

Two Birds and One Stone:

**Integrating Education and Clinical
Redesign to Achieve the Common Mission**

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Disclosures

A portion of my salary at the University of Nebraska Medical Center is reimbursed by the American Board of Internal Medicine:

- Academic Affairs
- Research



Objectives

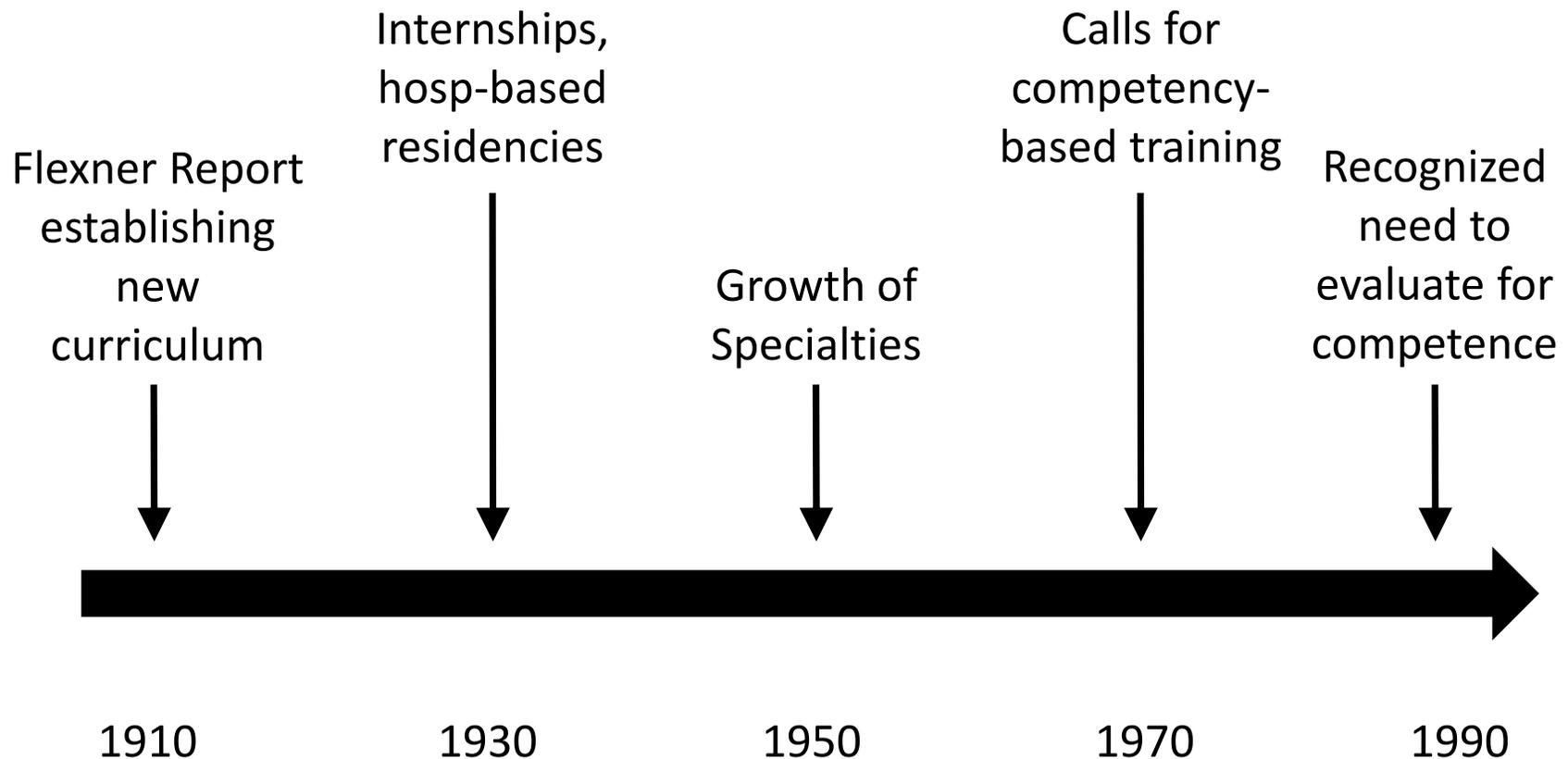
Appreciate the ongoing and active efforts at redesign of medical education and health delivery systems

Recognize how education redesign can facilitate redesign of the clinical delivery system and vice versa

Identify opportunities in which you can facilitate the alignment of the educational and clinical missions of teaching institutions



(Very rough) History of US Medical Education



Paradigm Shift of CBME



Competency-Based Medical Education

CBME is an outcomes-based approach to the design, implementation and evaluation of a medical education program using an organizing framework of competencies.

