Lost in Transition: Is It Time to Confront Our Assumptions About the Design of Residency Training?

ICRE
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Disclosures

- Employed by the American Board of Internal Medicine
- I receive royalties from Mosby-Elsevier for a textbook on assessment
- I am a member of the board of NBME and Medbiquitous
Outline

- Summary of the 2010 Flexner report
- Transitions in medical education
- Transitions from three perspectives
- Transitions, deliberate practice & supervision
- Impact of rotational transitions
- Confronting our assumptions
Medical Education Architecture

Medical School
Third Year Clerkship Example

Career Transition

Post-Graduate Training
Residency Year Example

Internal Medicine
Surgery
Ob/Gyn
Psych
Peds
Other

Ward
Ward
Elec
Onc
ED
CCU
Ward
Elec
Ward
Ward
ICU
Amb

Weekly half-day ambulatory clinic

“On Call”
Handoff
Post-call
Handoff
Night Float
Handoff
Clinic

Daily-type Transitions

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The “Miracle” of Medical Education

“L Think You Should Be More Explicit Here In Step Two.”
Nostalgialitis Imperfecta

- Syndrome characterized by the following signs and symptoms:
  - “When I was an intern…<insert superlative>”
  - “Medicine was so much better 25 years ago”
    • Reality: Not really…
  - “Look how I turned out – rotations certainly worked for me…”

![Image of Marcus Welby, M.D. and Doctor in the House]
The “Big Assumption as Truth”

- We operate on many assumptions that over time become “truth” without our testing or questioning the veracity of those assumptions
  - Test assumptions as assumptions

- Immunity to change
  - Preservation of status quo through fear
  - More comfortable to stay with familiar even when status quo isn’t effective

Kegan and Lahey. *The Way We Talk Can Change the Way We Work; Immunity to Change*. 
Educating Physicians:
The “2010 Flexner Report”

Cooke, Irby and O’Brien
“Can medical education’s illustrious past serve as an adequate guide to a future of excellence? Flexner asserted that scientific inquiry and discovery, not past traditions and practices, should point the way to the future in both medicine and medical education…”

Educating Physicians

 “…Medical training is inflexible, excessively long, and not learner-centered. We found that clinical education is overly focused on inpatient clinical experience, supervised by clinical faculty who have less and less time to teach and who have ceded much of their teaching responsibilities to residents, and situated in hospitals with marginal capacity to support their teaching mission.”
Recommendations

- Standardize learning \textit{outcomes} through assessment of competencies
- Individualize learning \textit{process} within and across levels
- Incorporate interprofessional education and teamwork into curriculum
- Prepare learners to attain both routine and adaptive forms of expertise
Recommendations

- Engage learners in initiatives focused on population health, quality improvement and patient safety
- Locate clinical education in settings where quality patient care is delivered, not just in university teaching hospitals
- Address the underlying messages expressed in the hidden curriculum
# Medical Education Architecture

## Medical School
- Third Year Clerkship

## Post-Graduate Training
- Residency Year Example

### Internal Medicine
- Surgery
- Ob/Gyn
- Psych
- Peds
- Other

### Ward
- Ward
- Elec
- Onc
- ED
- CCU
- Ward
- Elec
- Ward
- Ward
- ICU
- Amb

### Weekly half-day ambulatory clinic

### "On Call"
- Handoff
- Post-call
- Handoff
- Night Float
- Handoff

### Daily-type Transitions
- Clinic
Med School to Residency: Clinical Skills

- Stillman (Ann Intern Med; 1990)
  - Wide variability in clinical skills near graduation
- Sachdeva (Arch Surg; 1995)
  - Wide variability in surgery intern skills
- Lypson (Acad Med; 2004)
  - Wide variability of basic skills needed to start internship among new interns at University of Michigan on “entry” OSCE
  - Growing # of programs using “orientation OSCE” – is this the right answer?
Medical Education Architecture

Is this still the best educational model?
Frequent Rotations: Assumptions

- Allow for greater diversity and breadth of exposure to different disciplines in medical school, and as a mechanism in residency to develop expertise
- Effectively teach residents how to adapt and cope with multiple practice styles, varying expectations and stress
- Promote greater trainee independence in action by forcing them to adapt and learn on their own
Transitions: Three Perspectives

- Sociological
- Learning Theory
- Quality and Safety

Transitions: Sociological

- Importance of relationships for both learning and patient care
  - Transient encounters
    - Christakis: “hampers trainees” capacity to build relationships.
  - Changing conceptions of autonomy
    - MacDonald: “Relational autonomy”
  - Inter-professional teamwork
    - Baker: competencies of mutual trust, team orientation, shared mental models
Transitions: Learning

- Socio-cultural learning theories
  - Situated and distributed cognition
  - Regehr: too much focus on the isolated individual when learning occurs in dynamic and complex systems

- Deliberate practice and expertise
  - Ericsson: importance of DP, coaching and feedback on development of expertise

- Information sharing
  - Reluctance to “feed forward”
Transitions: Quality and Safety

- Importance of Microsystems on learning
  - Batalden et. al: effective Microsystems have strong teamwork, relationships and shared purpose

- Improving quality and safety is a team sport
  - Skills of PDSA, RCA, value-stream maps, etc. cannot be done alone effectively
Lessons from the Three Perspectives

- Relationships are critical and should be continuous
- Interprofessional teamwork essential to high-quality patient care and learning
- Deliberate practice and feedback essential
  - Quality supervision still matters
- Context and systems matter
  - Should be part of, not “adjusted” out of, the educational experience
Lost in Transition: The Experience and Impact of Frequent Changes in the Inpatient Learning Environment

