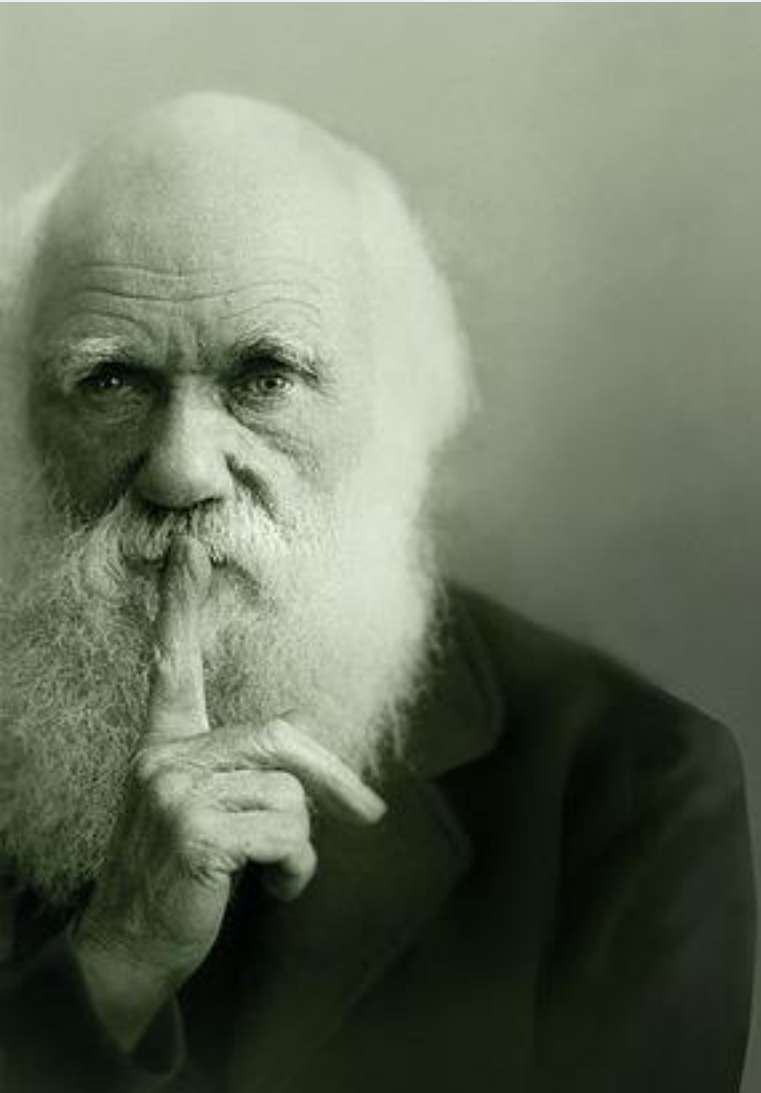
A Qualtrics Survey is now available for all UMMS students to provide input, ask questions, and share new ideas with regards to the curriculum changes.

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shots HEALTH NEWS FROM NPR

HEALTH INC.

Medical Schools Reboot For 21st Century

April 9, 2015 · 3:35 PM ET
Heard on All Things Considered

JULIE ROVNER   FROM KHN

Dr. Raj Mangrulkar and medical student Jesse Burk-Rafel at the University of Michigan Medical School. Good communication skills, teamwork and adaptability will help doctors thrive through swift changes in medical science, Mangrulkar says.

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Work Group Structure
Over 300 participants

Community

Steering / Operating Committee

Student Advisory Committee

Work Group (Sci Trunk)

Work Group (Clin Trunk)

Work Group (M-Home)

Work Group (Branches)

Work Group (Ldr / PoE)

Student

"It is not the strongest of the species that survives, nor the most intelligent, but rather the one most responsive to change."

Charles Darwin

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Has our medical education system changed much relative to other changes in society??

Start with big concepts first before you get into details

...always reminding yourself and others, what are the problems you are trying to fix.