The International CBME Collaborators
Frank et al. *Med Teach*, 2010



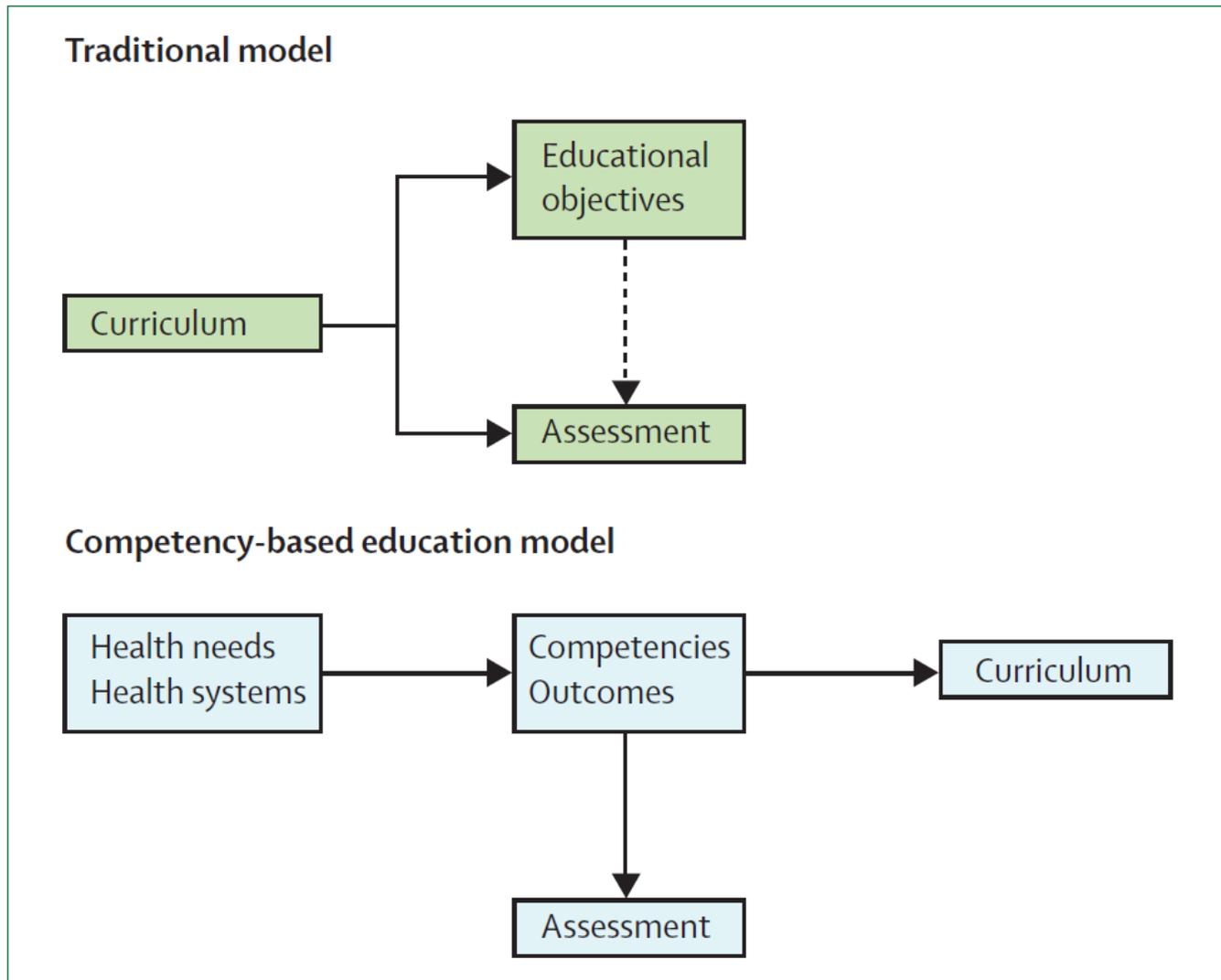
Traditional vs. CBME

Variable	Educational Program	
	Structure/Process	Competency-based
Curriculum	Content	Outcome
Goal of educ. encounter	Knowledge acquisition	Knowledge application
Assessment tool	Proxy	Authentic (mimic real tasks of profession)
Setting for evaluation	Removed (gestalt)	Direct observation
Evaluation	Norm-referenced	Criterion-referenced
Timing of assessment	Emphasis on summative	Emphasis on formative
Program Completion	Fixed time	Variable time

Adapted from: Carracchio et al. *Acad Med*, 2002



Traditional vs. CBME



Frenk et al.
Lancet, 2010

Curricular Redesign

In 2012, 75% of allopathic medical schools had initiated substantial curricular reform projects

- Earlier clinical experiences
- Integration of basic sciences and clinical care
- Interprofessional education

