LINKING COMPETENCY-BASED EDUCATION TO ADVANCEMENT

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We do not have an affiliation (financial or otherwise) with a pharmaceutical, medical device or communications organization.
Baystate Health

- BMC 659 beds
- Five hospital system
- Springfield, MA
- Umass Medical School-Baystate 2017
- 62 Internal Medicine residents
- 10 residencies/17 fellowships
- EIP program 2006
Agenda

- History of competency-based education (Eric/AKA Mike)
- The 10 year Baystate experience (Mike)
- Review a competency-based assessment methodology (and build your own) (Sudeep)
- Differentiate trainee competence utilizing milestones for educational plans (Alex)
CBME history and Basics
Early Principles: CBmE

- World Health Organization (1978):
  - “The intended output of a competency-based programme is a health professional who can practise medicine at a defined level of proficiency, in accord with local conditions, to meet local needs.”

CBME: Start with System Needs

COMPETENCIES

- Competency frameworks are just that – organizational frameworks to guide curriculum and assessment
- They **do not** represent the totality of a discipline or of all professional development
  - This important point got lost along the way...
- Competencies help to define the *educational outcomes* (abilities)
Linking Clinical and Educational outcomes

Triple Aim

Patient outcomes

Changes in professional practice?

What knowledge, skills and attitudes have they acquired as a result?

How did the learners react to the work-based learning experience? Was it enjoyable?

National Health Service – UK.
http://www.wipp.nhs.uk/tools_gpn/unit6_education.php
Fundamental Characteristics of CBME

- Graduate outcomes in the form of achievement of predefined desired competencies are the goal.

- Competencies are derived from the needs of patients, organized into a coherent guiding framework.

- Time is a resource for learning, not the basis of progression of competence.

- Teaching and learning experiences are sequenced to facilitate an explicitly defined progression of ability in stages.
Fundamental Characteristics of CBME

- Learning is **tailored** to the learner's individual progression in some manner.

- Numerous **direct observations** and focused **feedback** contribute to effective learner development of expertise.

- **Assessment** is planned, systematic, systemic, and integrative.
CBME Drivers

- Growing evidence and concern around quality and safety problems
  - Lack of attention to “21st century” competencies
- “Uneven” product
  - Too many trainees graduating with deficiencies
- Recognition of gaps in training
- Desire to improve educational and clinical outcomes
- Inflexible training models
  - “Pluri-potential stem cell” philosophy
- Costs of training, including debt
DYAD CONVERSATION

- What are your thoughts about CBME?
Chronology Vs. Competency
"I can do patient care on my own": autonomy and the manager role.
Our Journey

2004: medicine wards (hospital teams) restructured into three distinct transitions (Learner, Manager and Teacher)

Manager: builds on competencies mastered as Learner and prepares the resident for subsequent responsibilities as Teacher

Stepping stone for the development of competency based milestones at Baystate

2006: ACGME Educational Innovations Project (EIP) focusing on quality and outcomes in residency training

The Baystate Manager Model, Academic Internal Medicine Insight, Volume 5, Issue 2, 2007
Competency-Based Progression: Concept to Reality AAIM Insight, Volume 9, Issue 3, 2011
CanMEDS and ACGME Core competencies:

Medical Knowledge
Patient Care
Interpersonal Communication
Professionalism
Systems Based Practice
Practice Based Learning and Improvement

Medical Expert
Manager
Communicator
Professional
Collaborator
Health Advocate
Scholar
Demonstrates prioritization skills across medical care

On the basis of pre-rounding on one's panel, can create and implement an efficient workflow for optimum patient care

Milestone #18:
Patient Care

Systems based practice

Novice

Expert

* Does not consider competing priorities (acuity, location, discharge or new patient) when deciding the workflow

* With prompting can help develop order of care for a panel of patients based on multiple variables (e.g., stability, availability of labs, D/C status)

* Can independently develop order of care for a patient or patient panel based on medical issues

* Can direct care of patients with reference to availability of laboratory results or discharge status

* Can direct learner to put together an efficient order of managing a patient or a panel of patients
Education

- **Learners:** foundational skills and knowledge (*building basics*)
  - Stabilize patients
  - Initial treatment/diagnosis
  - Competent with simple
  - When to call for help
  - *Dependent with Direct Supervision*

- **Managers:** build on foundational skills through complex cases (*building experience/confidence*)
  - *Independent with Indirect Supervision*

- **Teachers:** begin to master complex cases, flexible and have the experience to teach Learners effectively
  - *Leaders of Learning Community*
  - *Independent with Oversight*
Learner Manager Teacher (LMT)

