# The Bridges Curriculum: A Pedagogically Driven Redesign to Fulfill Medical Education's Social Contract

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Objectives

1. Outline the differences between pedagogical and design based curriculum redesign strategies.
2. Contrast the different knowledge and skills needed by successful physicians in the 21st century with those needed in the 20th century.
3. Apply principles of authentic workplace learning and communities of practice to an outcomes based curriculum redesign project.
4. Consider how technology can facilitate this transformation

The Golden Age of Medical Education

Anarchy

Accreditation

Pedagogy

1900

2000
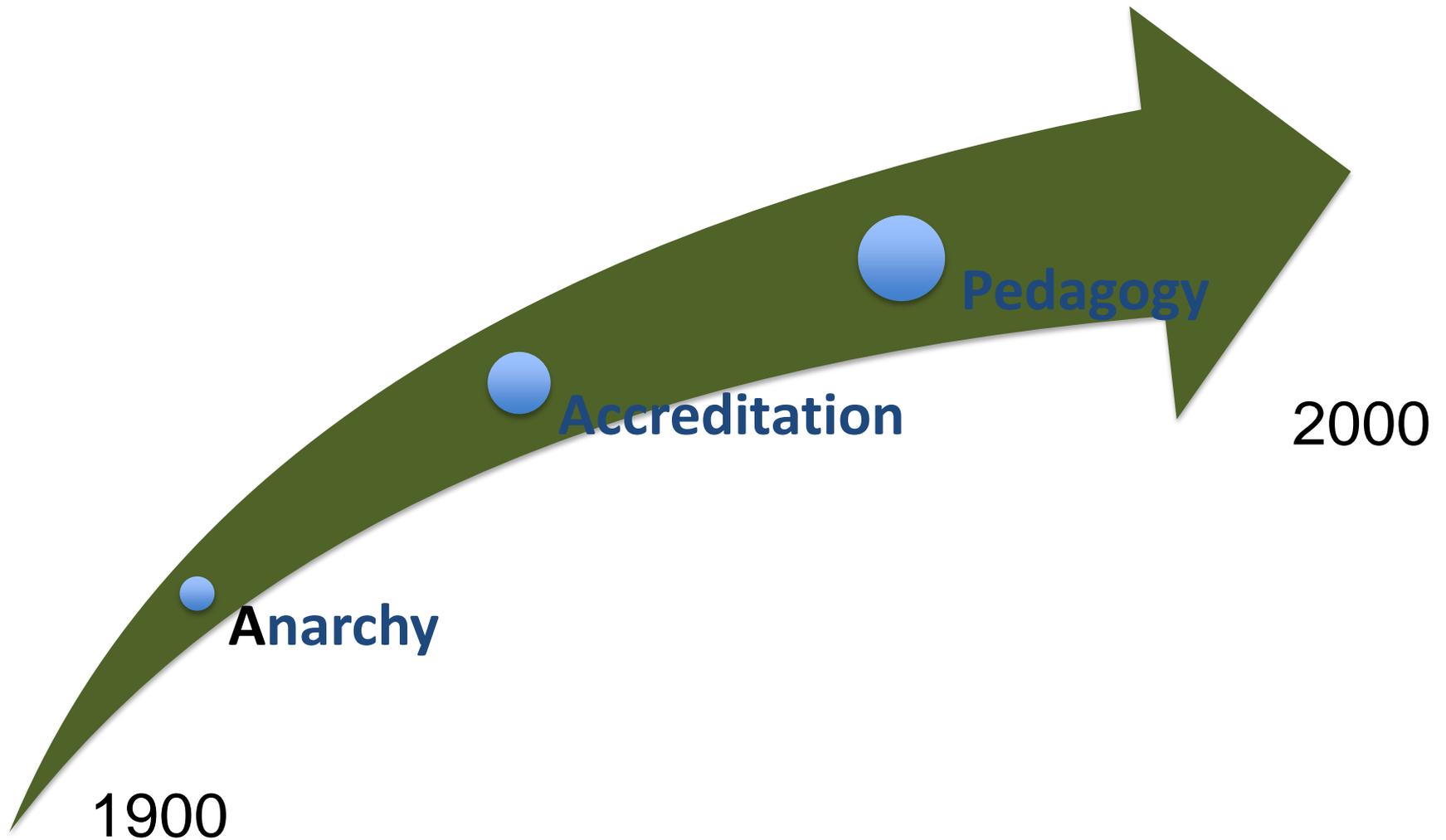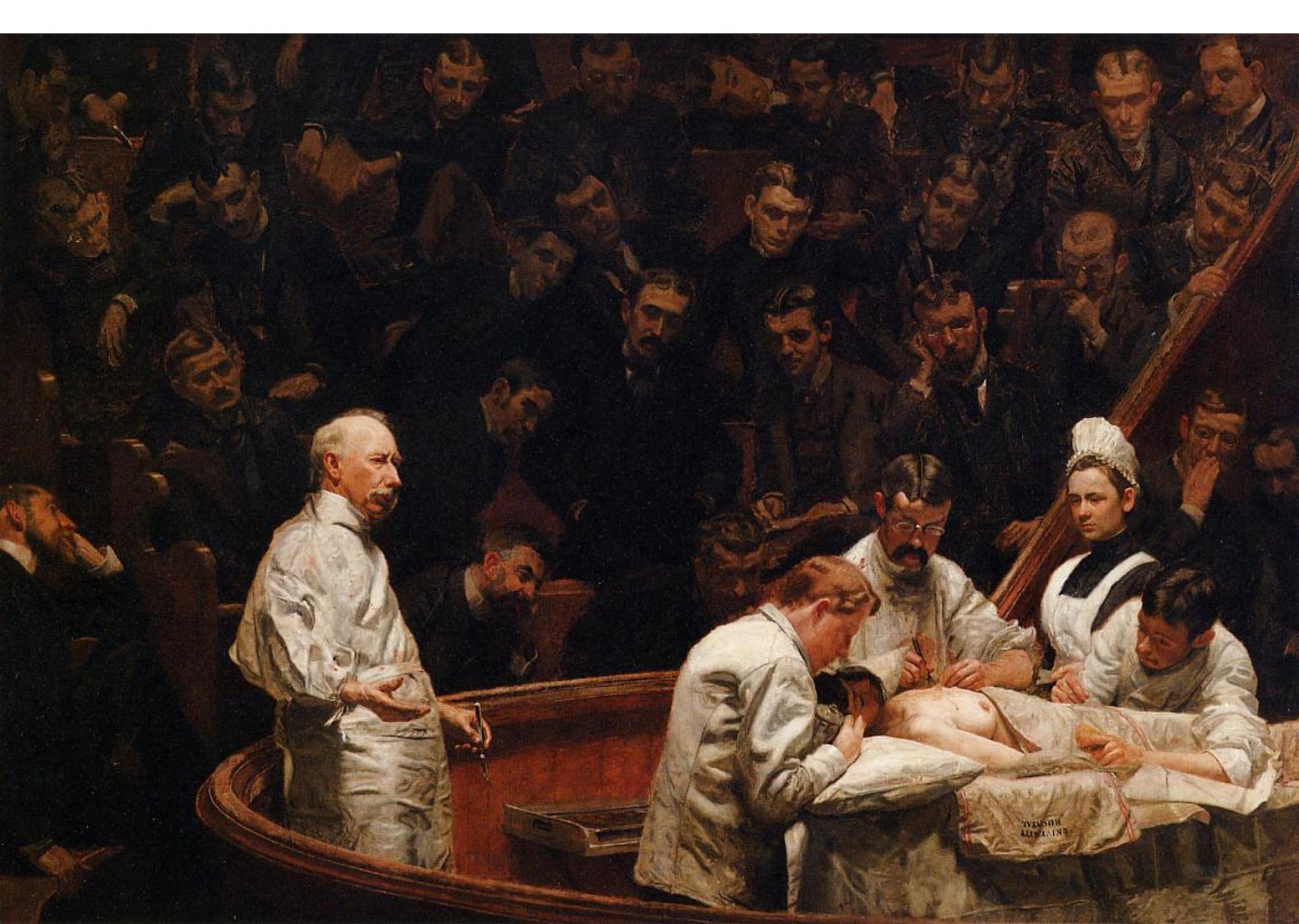
Milestones