# Paradigm shift 模式转变

from: "What are <u>you</u> teaching?"从：<u>您</u>在教什么？

to: What are <u>they</u> learning?"到：<u>他们</u>在学什么？

Core Competency Framework in the U.S.
(ACGME = Accreditation Council on Graduate Medical Education)

making yourself a <u>better</u> doctor

➢ 患者照护 (Patient care)

➢ 医学知识 (Medical knowledge)

🔴 基于实践的学习 (Practice based learning)

➢ 沟通 (Communication)

➢ 职业素养 (Professionalism)

🔴 基于体系的实践 (System based practice)
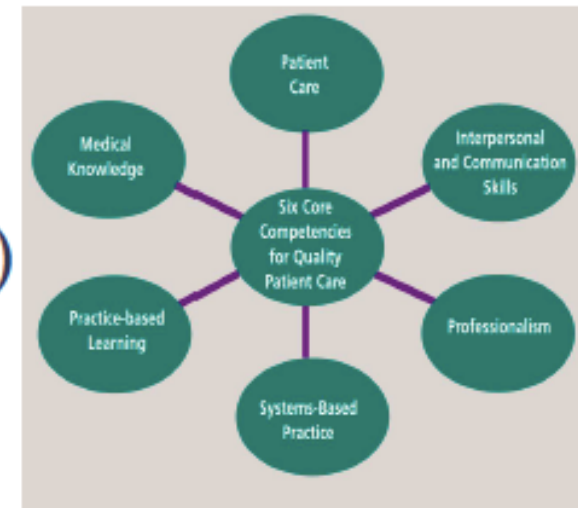
making the system work <u>better</u> for your patients