The Impact and Experience of Frequent Transitions

- **Qualitative design;** 12 focus groups with residents, faculty, nurses, and mixed group.
  - 3 sites purposefully chosen
  - N=97 participants
  - Grounded theory

- **Goals to better understand:**
  - How trainees transition between systems,
  - Barriers and facilitators to transitions,
  - Strategies trainees use to transition, and
  - The impact of transitions on patients.
Trainee Coping and Adaptive Strategies

- Trainees resort to trial and error to ‘survive’ transitions
  - **Coping** skills include peer support, rationalization (i.e. “just the way it is”)
  - **Workarounds**
    - **Positive** (e.g. rounding on patients night before, making special arrangements to get to know nurses and/or staff)
    - **Negative** (e.g. lying, omitting information, cutting corners, trainees walking away from situations in which they were needed)
    - Faculty aware of these often counterproductive behaviors, but varying levels of responsibility and/or remediation described.
Impact of Transitions on Patient Care

- Some examples of positives (e.g. ‘fresh eyes theory’).
- Mostly negative implications:
  - “putting patients last”,
  - Inefficient, burdensome, redundant care,
  - Faulty communication processes, often due to complicated rotation schedule (e.g. paging trainees no longer in hospital),
  - Delayed or omitted treatment or interventions.
Faculty Involvement

- Participants, including the faculty themselves, described an extremely low level of involvement in supporting residents through transitions.
- 1 to 4 different attendings per 4 week block common
- Many faculty disclosed that they didn’t explicitly teach goals and expectations
  - “it is much more time-efficient to tell [residents] what you want them to do than it is to ask them what they think is going on”
- Faculty acknowledged they often hold residents to “standards that may not exist”
Traditional Approach to Supervision

- Execution of trainee clinical decisions and actions and subsequent review by faculty separated by variable time and space
  - The late night phone call with subsequent visit by the attending hours later during morning rounds (time and space)
  - Precepting in clinic without seeing the patient (space)
Problems with Traditional View

- Faculty inaccuracy in knowing trainee’s ability in key clinical skills
  - Multiple studies highlighting deficits
- Discordance between trainee and faculty judgment
  - Implications for patient care and safety
- Delayed feedback and learning
Underlying Beliefs and Assumptions

- Physician autonomy
- Graduated independence
  - Trainees have to make and execute decisions on their own, without interference, in order to “learn” (including mistakes)
- Supervision = “taking over” for the trainee; interference; dependence.
Progressive Independence: Kennedy

- Acad Med (2005): Limited empirical support for current models
  - However, educational theories support need for progressive independence
- JGIM (2007): Taxonomy of oversight activities
  - Mostly reactive in nature
- BMJ (2009): Trainee decision to seek help dependent on clinical question, supervisor and trainee factors
Deliberate Practice

Ericsson & Lehmann, 1996:
- “Individualized training activities especially designed by a coach or teacher to improve specific aspects of an individual's performance through repetition and successive refinement.
  - To receive maximal benefit from feedback, individuals have to monitor their training with full concentration, which is effortful and limits the duration of daily training”.

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Design and Sequencing of Training Activities

* Monitor students’ development
* Design and select training tasks for individual students

Expert performance

Deliberate practice

Gradual improvement in some specific aspect

Performance

Amount of Deliberate practice

Professional teachers and coaches

From Anders Ericsson: Used by Permission
“Every system is perfectly designed to achieve the results it generates.”

Paul Batalden
The Harvard Medical School-Cambridge Integrated Clerkship

David Hirsh, MD
Co-founder and Director
Harvard Medical School-Cambridge Integrated Clerkship
The Harvard Medical School-Cambridge Integrated Clerkship
Longitudinal care in Internal Medicine

Structured Student Cohort

Internal Medicine Preceptor

Other Faculty and Consultants

- Patient with Diabetes, PVD
- Patient with Chronic Lung Disease
- Patient with CVA
- Patient with Headaches
- Patient with Weight Loss
- Patient with Lung Nodule

Follow Patients Through All Venues of Care
<table>
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<tr>
<th>Time</th>
<th>Mon</th>
<th>Tues</th>
<th>Wed</th>
<th>Thu</th>
<th>Fri</th>
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<td>Master Clinician Rounds</td>
<td>ED, Surg, Ped call 1 weekend per month</td>
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<td>Ob/Gyn</td>
<td>Longitudinal Care</td>
<td>Medicine</td>
<td>Tutorial</td>
<td>ED, Surg, Ped call 1 weekend per month</td>
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<td>Pediatrics</td>
<td>Psychiatry</td>
<td>Radiology and Pathology Rounds</td>
<td>ED, Surg, Ped call 1 weekend per month</td>
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<td>Pediatrics</td>
<td>Psychiatry</td>
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<tr>
<td>Eve</td>
<td>ED, Surg, Ped call 1 night per week</td>
<td>Basic Science Journal Club Monthly</td>
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<td>ED, Surg, Ped call 1 weekend per month</td>
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</tbody>
</table>

“If you want to make enemies, try to change something.”

Woodrow Wilson
Change and the Grief Reaction

- Denial
  - “Unfunded mandate”
  - “I can’t and we shouldn’t”

- Anger
  - “We need better tools”
  - “Evolution, not transformation”

- Bargaining
- Depression
  - “I need help to do this”

- Acceptance
  - “I can do this – it is an opportunity”
Leadership is Dangerous

“People do not resist change per se. People resist loss. You appear dangerous to people when you question their values, beliefs or values of a lifetime. You place yourself on the line when you tell people what they need to hear rather than what they want to hear. Although you may see with clarity and passion a promising future of promise and gain, people will see with equal passion the losses you are asking them to sustain.”

“If we pull this off, we’ll eat like kings.”
Questions