Workplace learning
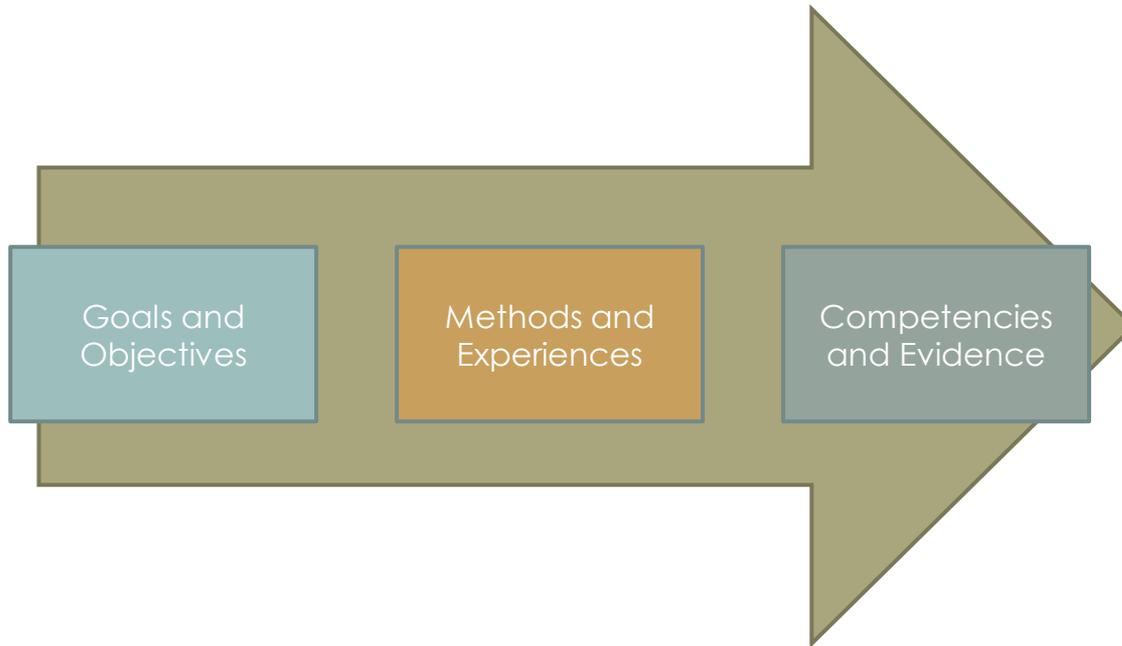
Integration

EPAs

Assessment

IPHE

Medical Education is:

- Too Long!
- Too Expensive!
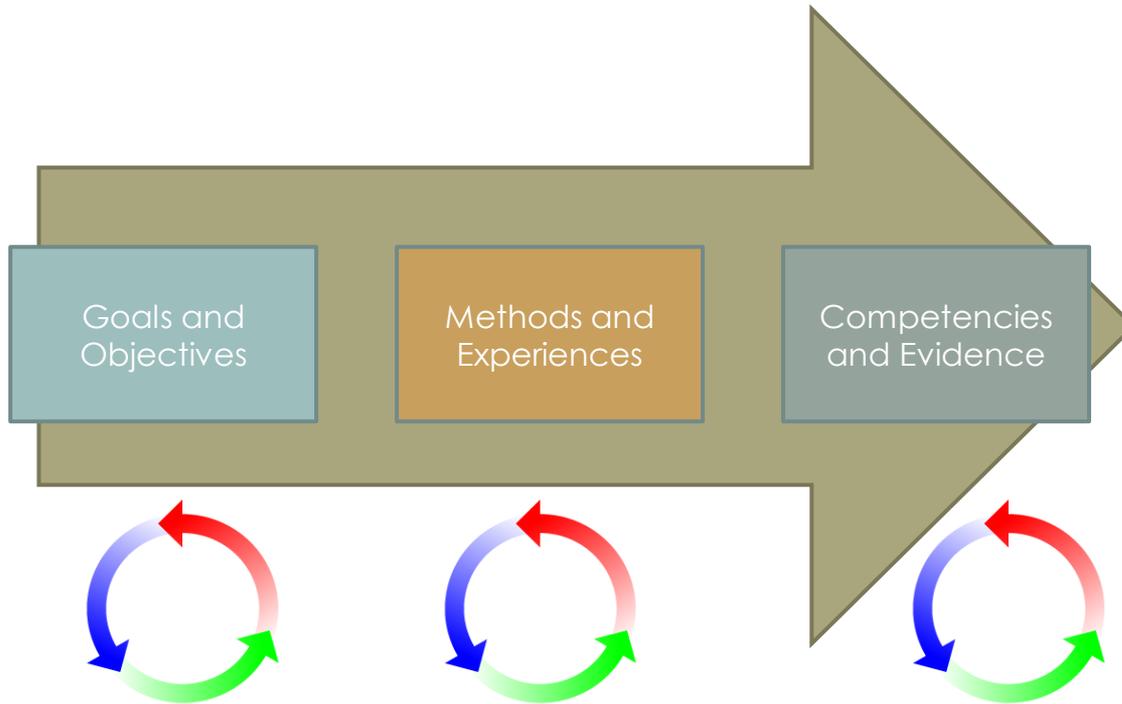- Too Old Fashioned!
- Too Specialty Focused!