Dezee et al. *Med Teach*, 2012

Anderson & Kantner. *Acad Med*, 2010



Curricular Content

Emphasis on competencies beyond medical knowledge and direct patient care

- Teams and systems
- Value and Quality
- Transitions of care
- Health disparities, cultural competence, diversity



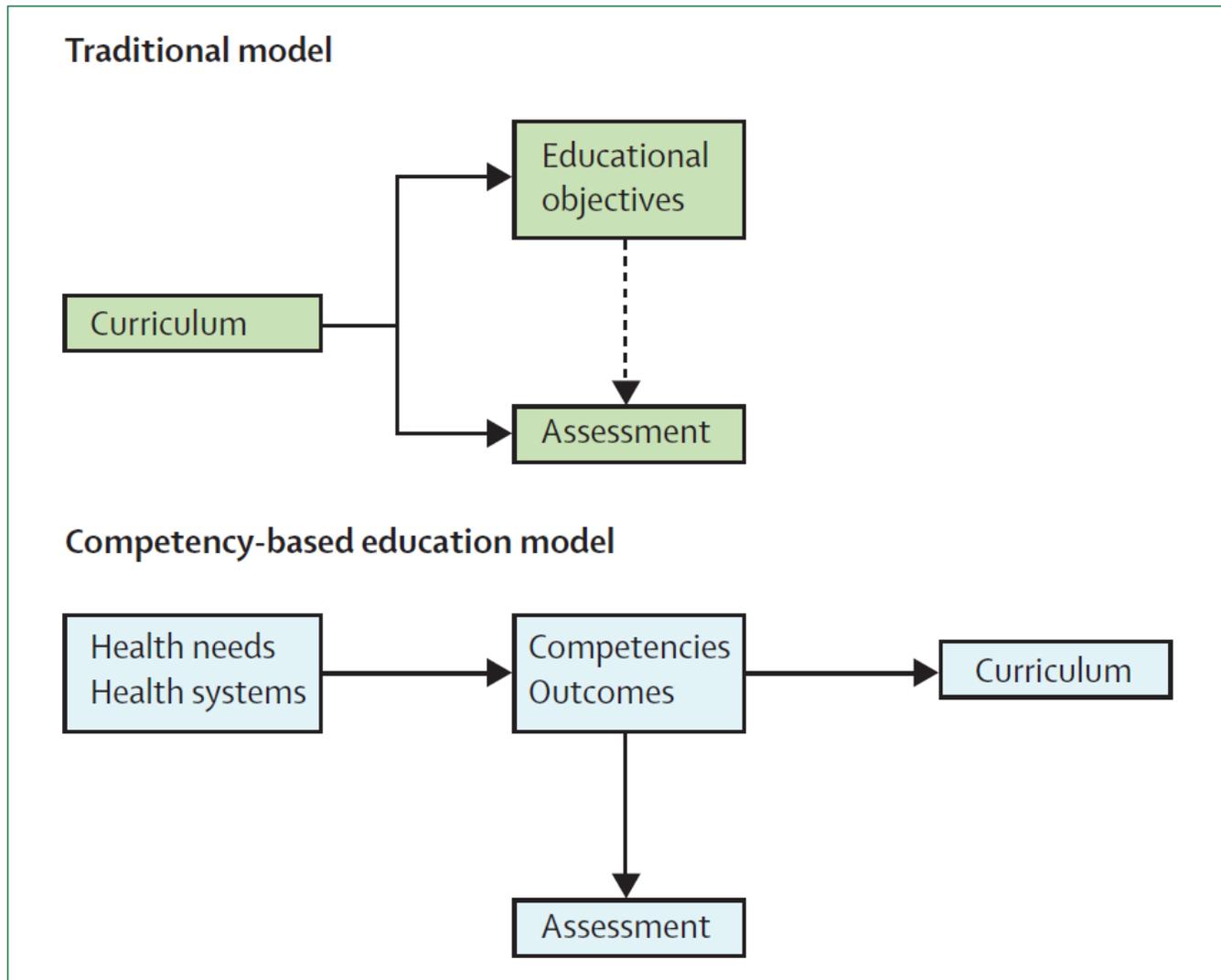
Curricular Structure

New pedagogical models that embrace technology and learning styles of new learners

- Simulation, virtual reality
- Problem-based and team learning
- “Flipped” classrooms
- Massive Open Online Course (MOOC)
- E-learning and modular formats



Traditional vs. CBME



Frenk et al.
Lancet, 2010

SPECIAL REPORT

The Next GME Accreditation System — Rationale and Benefits

Thomas J. Nasca, M.D., M.A.C.P., Ingrid Philibert, Ph.D., M.B.A., Timothy Brigham, Ph.D., M.Div., and Timothy C. Flynn, M.D.

