Back to the Future: What’s New In Residency Education?

Marty McFly: Hey, Doc, we better back up. We don't have enough road to get up to 88.

Dr. Emmett Brown: Roads? Where we're going, we don't need roads.
Envisioning Tomorrow in Medical Education

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If you're teaching today what you were teaching five years ago, either the field is dead or you are.

-- Noam Chomsky, Linguist and Activist, MIT

Residents:
At the end of your internship, new first-year medical students would be entering a “new” curriculum. Four years after your internship the new interns would arrive with new lexicon, asking different questions than when you were an intern, and needing to build upon knowledge you just recently encountered. Your ‘scaffolding’ would be more mature and dynamic, but you would be exploring the newness of medicine together...and rapidly deploying new knowledge and practice to the next generation.
Evidence of this rapid cycle

- 5 years ago we had the Six Competency Domains but no common framework for assessment
- 5 years ago nearly 100% of medical schools maintained a “Flexnarian” 2+2 curriculum
- 5 years ago the Irby, Cooke & O’Brien Carnegie Report was not yet published
- 3 years ago EPA’s were conceptualized in the Netherlands
- 2 years ago no one had heard of “CLER” and its pathways to excellence
- Today, we’re exploring what NAS and the new LCME requirements mean
- The curricular, assessment and accreditation frameworks of medical education – at all levels – are changing rapidly...
Why should you care?

- Medicine is your discipline
- You shape your profession, each day
- Medicine is a major player in healthcare
- Human health is not getting any less complex
- Population is booming, and aging
- Population dynamics shift rapidly (war, economy, vaccinations)
- Disparities are prevalent
- A key element of evolution is spontaneity
“I don’t know who you are anymore”
Rapid Cycle

- How do we make sense of what is happening and where we are going?

- Roadmap
Roadmap to explore the unknown

- Examine the theory of innovation
- Who is David Irby?
- Ask, what are EPA’s?
- Consider whether we are midst a paradigm shift?
- Look at commonalities and uniqueness in Milestones
- Develop the “innovation” competency
- Wonder at the intersection of CLER, EPA’s and Milestones
One take-way?

Go back to your program and state:

“In addition to a better understanding of the milestones assessment system, I began developing my innovation competency.”
Teresa Amabile (1992) Harvard Business School
Three Antecedents to Innovation

- Flexibility & Creative Skills
- Expertise
- Motivation
Innovation model supposes collaboration

Creative skills:

- Questioning Assumptions
- Defining and Redefining Problems
- Encouraging Idea Generation
- Cross-Fertilizing Ideas

- But what is the goal of innovation?

Activity in 15 mins
Goal of Innovation?

- In medical education, this may be:
  - Better learning outcomes, quicker succession to clinical practice, and so on
  - Innovation theorists agree that the goal of innovation is to promote more innovators
Notes from an Innovative faculty member


1. Ask an unscripted question
2. Count something
3. Write something
4. Change

Let’s call these “habits of inquiry”
Which bring us to *Who is David Irby?*

Carnegie Foundation commissioned the 100-yr follow-up to the 1910 Abraham Flexner report (which resulted in the closure of 70% of the medical schools in the USA)

Irby et al, from UCSF reported (2010):

1. Standardize learning outcomes *AND* individualize the learning process
2. Adopt multiple forms of integration (disciplines/continuum)
3. Incorporate habits of inquiry and improvement
4. Focus on the development of professional identity
Standardize learning outcomes AND individualize the learning process

How? One example...

- Enter Olle ten Cate, Utrecht University of Applied Health Sciences (now hanging out with Irby at UCSF)
- Physician Assistant program, not time based, individualized and competency-focused
- “STARs” – statements of awarded responsibilities
- Entrustable Professional Activities (2013)
What are EPA’s?

- **tasks or responsibilities that can be entrusted to a trainee once sufficient, specific competence is reached to allow for unsupervised execution**

Examples:
- M3 – gathering a history independently?
- Intern – writing orders on a patient?
- PGY-2 – disclosing an adverse event to a patient?
The P in EPA

- Professionalism
- Generational definition and clarity
- Professionalization over time
- Elements of professionalism -- ?
Paradigm Shift?

- First, before we wonder whether we are midst a paradigm shift in medical education, let’s review the terminology
Some terminology
(from epistemology/theory of knowledge)

- Paradigms
- Theoretical perspectives
- Conceptual frameworks

Thomas S. Kuhn, historian of science, in his book “The Structure of Scientific Revolutions” (1962) outlines the differences between paradigms, theoretical perspectives, conceptual frameworks
Hierarchical constructs

Paradigms

Theoretical Perspectives

Conceptual Frameworks
For example...one well-known paradigm shift

- The Copernican Revolution was an advancement to a new paradigm to understand our planets relationship to the other celestial entities.

- Copernicus (b. 1473- d. 1543) could not produce evidence for his theory that the earth was in orbit around the sun.

- The paradigm shift became possible when Galileo Galilei’s (b. 1564 – d. 1642) mathematical observations were refined by Isaac Newton (b. 1642 – d. 1727).

- This represents a 250 year process for a paradigm shift (in relation to what now is grasped intuitively by 3rd grade learners).
Paradigm shifts in medical education?