Is Medical Education Living up to its Social Contract?

Conventional Curriculum Redesign: Doing our best better

Goals and Objectives → Methods and Experiences → Competencies and Evidence

Conventional Curriculum Redesign: Doing our best better

Goals and Objectives

Methods and Experiences

Competencies and Evidence

Advances in Pedagogy and Understanding of Learners

Conventional Curriculum Redesign: Doing our best better

Goals and Objectives → Methods and Experiences → Competencies and Evidence
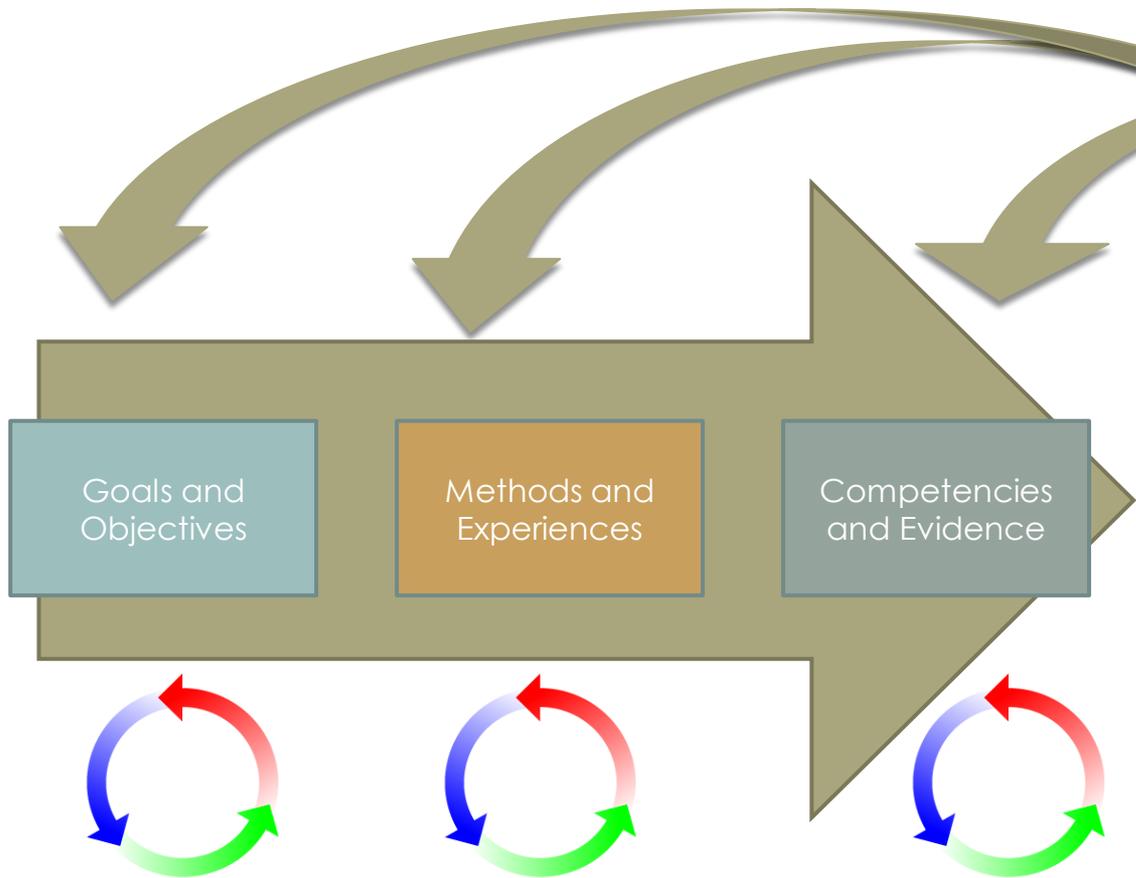
Deficiencies in Physician Performance

The Purpose of Medical Education: To Improve Health

THE LANCET

EDUCATION OF HEALTH PROFESSIONALS
FOR THE 21ST CENTURY:
A GLOBAL INDEPENDENT COMMISSION

Health professionals for a new century: transforming education to strengthen health systems in an interdependent world

Julio Frenk*, Lincoln Chen*, Zulfiqar A Bhutta, Jordan Cohen, Nigel Crisp, Timothy Evans, Harvey Fineberg, Patricia Garcia, Yang Ke, Patrick Kelley, Barry Kistnasamy, Afaf Meleis, David Naylor, Ariel Pablos-Mendez, Srinath Reddy, Susan Scrimshaw, Jaime Sepulveda, David Serwadda, Huda Zurayk