In 1999, the Accreditation Council for Graduate Medical Education (ACGME) introduced the six domains of clinical competency to the profession,¹ and in 2009, it began a multiyear process of restructuring its accreditation system to be based on educational outcomes in these competencies. The result of this effort is the Next Accreditation System (NAS), scheduled for phased implementation beginning in July 2013. The aims of the NAS are threefold: to enhance the ability of the peer-review system to prepare physicians for practice in the 21st century, to accelerate the ACGME's movement toward accreditation on the basis of educational outcomes, and to reduce

LIMITATIONS OF THE CURRENT SYSTEM

When the ACGME was established in 1981, the GME environment was facing two major stresses: variability in the quality of resident education⁸ and the emerging formalization of subspecialty education. In response, the ACGME's approach emphasized program structure, increased the amount and quality of formal teaching, fostered a balance between service and education, promoted resident evaluation and feedback, and required financial and benefit support for trainees. These dimensions were incorporated into program requirements that became increasingly

Next Accreditation System - Aims

Enhance the ability of our peer-review system to prepare physicians for practice in the 21st century

Reduce the burden associated with the current structure and process-based approach to accreditation

Accelerate the ACGME's movement towards accreditation on the basis of educational outcomes



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A key element of the NAS is the measurement and reporting of outcomes through the educational milestones...

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Internal Medicine Milestones

1. Gathers and synthesizes essential and accurate information to define each patient's clinical problem(s). (PC1)				
Critical Deficiencies			Ready for unsupervised practice	Aspirational
Does not collect accurate historical data	Inconsistently able to acquire accurate historical information in an organized fashion	Consistently acquires accurate and relevant histories from patients	Acquires accurate histories from patients in an efficient, prioritized, and hypothesis-driven fashion	Obtains relevant historical subtleties, including sensitive information that informs the differential diagnosis
Does not use physical exam to confirm history	Does not perform an appropriately thorough physical exam or misses key physical exam findings	Seeks and obtains data from secondary sources when needed	Performs accurate physical exams that are targeted to the patient's complaints	Identifies subtle or unusual physical exam findings
Relies exclusively on documentation of others to generate own database or differential diagnosis	Does not seek or is overly reliant on secondary data	Consistently performs accurate and appropriately thorough physical exams	Synthesizes data to generate a prioritized differential diagnosis and problem list	Efficiently utilizes all sources of secondary data to inform differential diagnosis
Fails to recognize patient's central clinical problems	Inconsistently recognizes patients' central clinical problem or develops limited differential diagnoses	Uses collected data to define a patient's central clinical problem(s)	Effectively uses history and physical examination skills to minimize the need for further diagnostic testing	Role models and teaches the effective use of history and physical examination skills to minimize the need for further diagnostic testing
Fails to recognize potentially life threatening problems				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:				

Entrustable Professional Activities

“... identify the critical *activities* that constitute a specialty ... the *activities* of which we would all agree should be only carried out by a trained specialist.”