Strategic Pillars of Medical Education

Basic Science   **Clinical Science**

Strategic Pillars of Medical Education
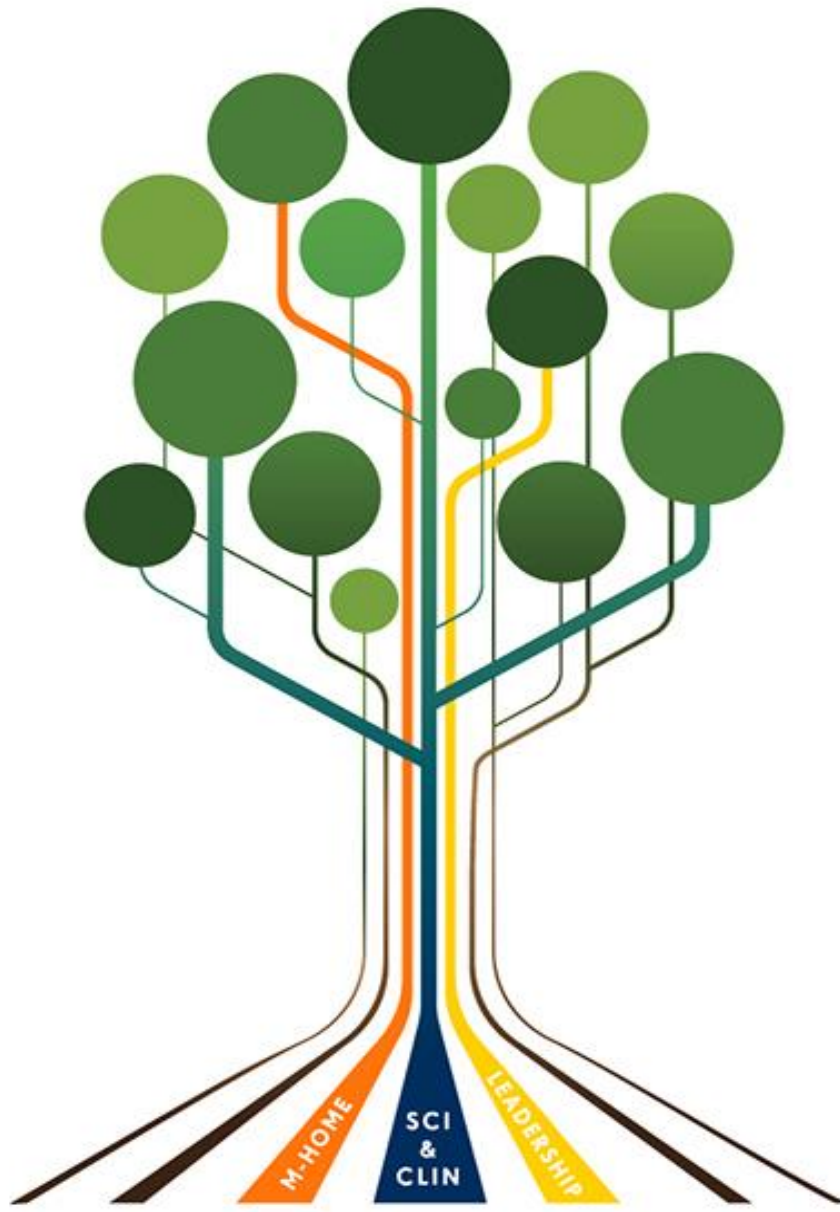
Basic Science   **Clinical Science**   **Health-Systems Science**
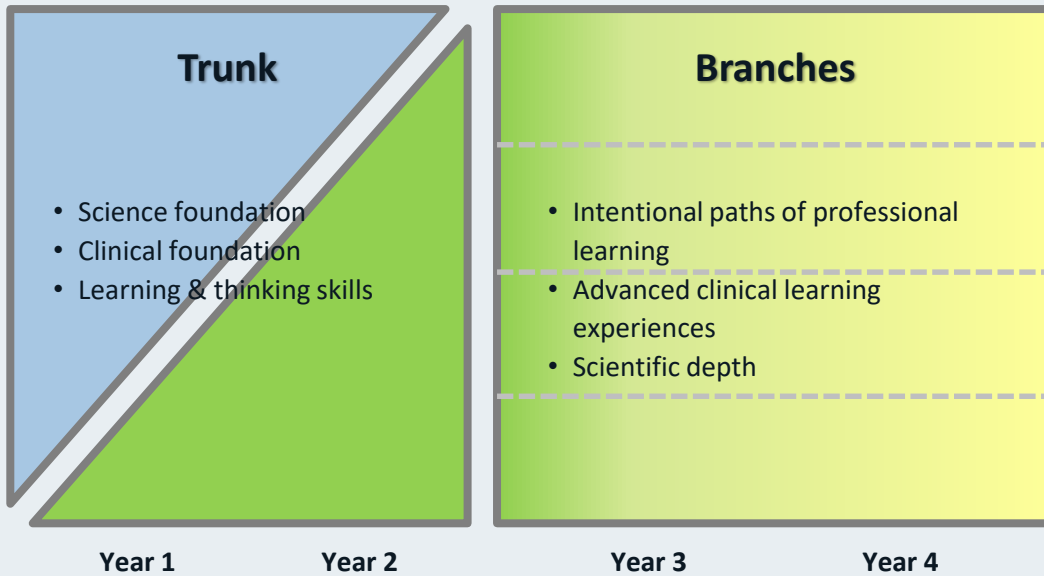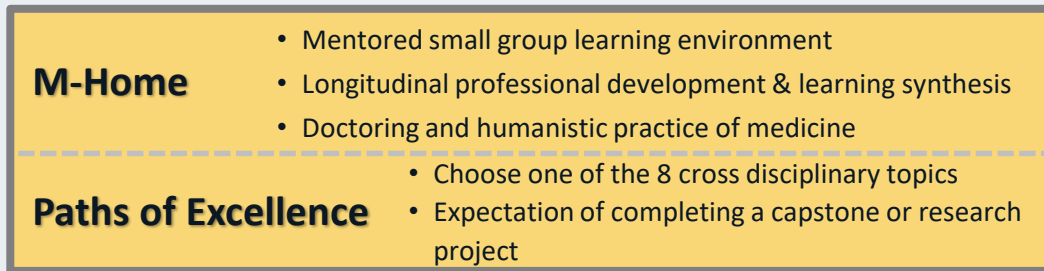
Medical Education Reform

Why?

How?

What?