Curriculum Redesign with Design Thinking: Begin with the End
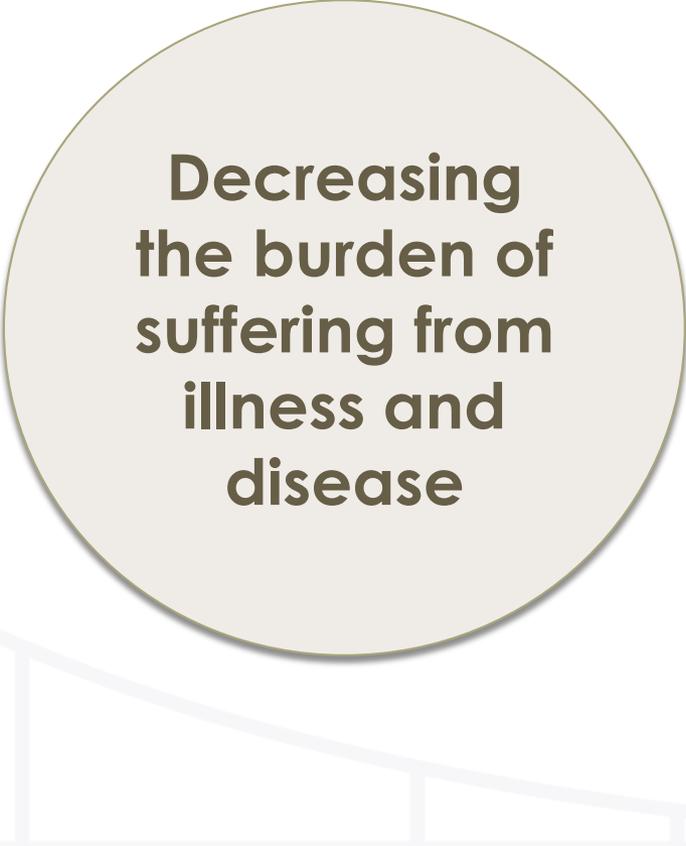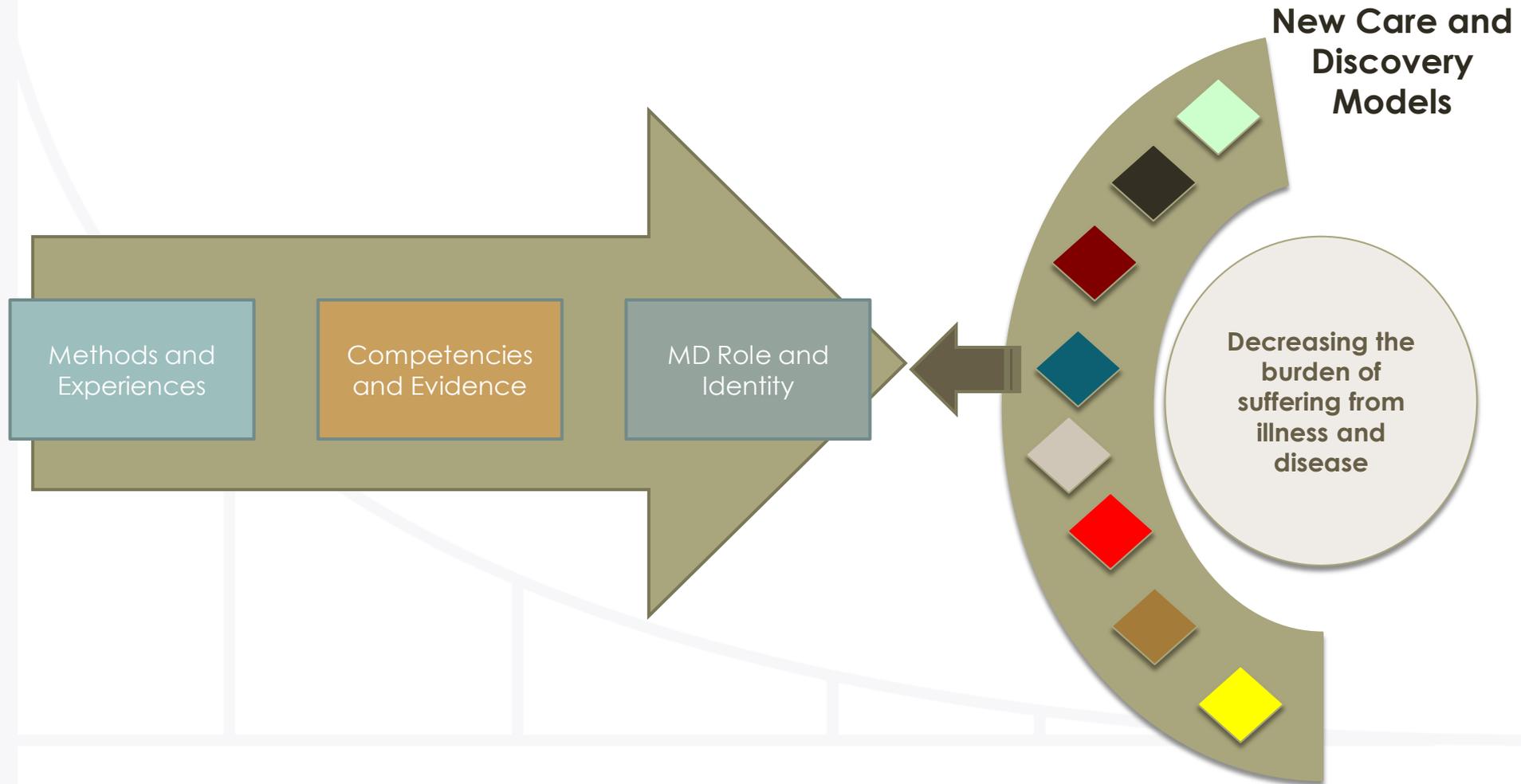
Decreasing the burden of suffering from illness and disease