ten Cate et al.
Acad Med, 2007



EPAs as an assessment strategy

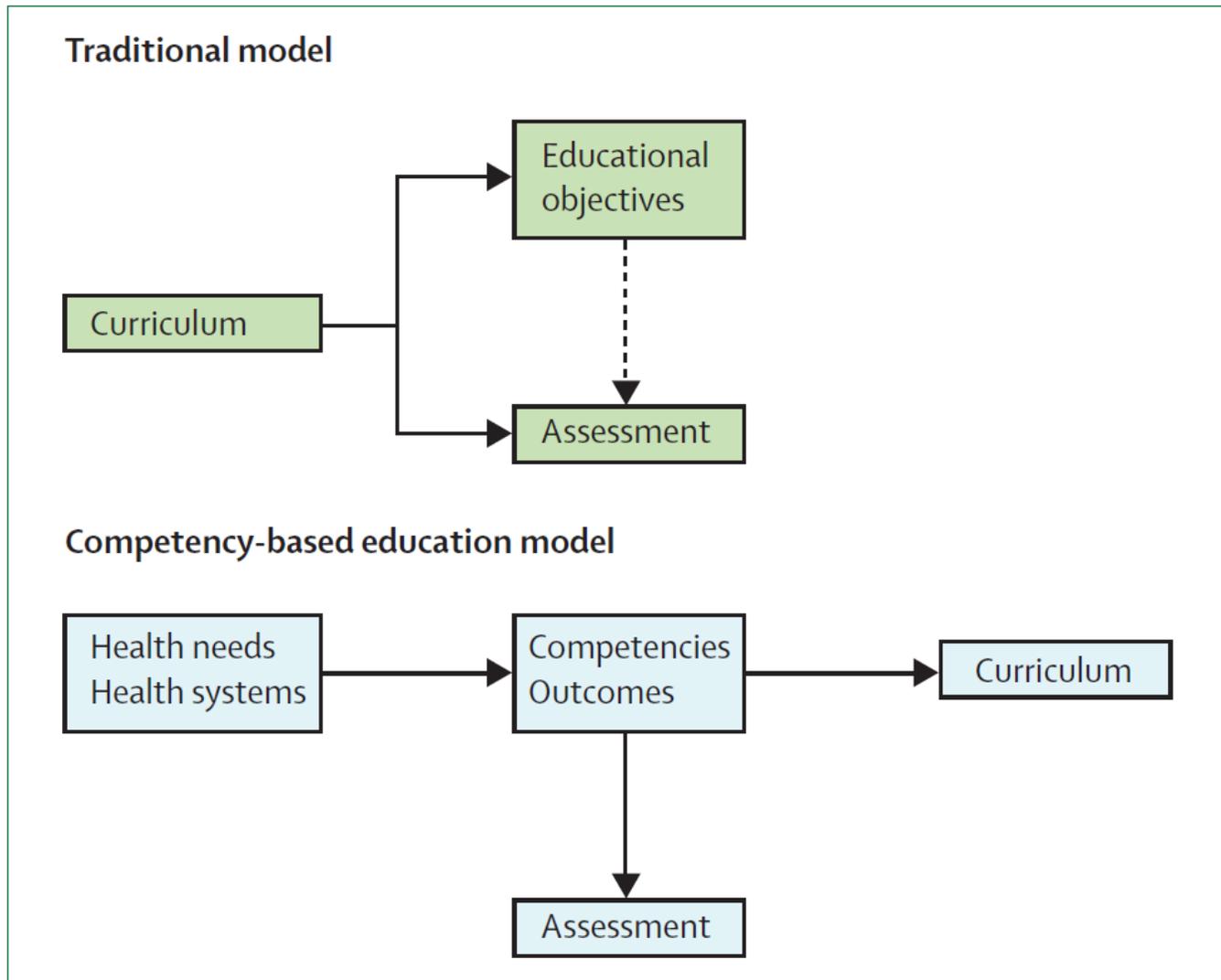
EPAs provide a meaningful context to a work-based assessment

Synthesize multiple competency domains

Reflect the desired outcomes of profession, public and policy-makers



Traditional vs. CBME



Frenk et al.
Lancet, 2010

Redesign in Medical Education

Competency-Based Medical Education (CBME)

- Focus is on outcomes
- Reflect health system needs

Curriculum and Assessment Reform

- Moving towards andragogy
- New curricular elements
- Milestones and EPA's

Regulatory Changes

- ACGME Next Accreditation System
- Maintenance of Certification
- Threats to GME funding



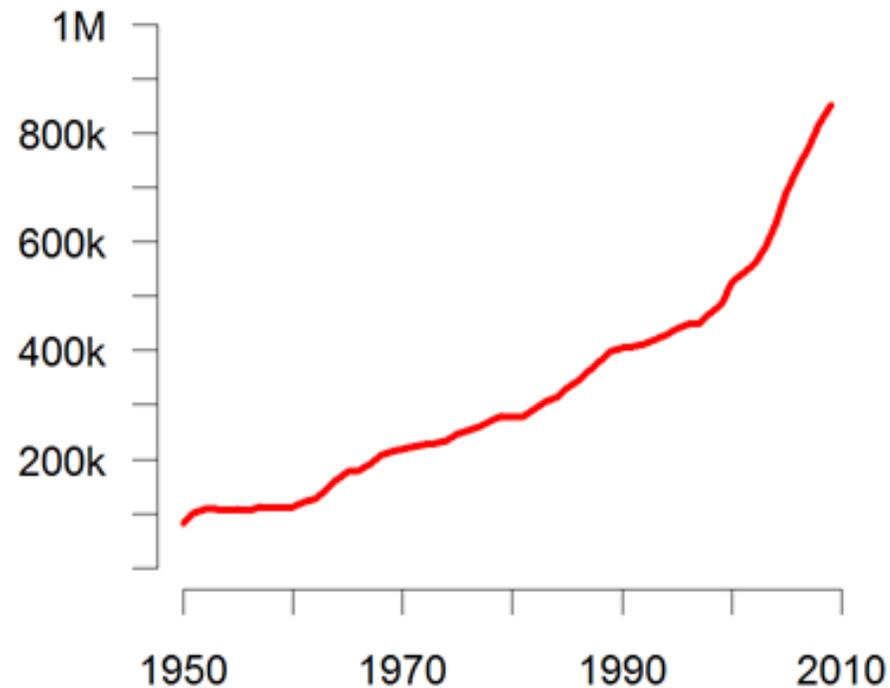
Education Redesign

What are the pressures driving this change?



