Part 1: Problems with the Current System

Reflection #1:

Think of what you learned in medical school versus how you practice medicine. What would you change if you had to start from scratch?
Health Systems Science

“The principles, methods and practice of improving quality, outcomes and costs of health care delivery for patients and populations within systems of medical care.”


Health Systems Science

- Core Domains
  - Health care structures and processes
  - Health care policy, economics and management
  - Clinical informatics & health information technology
  - Population health
  - Value-based care
  - Health system improvement

- Cross Cutting Domains
  - Leadership and change agency
  - Teamwork and inter-professional education
  - Evidence-based medicine and practice
  - Professionalism and ethics
  - Scholarship
Some Informatics Competencies

- Find, search and apply knowledge-based information to patient care and other tasks
- Effectively read and write from the electronic health record for patient care and other clinical activities
- Use and guide implementation of clinical decision support systems
- Provide care using population health management approaches
- Protect patient privacy and security

[Advances Med Ed Practice 2014; 5:205-212]

Sandbox to Learn to use an EHR

Other HSS Innovations

- IPE foundations course on patient safety
- QI/PS elective in neonatology
- Students as patient navigators (SNaP)
- Faculty development related to quality and improvement science (FISC)
- Aligning student assessment systems
  - OSCEs emphasizing value-based care
  - New NBME health system science exam
- In the pipeline: QI boot camp for GME
Reflection #2:

Think of your transition to residency. How well were you prepared for July 1st?
Goal of YourMD

Effectively prepare the MD graduate for residency training and professional practice to best serve and meet the needs of society in the 21st century

Principles of YourMD

- Learner-centered
- Active learning methods
- Core knowledge, skills and attitudes with opportunities for individualization
- Integrated basic, clinical, health systems sciences
- Competency-based
- Critical thinking, inquiry, and lifelong learning

Your MD is for:

- Students – customized path to M.D.
- Faculty – developed by faculty
- Society – produce physicians with knowledge, skills and attitudes that society needs most in 21st century

State of Oregon
Example of New Clinical Experiences to Better Prepare Medical Students for Residency

Pediatrics Quality Improvement & Patient Safety
- Improvement Science
- Teamwork
- Quality improvement in practice
- Kaizens

Part 2: Data and Information to Future Supervisors / Employers
ACGME/ABMS Domains of Competency

- Patient Care and Procedural Skills
- Medical Knowledge
- Practice Based Learning & Improvement
- Interpersonal and Communications Skills
- Professionalism
- Systems-based Practice

43 Competencies for OHSU MD Graduates

Students will need to be "entrusted" for all 43 in order to graduate

OHSU’s Electronic Portfolio

[Graph showing data and progress]
In a Competency-Based, Time-Variable Framework, Learners Require (Frequent) Performance Data

Show Me The Data!

(Tom Cruise in Jerry Maguire)

Excerpt from the OHSU Medical Student Handbook

<table>
<thead>
<tr>
<th>Competency Domain: Interpersonal and Communication Skills (ICS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 ICS 1 – minimum of 6 different assessors in a variety of clinical contexts</td>
</tr>
<tr>
<td>21 ICS 2 – minimum of 3 different assessors in a variety of clinical contexts</td>
</tr>
<tr>
<td>22 ICS 3 – minimum of 3 different assessors in a variety of clinical or non-clinical contexts</td>
</tr>
<tr>
<td>23 ICS 4 – minimum of 3 different assessors in a variety of clinical contexts</td>
</tr>
<tr>
<td>24 ICS 5 – minimum of 7 different assessors in a variety of clinical contexts</td>
</tr>
<tr>
<td>25 ICS 6 – minimum of 3 different assessors in a variety of clinical contexts</td>
</tr>
<tr>
<td>26 ICS 7 – minimum of 3 different assessors in a variety of clinical contexts</td>
</tr>
<tr>
<td>27 ICS 8 – minimum of 3 different assessors in a variety of clinical contexts</td>
</tr>
</tbody>
</table>
Example of Portfolio Data for a Current 3rd Year Medical Student

Wait Just a Minute! You Want to Share WHAT with WHOM?

- Historically, supervisors of future learning have not been privy to any:
  - Past grades
  - Learning outcomes
  - Competencies
  - Areas of deficiencies

- Learner concerns - biasing current rotation evaluators, fears of profiling instead of learning. Horrified at feed forward practices.