Competency-Based Advancement System

Learner  \(\rightarrow\) Manager  \(\rightarrow\) Teacher

(is dependent)  (independent)  (has dependents)

PGY-1

PGY-2

PGY-3
Demographics

- 49,000 visits/year
- 48% Spanish Speaking
- Poorly insured
- High Prevalence of Chronic Disease
  - Diabetes: 23% of patients

Ranked 14 of 14 for mortality and morbidity, SE factor
NCQA PCMH Level 3 (recertified 2016)

Providers/Team

60 Internal Medicine Residents
6 full-time NP/PA (advanced practitioners)
11 part-time Faculty
10 Provider teams + specialty clinics
Hybrid model of ambulatory blocks and continuity full days
Team Structure/Resident Assessment

- 1,000 patients per team
- 1 Preceptor
- 5-6 Residents
- ½ NP/PA
- 1 Team RN
- 1.5 Medical Assistant (14)
- ½ Interpreter (5)
- 2 Care Managers for practice
- Social worker
- Integrated behavioral health
Assessing competency

"I don't make house calls. My mom won't let me leave the yard."
February day at clinic

Dr. J is seeing a complicated patient with diabetes, hypertension and depression for the 2\textsuperscript{nd} time.

The patient is scheduled for a Diabetes focused visit.

Dr. J ‘s impression is that the patient has poorly controlled Diabetes and presents to you an excellent plan to start long acting insulin.
What year is this resident?
Visit Part II

Upon entering the room to confirm the “story” you notice that the patient appears ill.

You start by asking, “how are you feeling?”

The patient states that in general she is well but since lunchtime she has had nagging chest pressure and nausea.
Discussion

- What year is this resident?
- Is this resident ready for *indirect* supervision?
<table>
<thead>
<tr>
<th>Ambulatory</th>
<th>First 6 months</th>
<th>Remainder of residency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residents</td>
<td>Discuss case</td>
<td>+/- Discuss case</td>
</tr>
<tr>
<td></td>
<td>Verify findings</td>
<td>+/- Verify findings</td>
</tr>
<tr>
<td></td>
<td></td>
<td>+/- Patient still here</td>
</tr>
</tbody>
</table>
Discussion

- Impact on the learner?
- Impact on patient care?
Key transitions

- Behaviors and skills (milestones)

- Assessment tools
  - ambulatory passports
  - mini CEX/TEX
  - end of rotation evaluations
Key Transitions in ambulatory training

- Seeing patients with indirect supervision
  - *without in-room supervision for every case*

- Allowing patients to leave before precepting
Ambulatory Learner-Manager-Teacher Model

- **Learners:** have **Direct** supervision
  - Faculty member **sees** every patient

- **Managers:** have **Indirect** supervision
  - Faculty member **does not see** every patient

- **Teachers:** **Oversight** from faculty
  - Allow patients to **leave** before precepting
Breakout: Part One

Identify 2 key transitions in your program

- leading a family meeting (code status)
- giving bad news
- night float
- supervising junior learners
- leading the code team
- performing a hysterectomy / C-section independently
ASSESSING COMPETENCIES

Key Transitions

- Define behaviors/skills (milestones) essential for the key transition

- Develop an assessment that focused on these observable behaviors/skills
  - early recognition of strengths and areas for improvement
  - determine readiness for advancement
Ambulatory Passports

- Learner Advancement Passport, Manager Advancement Passport and Teacher Advancement Passport

- Objective confirmation of the skills and behaviors
  - direct observation
  - longitudinal assessment

- Mapped to the ACGME six core competencies (2006) and ABIM (NAS) Milestones (2014)

- Multi-source evaluation
  - faculty, nurses, medical assistants, interpreters

- An integral component of the evaluation process to determine readiness for advancement

AAIM Curated Milestone Evaluation Exhibit, 2016
Ambulatory Learner-Manager-Teacher Model