Rapid Growth in Medical Literature

**MEDLINE-indexed articles
published per year**



<http://jasonpriem.org/2010/10/medline-literature-growth-chart/>



Gaps in Individual Physician Readiness for “Unsupervised Faculty”

Office-based practice competencies

- Inter-professional team skills
- Clinical information technology skills
- Population management skills
- Reflective practice and CQI skills

Care coordination

Continuity of care

Leadership and management skills

Systems-thinking

Procedural skills



Deficiency in surgical skills for graduates

Subspecialty surgical fellowship director questionnaire:

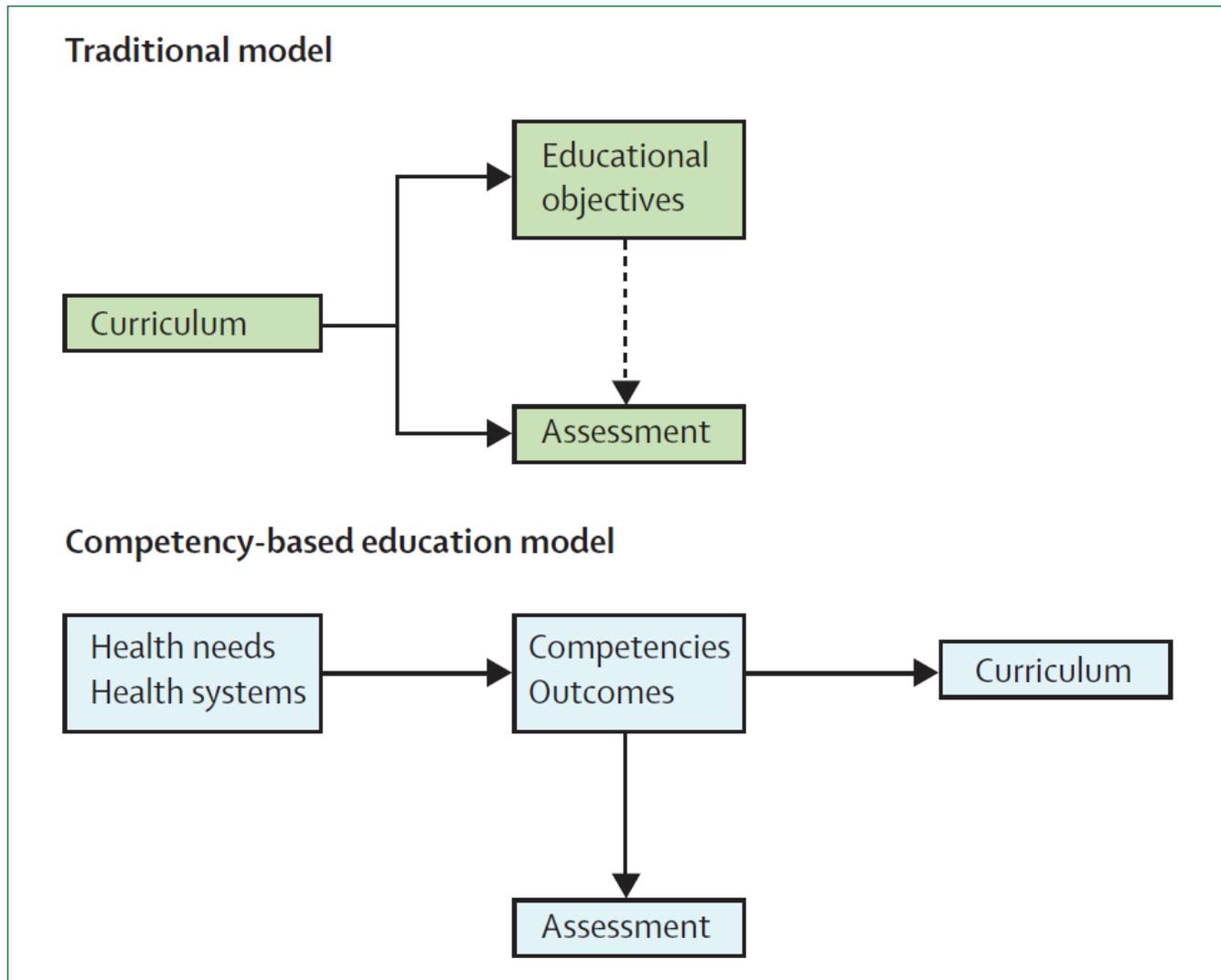
- 21% unprepared for the operating room
- 38% lack of patient ownership
- 30% could not perform a lap chole
- 66% unable to operate for 30 unsupervised minutes
- 28% not recognize therapeutic options
- 24% unable to recognize early complications



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Imperative for Education Redesign

Medical education has not sufficiently responded to:

- Shifting patient expectations and demographics
- Changing health delivery systems
- Quality improvement
- Use of new technologies

Summary: Medical education is not meeting the nation's health care needs

What are the nation's health care needs?