Achieving the End Goal Means a Different Health Care System

New Models of Care Delivery

Decreasing the burden of suffering from illness and disease

And Fundamentally Different Physicians

New Care and Discovery Models

Methods and Experiences

Competencies and Evidence

MD Role and Identity

Decreasing the burden of suffering from illness and disease
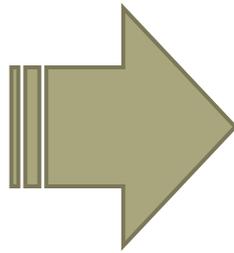
UCSF Catalyzes a Fundamental Shift in the Physician's Professional Identity

Solitary, Hero Physician

Collaboratively Expert Systems Physician

Collaboratively Expert 21st Century Physicians

Accountable for and focuses continuously on Patient and Populations Outcomes

Engage with other professionals in models of collaborative practice

Use diverse data sets to drive patient care and system improvement

Embrace redesign and re-monitoring as part of every day's work

Collaborate with other microsystems

Collaborate with biomedical scientists

Moving from:
20th Century Physician Competencies

Clinical Skills

Biomedical and Behavioral Sciences

- Skills needed to work effectively in IP teams to care for patients and populations and to engage in CPI

- Skills needed to diagnose, treat and support patients
- Personal dedication, empathy, and commitment to excellence

Systems Improvement Competencies

Direct Patient Care Competencies

TO: 21ˢᵗ Century Physician Competencies

Implementation Sciences

Biomedical and Behavioral Sciences

- Foundational knowledge to measure, evaluate and improve care

- Foundational knowledge to understand and explore disease and therapeutics

# Strategies to Address the Need for New Physician Skills

Existing

- Too abstract
- Too little
- Too late
- Too episodic
- Too inauthentic

New

- Apply principles of workplace learning
- Communities of Practice
- Developmentally appropriate and authentic roles
- Integration of Knowledge and clinical application