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  - Allow patients to *leave* before precepting
<table>
<thead>
<tr>
<th><strong>Able to set a clear agenda early in the visit</strong></th>
<th>Faculty Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solicts the patient agenda. Uses open ended questions at the onset of the encounter</td>
<td>Faculty/Interpreter Signature</td>
</tr>
<tr>
<td>Is observed checking for understanding and using the teachback technique</td>
<td>Faculty Signature</td>
</tr>
<tr>
<td>Is able to identify the conflict when shared decision making is a challenge</td>
<td>Faculty Signature</td>
</tr>
<tr>
<td>Checks for understanding with input from the interpreter as it relates to culture and language</td>
<td>Interpreter Signature</td>
</tr>
<tr>
<td>Engages patients in shared decision making in uncomplicated conversations</td>
<td>Faculty Signature</td>
</tr>
<tr>
<td>ICS 1</td>
<td></td>
</tr>
<tr>
<td>ICS 3</td>
<td></td>
</tr>
<tr>
<td>Health records are organized, accurate, comprehensive and effectively communicates clinical reasoning</td>
<td></td>
</tr>
<tr>
<td>Medication list and Problem list are accurate – (chart review during precepting session)</td>
<td>Faculty Signature</td>
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Manager Ambulatory Passport
Interpersonal communication

<table>
<thead>
<tr>
<th>ICS 1</th>
<th>Effectively delivers bad news. (Direct Observation)</th>
<th>1 2</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>ICS 1</th>
<th>Facilitates informed decision making with controversial evidence (i.e., mammography). (Direct Observation)</th>
<th>1 2 3 4</th>
</tr>
</thead>
</table>

Faculty Signature

Faculty Signature
Breakout: Part Two

Focusing on one key transition

- List 2 behaviors/skills a trainee must demonstrate before they can perform this role independently

- How is it best evaluated?
  - How can it be objectively evaluated?
  - Where will it be most effectively evaluated?
  - Who is best suited to evaluate this behavior/skill?
ACGME
Core Competencies
- Patient care
- Medical knowledge
- Practice-based learning & improvement
- Interpersonal & communication skills
- Professionalism
- Systems-based practice

CanMEDS
- Professional
- Communicator
- Collaborator
- Health Advocate
- Scholar
- Manager
- Medical Expert
Using the Passports

Residents

• Clear expectations
• “Own” the Passport
• “Reward” for completion
  • greater autonomy and efficiency
Using the Passports

Direct observation increased
↓
More rigorous and objective evaluation
↓
Strengths and weaknesses recognized earlier
↓
Directed education and feedback
Using the Passports

- Guide the preceptor...
  - Adjust precepting to meet the needs of individual residents
  - Focus on progressive skills

- Orient new faculty

I don’t have the personal relationships to know which residents are ready for increased independence. ..

Looking at the resident’s AP at the beginning of a session, I can quickly assess their general level of clinical competence.

These tools allow me to get the benefit of other attending's experiences.
Challenges

- Implementation required a significant time commitment from faculty.
- Direct observation beyond the historic time-frame creates delays in cycle time and other processes.
Clinical Competency Committee (CCC)
What is a CCC?

- Diverse team:
  - Medicine CCC Chair and at least 3 faculty
  - Chief resident(s)
  - Sub-specialist(s)
  - Nurses and other non-physicians

- Consensus decisions on milestone-based advancement

- Helps develop individualized educational plans
Structure

- 12 sessions/year + semi-annual reviews
- Residents are presented by their advisor
  - Residents are designated an advisor
  - Follows trainee through residency
  - Advisors summarize progress and deliver a longitudinal perspective

- CCC Members
  - All input is equal and valued
  - Progress of residents struggling to meet milestones discussed at future meetings
Examples of Milestones

- Accepts responsibility and follows through on tasks. (PROF2)

- Exhibits integrity and ethical behavior in professional conduct. (PROF4)
Resident and Peer group
Individualized Education Plan

- Core competency: Professionalism
  - Issues completing administrative responsibilities and openness in communication with team members
- Plan developed *with* the resident
  - Be on time for all sessions
  - Check-in at the end of each clinic session with attending/team to close loop
- Resident had frequent follow-up with advisor
Spider Plot: 6 months later

Resident Competencies

Comparison with peers
Resident 2

- Gathers and synthesizes essential and accurate information to define each patient's clinical problem(s). (PC1)

- Manages patients with progressive responsibility and independence. (PC3)
Individualized Education Plan

- Core competencies: Patient Care (PC) and Medical Knowledge (MK)
  - Disorganized presentations with missing information
  - Does not seek help in a timely manner

- Individualized education plan
  - Complete chart review prior to every session
  - Develop systematic approach to pre-rounding
  - Ask for help when feeling overwhelmed
1 year later
Benefits of CCC

- Promotes transparency
  - Objective milestones for advancement
  - Offers consensus opinion
  - Residents are able to see where they are compared to peers

- Early identification and intervention

- Categorizes specific challenges
  - Not generic, “read more”
  - Focuses goals

- Follows-up on progress
Questions?

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