New Curricular Model
A liberating new architecture

M-Home	• Mentored small group learning environment • Longitudinal professional development & learning synthesis • Doctoring and humanistic practice of medicine
Paths of Excellence	• Choose one of the 8 cross disciplinary topics • Expectation of completing a capstone or research project

Trunk

• Science foundation
• Clinical foundation
• Learning & thinking skills

Branches

• Intentional paths of professional learning
• Advanced clinical learning experiences
• Scientific depth

Year 1   Year 2   Year 3   Year 4

- A deeper foundation – becoming a **master thinker and learner**

- **Flexibility** for the student to understand strengths and weaknesses and choose wisely

- **Exploration** in depth

- **Leadership** and becoming a Change Agent

- **Assessment throughout** and across all domains (connected with the vision), that promotes the longitudinal development of the learner.

UMMS Curricular Model
Key Branch Components: Years 3 - ?

Patients & Populations	Systems Focused and Hospital-Based Practice	Procedures-Based Care	Diagnostic and Therapeutic Technologies

More Clinical Training and Exploration
- Core clinical rotations (e.g. Emergency Medicine)
- Early clinical experiences (e.g. sub-internships)
- Capstone clinical experiences (e.g. bootcamps, apprenticeships)
- Clinical electives across branches

Opportunities to Pursue Professional Interests
- Branch-specific and non-branch-specific clinical electives
- Paths of Excellence electives (e.g. global health, quality & safety, policy)
- Time for self-directed projects (incl. research)
- Coursework at other schools and programs

Science Learning Integrated with Clinical Practice
- General and Branch-specific scientific curricula
- Science in the clinics - joint rotations
- Medical Therapeutics and online modules- Just in Time
- Opportunities for scientific research

Developing a Professional Intention with a Plan
- Development of an individualized learning plan
- M-Home and Branch mentoring
- Leadership development through the lens of Branch
- Ability to change Branches, customize focus, determine time in curriculum
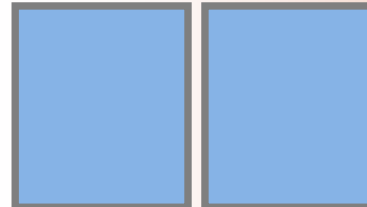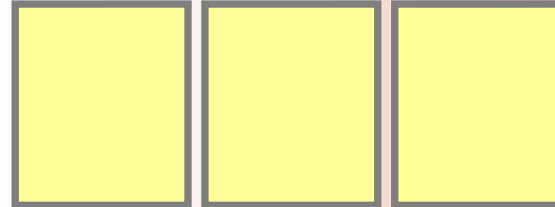
Competency-Based Assessments
- Assessment aligned with GME competency milestones
- **M3 Milestone Assessment**
- **M4 Milestone Assessment (X2)**
- Flexibility to conduct remediation as needed
- Graduation from Branches competency-based

Impact Where? Paths of Excellence

Global Health and Disparities

Bio-Ethics

Health Economics & Policy

Scientific Discovery

Scholarship of Learning and Teaching

Medical Humanities

Patient Safety, Quality and Complex Systems

Innovation & Entrepreneur-ship

Leadership

New Curriculum

Examples

Communicating & Influencing
- Alda Communication Training
- AAMC Student Leadership
- PoE issue advocacy

Working in Teams
- ICE Longitudinal Experience
- Mentoring M1/M2s
- 360 Evaluation Debriefing

Understanding Systems
- Healthy Policy MOOC
- PoE Capstone project
- Student Clinic Leadership

Solving Problems
- Lean QI Project
- Facilitating Learning Cases
- MQS Training in Problem Solving Methods

Leading Change in Health, Healthcare and Healthcare Science

Professional & Leadership Identity

Continuous Implementation

Goals:

Medical Education Reform

Why?
How?
What?

Do these first!
- **get agreement**
- **document? 'proceedings'?**

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全国医学教育发展中心
NATIONAL CENTER FOR HEALTH PROFESSIONS EDUCAITON DEVELOPMENT

Transforming Medical Education: Lessons from the U.S.

- **Begin with the end in mind**
- **Make it scholarly – design experiments and generate the evidence for improved outcomes**
- **Confront legacy; tradition is good but confining**
- **Focus explicitly on change management and leadership**