2014 MMS Annual Oration

Medical Education Across the Continuum: A Snapshot in Time 2004-2014

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UMass Medical School
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Disclosure

I have no relevant financial relationships to disclose.

My roles
Senior Associate Dean for Educational Affairs
Executive Director, interprofessional Center for Experiential Learning and Simulation (iCELS)
Professor, Family Medicine and Community Health
UMass Medical School
Family Physician, Health Alliance Fitchburg Family Practice
Disclosure

Confluence of Interest

Education of medical students
Training the next generation of future physicians
....our replacements
What We Will Learn

- How changes in medical school curriculum impact residency; how residency training influences clinical practice, and how clinical practice informs continuing professional development.

- How interprofessional education is embraced across the educational continuum.

- How investments in educational assets (simulation) benefit physicians across the continuum of lifelong learning.

How ....

The MAP of change 2004-2014:
- where we are now, where we have been and may be going
- overview, not a systematic review

The MODEL of change:
- A “visual” model as conceptual framework for change

The DRIVERS of change:
- Key Educational Innovations
- Examples: what’s new, what’s cutting edge in educational innovation

PREVIEW 2024: The interview of the future 2024
- Reflect back and preview forward
- Today informing tomorrow
- Tomorrow informing today
### SNAPSHOT IN TIME, ALONG THE CONTINUUM

<table>
<thead>
<tr>
<th>THEN</th>
<th>NOW</th>
<th>TOMORROW</th>
</tr>
</thead>
<tbody>
<tr>
<td>1910…</td>
<td>2004</td>
<td>2014</td>
</tr>
<tr>
<td>2014</td>
<td></td>
<td>2024…</td>
</tr>
</tbody>
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#### UGC

- Stand-alone

#### 2000-2002
- IOM To Err is Human: Building a Safer Health System
- IOM Crossing the Quality Chasm: A New Health System for the 21st Century
- IOM Health Professions Education: A Bridge to Quality

#### 2000-2003
- ACGME: launch 6 GME competencies
- ABMS: endorses the 6 competencies for assessment of practicing physicians (acgme.org)
**SNAPSHOT IN TIME, ALONG THE CONTINUUM**

**THEN**

1910.....

Stand-alone

**NOW**

2004

Contiguous

**TOMORROW**

.....2024

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**2004-06 ACCME Report Competency and Continuum**

- Adoption of 6 competencies as CME accreditation criteria
- Collaboration w/other health professions
- Promoting lifelong learning and self assessment

**2006 & beyond: ABMS MOC required in all 24 certified specialties**

- Part I: Licensure & Professional Standing
- Part II: Lifelong learning and Self-assessment (CME becomes CPD)
- Part III: Cognitive Expertise
- Part IV: Practice Performance Assessment and Improvement

“Boards picking up where GME leaves off” (LE Peterson Acad Med 2014)

**2010 and ongoing: FSMB proposes Maintenance of Licensure concept**

- In coordination with ABMS and still evolving

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**SNAPSHOT IN TIME, ALONG THE CONTINUUM**

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**2010 Educating Physicians: A Call for Reform of Medical School and Residency**

Carnegie Foundation report

(D Irby, Acad Med 2010)

- Standardizing outcomes/individualizing learning; Competency-based vs time-based
- Multiple forms of integration: IPE & teamwork
- Habits of inquiry & improvement; Self-assessment & improvement, PS/QI
- Professional identity formation; Commitment to excellence

**2011 Core Competencies for Interprofessional Collaborative Practice**

report of an expert panel, IPEC (AAMC Interprofessional Education Collaborative Expert Panel, 2011)

- Nursing, osteopathy, dentistry, public health, medicine, pharmacy

**2012 AAMC CEI: Continuing Education & Improvement**

Transforming CME to QI and Performance Improvement principles
The 10 Year Snapshot of Med Ed
4 Drivers of Educational Innovation

1. IPE = **Team**-based learning
   “The need for persons trained in related health fields to work as members of the team under the leadership and coordination of the physician” The Coggeshall Report, AAMC 1965

2. Simulation = **Practice**-based learning ‘Practice makes perfect’
   “No excuse today for the surgeon to learn on the patient” William J Mayo, 1927

3. Competencies = **Outcome**-based learning
   “If you don’t know where you are going, you might wind up someplace else” Y Berra

4. Pt Safety and Quality = **Improvement**-based learning

The 10 Year Snapshot of Med Ed
IPE as a Driver of Educational Innovation

IPE: (WHO 2010, IPEC report 2011)
- "Students from two or more professions learn[ing] about, from, and with each other to enable effective collaboration and improve health outcomes"
- "A necessary step in preparing a ‘collaborative practice-ready’ health workforce that is better prepared to respond to local health needs."