- 1910 Abraham Flexner report under the aegis of the Carnegie Foundation (Carnegie Bulletin number 4)

- 2010 Carnegie Report; Irby, Cooke & O’ Brien

- Might the refractory period of paradigm shifts shorten?
Shift in conceptual frameworks for assessment

- From Likert to Dryfus
  - Rensis Likert, Columbia University, pioneered the use of the Likert rating scale system in the 1930’s/40’s/50’s
  - The Dryfus Brothers, UC-Berkeley, proposes a new model in 1980 for the US Air Force
In this review, I'll pretend I can accurately characterize you with a two-digit rating and you pretend this is a meaningful process of self-reflection.
Dryfus Scale – intuitive and relevant

Mastery
Expertise
Proficiency
Competence
Novice
So, milestones...

- We found that milestones in specific disciplines tended to reflect semantics in that discipline; though there was not uniformity in language across disciplines.

- Some milestones were highly specific and detailed, others were highly vague.

- Let’s examine what some consider the quintessential Pediatrics “milestone”
Interpersonal Communication Skills

- ICS2. Demonstrate the insight and understanding into emotion and human response to emotion that allows one to appropriately develop and manage human interactions

- First, what does this mean to you?

- How would you entrust an intern or junior resident to do this?

- Are there similar milestones in other disciplines?
ICS2. Demonstrate the insight and understanding into emotion and human response to emotion that allows one to appropriately develop and manage human interactions

<table>
<thead>
<tr>
<th>Not yet Assessable</th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
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<td>Does not accurately anticipate or read others’ emotions in verbal and non-verbal communication; is unaware of one’s own emotional and behavioral cues and may transmit emotions in communication (e.g., anxiety, exuberance, anger) that can precipitate unintended emotional responses in others; does not effectively manage strong emotions in oneself or others.</td>
<td>Begins to use past experiences to anticipate and read (in real time) the emotional responses in himself and others across a limited range of medical communication scenarios, but does not yet have the ability or insight to moderate behavior to effectively manage the emotions; strong emotions in oneself and others may still become overwhelming.</td>
<td>Anticipates, reads, and reacts to emotions in real time with appropriate and professional behavior in nearly all typical medical communication scenarios, including those evoking very strong emotions; uses these abilities to gain and maintain therapeutic alliances with others.</td>
<td>Perceives, understands, uses, and manages emotions in a broad range of medical communication scenarios and learns from new or unexpected emotional experiences; effectively manages own emotions appropriately in all situations; effectively and consistently uses emotions to gain and maintain therapeutic alliances with others; is perceived as a humanistic provider.</td>
<td>Intuitively perceives, understands, uses, and manages emotions to improve the health and well-being of others and to foster therapeutic relationships in any and all situations; is seen as an authentic role model of humanism in medicine.</td>
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Yes, in psychiatry and surgery

- PSYCH MK1. Development through the life cycle (including the impact of psychopathology on the trajectory of development and development on the expression of psychopathology)

- SURGERY PROF2. Maintenance of Physical and Emotional Health
Wait, what just happened?

- Unique milestone in Pediatrics
- Connected to milestones in psychiatry and surgery
- But in three different competency domains:
  - Interpersonal and Communication Skills
  - Medical Knowledge
  - Professionalism
Evidence of re-defining Medicine?

- Milestones can be seen as the 2014 statement by RRC’s on what constitutes medicine in each of the represented disciplines

- Fabric of the profession
Let’s for a moment go back to being innovative….

- Questioning Assumptions
- Defining and Redefining Problems
- Encouraging Idea Generation
- Cross-Fertilizing Ideas

**Activity:**

In trios, define something that is either outdated in medicine/pediatrics or that has been updated in the last two/three years. Discuss a plan to educate students & interns (or parents/children) about this concept/construct.
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Quick review

- We established there is a rapid cycle of change in medical education
- Determined that you do care because you shape your profession
- Examined innovation theory
- Listed creativity skills
- Explored habits of inquiry
- Reviewed the four recommendations for the future of medical education (Irby)
- Defined EPA’s
- Considered paradigms and shifts in med ed
- Discussed new frameworks for assessment
- Compared and contrasted peds related communications milestones
- Planned new curriculum for peds interns
Next CLER, and the nexus of CLER/EPA’s and Milestones
Next Accreditation System of ACGME

- Two major components:
  - Milestones (common assessment framework)
  - Clinical Learning Environment Review

- Milestones focus on resident learning outcomes and the programs’ continuous tracking of resident growth
- CLER attends to the broader clinical environment within which the programs exist – in our context two distinct hospital systems
Impetus

- Impetus revolves around the idea of greater integration of residents (thus residency programs) into hospital systems in a meaningful way.

- Scale of the issue: 117,000 resident and fellow physicians in the USA.
Issues CLER addresses

- Who and what from the hospital/medical center’s infrastructure designed to address the six focus areas?

- How integrated is the GME leadership and faculty in hospital/medical center efforts across the six focus areas?

- How engaged are the residents and fellows?
Infrastructure of CLER

- 6 focus areas
- 34 pathways to excellence
- Site visit, review and feedback
Six Focus Areas

1. Patient Safety
2. Healthcare Quality
3. Care Transitions
4. Supervision
5. Duty Hours/Fatigue Management/Mitigation
6. Professionalism
More robust accountability in medical education?
Process Change?

EPA’s

Milestones

CLER

Patient Outcomes?
Responsibility of everyone in medical education....

- To determine the relationship between the various dynamics and patient care

- Suggest using the following skills:
  - Questioning Assumptions
  - Defining and Redefining Problems
  - Encouraging Idea Generation
  - Cross-Fertilizing Ideas
Questions and Discussion

Feel free to contact me:

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