Healthcare Macrosystem

Includes patients, providers, insurers, employers, public programs (Medicare), medical suppliers, medical training and research institutions

Interact and partner for the socially desired purpose of improving the health of the population



Examples of Macrosystem Redesign

Affordable Care Act (ACA)

- Access to care through insurance
- Cost containment
- Accountable Care Organizations

New care delivery models (PCMH)

Meaningful use

Medical Education Redesign



Healthcare Microsystems

Small, functional, front-line units that provide the most health care to most people. They are the essential building blocks of larger organizations and of the health system.

The quality and value of care produced by large health systems can be no better than the services generated by the small systems in which it is composed.



Examples of Microsystem Redesign

High-value and cost-effective care

Patient experience

Population health

Handoffs at transitions of care

Improved access to non-emergent care



Does where you trained matter?

Maternal complication rates from hospital deliveries in Florida and New York from 1992-2007

>4.9 million deliveries by 4,124 physicians from 107 residency programs

Goal: compare patient clinical outcomes against where received residency training



-Substantial and stable differences in complication rates across programs

- Consistent across type of delivery ($p < 0.001$)

-Consistent across individual complication

- Adjusted for comorbidities and hospital characteristics

-No evidence of selection effects

Maternal Complication Rate

Residency Quintile	Rate	95% CI
1	10.3	(10.1-10.5)
2	11.3	(11.3-11.4)
3	11.9	(11.9-12.0)
4	12.4	(12.3-12.5)
5	13.6	(13.1-14.0)



Summary

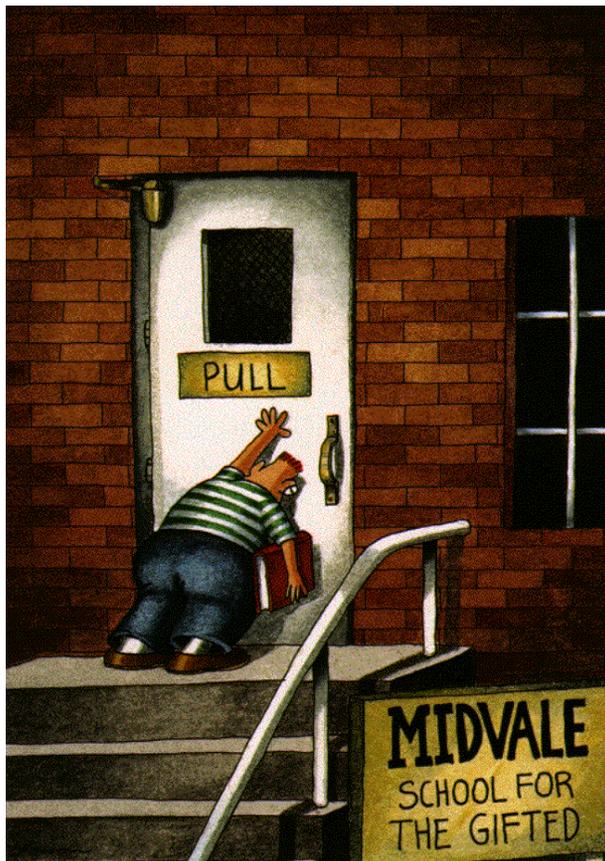
Education is evolving to achieve outcomes that meet the needs of health delivery system

Education is part of the larger health delivery system (micro- and macro-systems)

Clinical environment of training impacts the quality of care throughout a career



Isn't this obvious?



Not always the case...

CEO: "Isn't that
(education) what the
University does?"

Academic Leader:
"What do they (hospital)
care about education?"



To the CEO:

Trainees and faculty provide care for the health delivery system

Embracing educational mission is crucial to improving quality (academic and otherwise)

Education is part of the health system

These are your future providers!



To the Academic Leader:

New curricular structures or content areas alone won't improve the quality of students' education

Engaging in clinical improvement is necessary to teach and assess meaningful educational outcomes

Education is part of the health system

Training competent physicians requires that they train in competent systems!



Alignment and integration is necessary

Innovative solutions to common problems

Sharing of resources

We share a common mission to improve the health of the patients and populations that we serve!



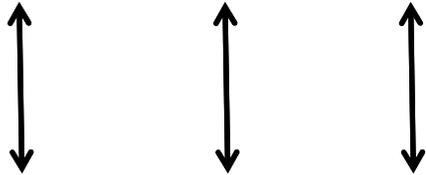
Discussion

What educational redesign efforts are you currently engaged?

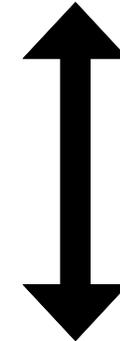
What clinical redesign efforts are you currently engaged?

Are they aligned? Should they be?