IPE: A new LCME accreditation requirement for 2014-15 (lcme.org)

AAMC GQ of US grads 2011-14 (RR 80%): ‘At Least Some’ IPE Experience = 71.1%

<table>
<thead>
<tr>
<th></th>
<th>% ALL</th>
<th>% of those with IPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nursing</td>
<td>57.9</td>
<td>81.4</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>56.9</td>
<td>79.9</td>
</tr>
<tr>
<td>Physician Assistants</td>
<td>46.5</td>
<td>65.3</td>
</tr>
<tr>
<td>Social Work</td>
<td>36.8</td>
<td>51.7</td>
</tr>
<tr>
<td>Physical Therapists</td>
<td>34.8</td>
<td>48.9</td>
</tr>
</tbody>
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(Analysis in Brief AAMC Oct 2014)
The 10 Year Snapshot of Med Ed Simulation as a Driver of Educational Innovation

“Simulation ... a technique—not a technology
— Evokes/replicates substantial aspects of the real world in a fully interactive manner.” (D Gaba, Qual and Safety in Healthcare 2004)

Learning:
— From mistakes, safe to make mistakes
— ‘Deliberate’ practice, ‘til you get it right’

Technology enhanced simulation: improved outcomes compared to no intervention (Cooke, JAMA 2011)
— Across a range of health professions, clinical topics, and outcomes
— Large effect on clinician behavior
— Moderate effects on patient care

Conclusion: Simulation works

The 10 Year Snapshot of Med Ed Competencies as a Driver of Educational Innovation

Competency:
— Observable personal ability or quality, for all physicians
— Allows outcomes-based, time-variable assessment
— In place across the continuum: UME, GME, CPD

C-BME limitations:
— Applicability to real world practice
— Attributes, not activities
— Specificity to specialties (Carraccio / Grad Med Ed 2010)

Introduction of Entreatable Professional Activities: EPA’s
The 10 Year Snapshot of Med Ed
EPA’s as a Driver of Educational Innovation

EPA's:
- “Routine professional activities of physicians in their specialty”
- A bridge to professional practice: GME to CPD/MOC
- Pediatric hospitalist EPA: “Serve as the primary admitting pediatrician for previously well child suffering from common acute problems” (Carraccio J Grad Med 2010)

Entrustable:
- “unsupervised” practice, can be trusted to independently perform the activity. (Carraccio J Grad Med 2010)

Core EPA’s for Entry into Residency: CEPAER’s (AAMC 2014)
- A bridge from UME to GME
- What PGY1’s should do, day 1 of residency
- CEPAER example: Gather a history and perform a physical exam
  https://www.mededportal.org/icollaborative/resource/887

2014: Where We Are Now
Education and Integration Across the Continuum

Pt Safety/Quality= Improvement-based learning
IHI Triple Aim
(http://www.ihi.org/Engage/Initiatives/TripleAim/Pages/default.aspx)
Education and Integration Across the Continuum

- Pediatrics Redesign Project [D Powell AcadMed 2011]
- A pilot for competencies/EPA’s across the UME, GME, CPD continuum
  - Partnership with AAMC, ABP, ACGME and five med schools
  - Progress across the continuum based on EPA’s for general pediatrics
  - Enter yr 2 of med school and finish residency with completion of board certification requirements
  - Includes team based, IPE throughout
Education and Integration Across the Continuum

Maintenance of Certification in Anesthesia (asa.org)
- ‘MOCA’ Simulation as a part 4 (PPA and I) requirement, that includes:
  • Participants experience being the Anesthesiologist-in-charge
  • Managing difficult scenarios (e.g. hypoxemia)
  • Teamwork and communication
  • Post scenario debriefing with peer input

*The “Simulation for MOCA” video is rebroadcast with the permission of The American Board of Anesthesiology, Inc.*

MOCA Simulation

*The “Simulation for MOCA” video is rebroadcast with the permission of The American Board of Anesthesiology, Inc.*

Insert video here
SNAPSHOTS ALONG THE EVOLUTION

THEN  NOW  TOMORROW


U  G  C  U  G  PD  G  U  PD

SNAPSHOT IN TIME, ALONG THE CONTINUUM

2024
The interview of the future......
Thank You