Example of Portfolio Data for a Current 3rd Year Medical Student

Wait Just a Minute! You Want to Share WHAT with WHOM?

- Share competency attainment and performance data with next rotation director? Direct attending supervisor? Nursing or other Healthcare Colleagues? Patients?

- Whose job is it to drive authentic workplace-based learning?
What is an EPA?

An Entrustable Professional Activity is a “unit of professional practice, defined as tasks or responsibilities to be entrusted to the unsupervised execution by a trainee once he or she has attained sufficient clinical competence.”

Olle ten Cate, 2013
Core Entrustable Professional Activities for Entering Residency
Curriculum Developers’ Guide
Figure 1. The relationships among the Core EPAs for Entering Residency to a medical school's graduation requirements, the EPAs for any physician, and specialty-specific EPAs.
**Entrustment Concepts**

- **Type of decision**
  - *Ad hoc* by supervisor in real time and done in authentic clinical settings (Ottawa)
  - Summative decision by institution made by OHSU’s Entrustment Committee (Chen)

- **Four key aspects**
  - Knowledge, skills and attitudes
  - Discernment
  - Truthfulness
  - Conscientiousness

**Clinical Supervisor Involvement**

- **I did it**
  - Student required complete guidance; was unprepared; I had to do most of the work myself

- **I talked them through it**
  - Student was able to perform some tasks but required repeated direction

- **I directed them from time to time**
  - Student demonstrated some independence; only required intermittent prompting

- **I was available just in case**
  - Student functioned fairly independently; only needed assistance with nuances or complex situations

**The Path to Entrustment**

OHSU will be using MedHub to allow supervisors to assess learners on a variety of mobile devices.
Vision of EPA Competency Curve

Modified from Ole Ten Cate

Competence
Threshold
Advancement (entrustment) decisions

Training deliberate professional practice

EPA1
EPA2
EPA3
EPA4
EPA5

Ability at EPA thresholds:

- EPA1: Gather a history and perform a physical examination.
- EPA4: Perform physical examination, clinical reasoning, and schedule patients.
- EPA3: Make basic advanced life support decisions.
- EPA2: Basic life support.
- EPA5: Advanced life support.

EPA Thresholds:

- EPA1: Gather a history and perform a physical examination.
- EPA4: Perform physical examination, clinical reasoning, and schedule patients.
- EPA3: Make basic advanced life support decisions.
- EPA2: Basic life support.
- EPA5: Advanced life support.

Entrustment Assessors

- Holistic EPA Assessment (Top Down)
  - In situ observation and judgment of specific EPA(s) for individual student (e.g., discusison, interactions, engagement)
- Entrustment Group Review
  - Longitudinal student performance & assessment data (IMSS)
  - Competency attainment
  - Abilities/predictions
  - Narratives
  - Entrustment assessor data

Award/Deny EPA Badge(s)

- Programmatic Entrustment
  - Entry to clinical experiences
  - Entry to subspecialties
  - Entitlement to graduate/enter residency

Qualifying Entrustment

- Multiple direct observers of student’s performance
- Required Number of “Entrustable” Milestones
  - By Competency
  - By EPA
  - Defined artifacts/evidence for each EPA

Entrustment Milestones:

- 43 UME Competencies
  - Ward rounds, Clinical reasoning, schedule patients

Milestone Assessments:

- Pre Entrustable
- Approaching Entrustable
- Entrustable
- Entrustable
- Entrustable
What Dashboards/Data do GME Program Directors Want? Need?

- “We know interns come into our programs with gaps in knowledge and skills. It would be lovely just to know what those are without having to spend first 6 months figuring that out!”
- “Think of residency like a garden…we want all plants to grow (learn) and be nourished. But we don’t even know what plants we are getting!”

Learner Handoffs

Current State
- Application
- Dean’s Letter (MSPE)
- USMLE scores
- Letters of recommendation
- Interviews
- Audition impressions
- All before the match and mostly considered with a skeptical eye

Future State
- Portfolio data that emphasizes EPAs
- Learner understands her/his areas that need improvement and seeks feedback and pathways to make improvements
- Post-match handoff with actual information about learner performance to guide future learning

Take Home Messages

- The OHSU School of Medicine is pushing the envelope with innovation, and is a national medical education leader
- A new emphasis on health system science
- Competency-based frameworks and data can facilitate information-sharing to future supervisors / employers
- Learner handoffs will include entrustment & EPAs
Thank You!
What Questions Do You Have?