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Challenges to alignment and integration

Ongoing risk of the “unintentional marginalization” of education mission

Reliance on “Old Files” (i.e. the way it used to be)

Fear of Change (i.e. the way it needs to be)

Lack of trust regarding intent



Approach

Listen to needs of health system

Listen to concerns of educational leaders

Identify opportunities for health system redesign can drive education (e.g. quality)

Identify opportunities where education can drive health system redesign (e.g. patient experience)



Engaging Nebraska Medicine

Engage senior leadership – tie educational objectives to their bottom line

Transparent in my intent – prevent the unintentional marginalization

Demonstrate value – link to institutional objectives (improved margin, sustained quality, enhanced UHC scores, etc...)



Engaging UNMC

Engage educational leaders – especially
Academic Affairs

Transparent in my intent – prevent the
unintentional marginalization

Demonstrate opportunity – link to strategic
plan (interprofessional practice, clinical
training sites, faculty development, etc...)



Office of Health Professions Education

Purpose: Facilitate clinical and educational initiatives to achieve the common mission

- Recognition of priorities
- Recognition of opportunities
- Facilitate and drive innovation
- Not deliver or develop educational content
- Strategic and mission-focused

Lives within leadership structure of
Nebraska Medicine



OHPE Areas of Focus

1. Clinical Quality
2. Interprofessional Practice
3. Rural/Community Development
4. Maintenance of Competence



Shared Vision

Avoid having two visions

Incorporate leaders vision into document – they need to be able to see themselves and their transition in the document

Builds trust and transparency

Provided a license for others to explore, build and grow



Lessons Learned

Shared vision document for OHPE

Link alignment to existing structures or processes that are working well or could be enhanced (i.e. reinvestment)

Cannot communicate enough

Need more time! Competing priorities get in the way.



What does alignment mean for GIM?

Opportunity!

- Emphasize, enhance education
- Reward for educational excellence and leadership
- Education to drive quality
- Enhanced, personalized and individualized training
- Emphasis on outcomes is strategic for GIM



Medical Education: Part of the Problem and Part of the Solution

“The goal of medical education is not simply to produce physicians. It is to improve the health of our patients and their communities.

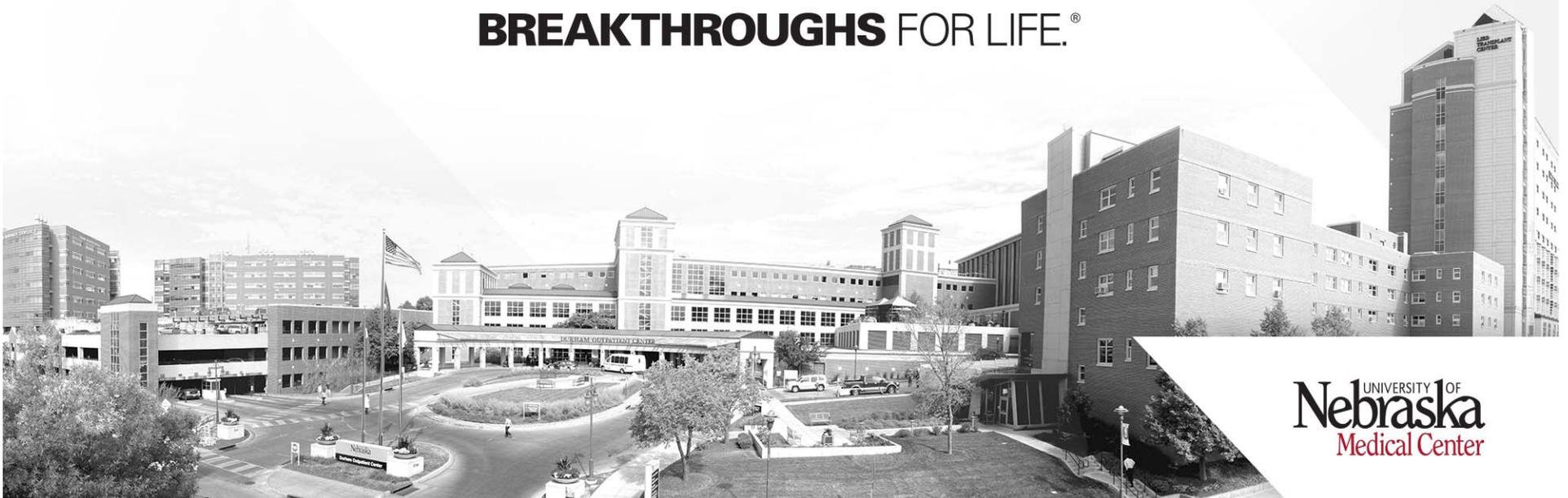
Achieving this goal means that we must pursue our education reform process with the end in mind: targeting the development of the physicians who can be successful in the 21st century health care environment rather than further refining our ability to produce the 20th century physician.”





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