Communities of Practice:
Ideal Workplace Learning

Time, Engagement, Trust, Collaboration
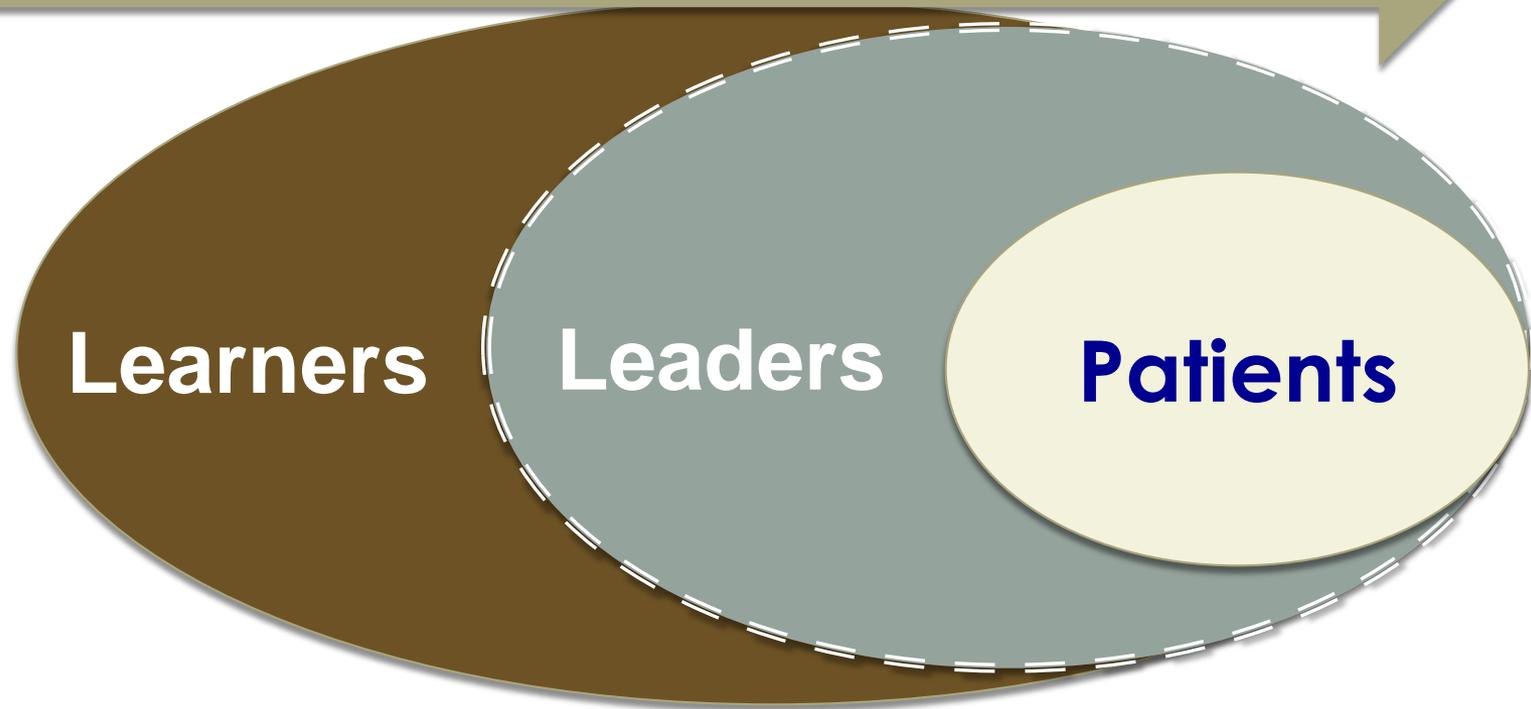
Learners **Leaders** **Patients**

Wenger, Etienne (1998) 'Communities of Practice. Learning as a social system', *Systems Thinker*, http://www.co-i-l.com/coil/knowledge-garden/cop/lss.shtml.

Take Steps to Turn Lurkers into Learners

Learners

Leaders

Patients

Wenger, Etienne (1998) 'Communities of Practice. Learning as a social system', *Systems Thinker*, http://www.co-i-l.com/coil/knowledge-garden/cop/lss.shtml.

Imbed students from day 1 in clinical microsystems in developmentally appropriate roles.

Work Place Learning Experiences

| Med 1a | Med 1b | Med 2a | Med 2b | Med 3 a |
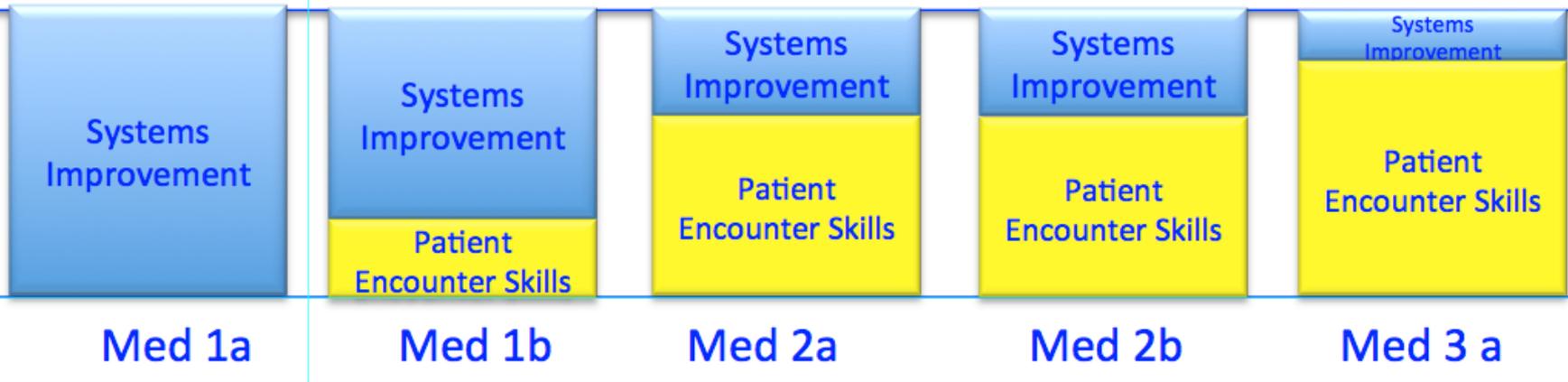
a and b represent different longitudinal microsystem assignments

Benefits to the Student

- Education is always driven by service to patients.
- Life long learning and inquiry are practiced from the start.
- Patient centered learning and improvement are the purpose of interprofessional work.
- Team based work facilitates care and learning

Preliminary Results

Med 1:
"Today was our last day in the clinic, and it proved to be a great culmination to our work at the clinic. It's amazing to think how much we have learned during our time at the clinic, and I think this aspect of the pilot has been successful in enabling Lauren and me to learn to be a part of health care teams, as well as increased our comfort level in acting within a health system - we've learned how patients are seen from the start of their visit to the end of their visit, and we've seen all the behind the scenes work necessary for patients to get the care they need."

"I really appreciated the debriefing that the medical assistant gave me after this patient encounter. She explained to me that I shouldn't be hesitant to speak loudly and be confident, especially because the patient can sense my confidence level. She complimented me on how quickly I picked up their "process" and even asked me if I thought she was a good teacher! This was humbling, since I did not think that an experienced medical assistant would care if I thought she was a good teacher."

Benefits to the system

- Constructs dynamic workplace learning environment

- Provides sustainable intervention force for important issues

- Demonstrates clear value of education to the institution

Accelerates the Transformation

From the nursing staff

This has been an experience unlike anything we have ever done before.
I also think we were fortunate to have amazing energy from all, including these students.
Thank you!

# Using Technology: Digital Learning Objects and Tools

- Allow students to participate in the workplace at peak times and study at slow times.

- Can support distance team learning

- Facilitate education of all members of team, not simply those enrolled in Med School

- Creates flexible learning strategies for different students.

Video Content
Digital Text Books
Webinars
Telemedicine

Future Goals: Learning Analytics

- Provides portfolio of experiences and data to drive personal learning
- Allows for individualized coaching and adaptive learning
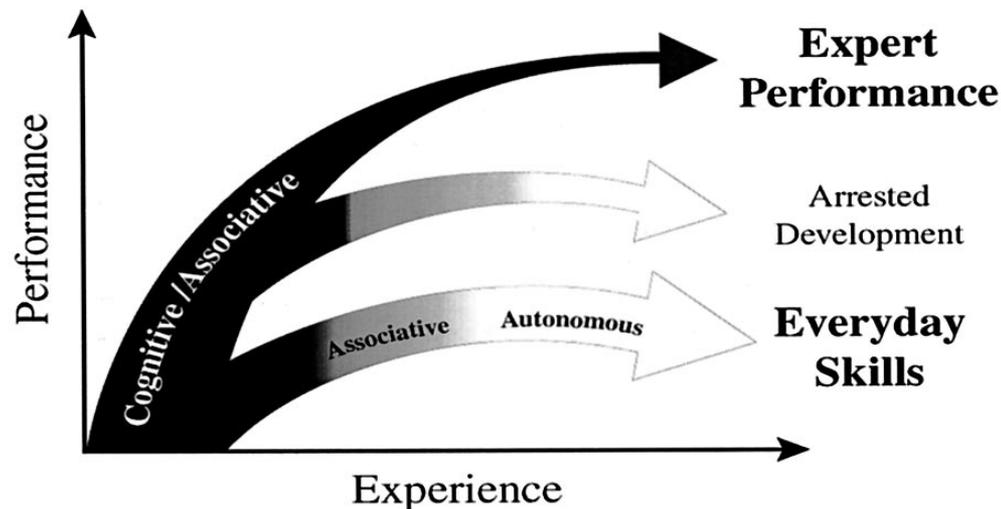
Medical Education Curricula must be explicitly designed to benefit patients, the delivery system and students

Pedagogy:
- **Integration**
- **Continuity**
- **Standardization**
- **Authentic Roles**
- **Inquiry**
- **Learning not Teaching**

- Align Systems & Educational Goals
- Longitudinal assignments
- Interprofessional mentorship
- Flexible Content Delivery
- Mastery Learning