Teaching by Observation: How to Improve Residents’ Skills

Eric S. Holmboe, MD, MACP, FRCP
Eric S. Holmboe, MD, MACP, FRCP

- ACGME Chief Research, Milestone Development, and Evaluation Officer
- Professor Adjunct of Medicine at Yale University, Adjunct Professor at the Uniformed Services University of the Health Sciences and Adjunct Professor at the Northwestern University Feinberg School of Medicine
- Previously was the Associate Program Director, Yale Primary Care Internal Medicine Residency Program and was the Director of Student Clinical Assessment, Yale School of Medicine.
- Research interests include interventions to improve quality of care and methods in the evaluation of clinical competence
- Memberships include the American College of Physicians, where he is a Fellow, the Society of General Internal Medicine, and the Association of Medical Education in Europe; Honorary Fellow of the Royal College of Physicians in London and an Honorary Fellow of the Academy of Medical Educators.
“Basic” Clinical Skills

- Medical interviewing
- Physical examinations
- Informed decision making
- Clinical judgment/reasoning
- Interpersonal communication
- Reflective practice
  - Self-directed life-long learning
  - Personal growth and improvement
  - Quality improvement for patients
Importance of History Taking

- Leads to diagnosis > 80% of the time
  - Even in era of technology
  - Required to avoid unnecessary testing

- Faulty data gathering common
  - Source of diagnostic errors
  - Common cause of death

Hampton JR et al. *BMJ* 1975; 2:486-9
National Academy of Medicine. *Improving Diagnosis in Medicine*, 2015
Physical Examination

B. Reilly (Lancet, 2003)

- Study comparing physical examination findings of residents versus attending on a general medical service for 100 consecutive patient admissions

- Detection of “pivotal findings”
  - Detected by PE maneuvers only
  - Prompted revision of initial diagnosis
  - Led to change in patient management

- 26 “pivotal findings” missed that changed diagnosis or patient management during admission
Importance of Patient Centered Care

- Improves communication
- Promotes patient involvement in care
- Increases patient knowledge and self-efficacy
- Creates positive relationships with the provider
- Improves adherence
- Improves well-being
- Improved outcomes
- Decreased costs

Levinson W et al. 2010; *Health Aff* 29: 1310


Stewart M. *CMAJ*. 1995; 152:1423-33

Why is Direct Observation Important?
1. Goal of Patient Care and Training

Safe, effective patient-centered care
State of Clinical Skills

Trainees

- Wide variability in graduating students’ clinical skills measured as MS4s or starting internship
  - History taking
  - Exam

Practicing physicians

- Variability in physical exam skills
- Missing elements of informed decision making

Goal of Patient Care and Training

Safe, effective patient-centered care

Appropriate level of supervision**
**a function of attending competence in context

Trainee performance*
*a function of level of competence in context

Kogan JR et al. Acad Med; 2014;89:721-7
2. Learning Curves

What Do They Have in Common?
Deliberate Practice

- Requires a field that is reasonably well developed. Clear mental representations (i.e. shared mental models) of the tasks of the field are essential.

- Requires a teacher who can provide practice activities and informative feedback that can help learners improve their performance.

Role of the Coach

“"They observe, they judge, and they guide””

“"That one twenty-minute discussion gave me more to consider and work on than I’d had in the past five years””

Atul Gawande, New Yorker 10/3/2011
Coaching Requires DO and Feedback
3. Competency Based Medical Education

Structure  
Process  
Time

Outcome  
(Competency)
It is Very Difficult to Effectively Teach What You Do Not Assess
Ultimately, we need to know what the resident can do: this is the key outcome.
Barriers to Direct Observation

What are the barriers to frequent, high quality direct observation?
Why Faculty Observe Infrequently

- Lack of time
- Lack of buy-in
- Undermines learner-patient relationship
- Low self-efficacy
  - Content/skills assessed
  - Standards
  - Feedback approach
  - Diagnosing learner/offering action plan
Why Learners Don’t Buy-In

- Lack of faculty time
- Anxiety provoking
- Artificial
- “Check-box” activity
- Lack of trust, longitudinal relationships
- Threatens autonomy and efficiency
- Tension feedback vs high stakes assessment

Bing You RG et al. *JAMA.* 2009;302:1330-1
Reasons for Poor Assessment Quality

- Poor accuracy
- Focus on different aspects of clinical performance
- Different expectations about what is acceptable
- Rating errors
  - Halo effect/ “Horn” effect
  - Leniency/stringency effect
  - Central tendency
- Cognitive biases
Faculty’s Primary Frame of Reference: Self

"Whenever I walk in a room, everyone ignores me."
Assessors’ Own Clinical Skills

Variable and sometimes deficient

➢ History taking
➢ Physical exam
➢ Counseling/shared decision making
➢ Patient centered communication

Ramsey PG et al. JAMA 1993;269:1655-60
Paauw DS et al. JAMA 1995;274:1380-2
Vukanovick-Criley JM et al. Arch Intern Med. 2006;166:610-16
Levinson W. BMJ Qual Saf 2011;20:823-5
## Faculty OSCE Clinical Skills

<table>
<thead>
<tr>
<th>Competency</th>
<th>Mean (SD)</th>
<th>Range</th>
<th>Generalizability</th>
</tr>
</thead>
<tbody>
<tr>
<td>History Taking</td>
<td>65.5% (9.6%)</td>
<td>34% - 79%</td>
<td>0.80</td>
</tr>
<tr>
<td>Physical Exam</td>
<td>78.9% (13.6%)</td>
<td>36% - 100%</td>
<td>0.52</td>
</tr>
<tr>
<td>Counseling</td>
<td>77.1% (7.8%)</td>
<td>60% - 93%</td>
<td>0.33</td>
</tr>
<tr>
<td>Patient Satisfaction&lt;sup&gt;1&lt;/sup&gt;</td>
<td>5.62 (0.48)</td>
<td>4.43 – 6.63</td>
<td>0.60</td>
</tr>
</tbody>
</table>

<sup>1</sup>On 7-point scale

N=44

Faculty Skills and Ratings of Learners

Faculty with higher history and patient satisfaction performance scores provide more stringent ratings.
Achieving Accurate, Reliable Ratings

- Form not the magic bullet
- Assessment requires faculty training
  - Similar basis for assessment
  - Agreed upon levels of *competence/shared mental models*
    - Substantial evidence exists in what constitutes effective clinical skills
- Move to criterion referenced assessment
  - This is essential to teaching and assessing learners’ clinical skills
Performance Dimension Training

© Cartoonbank.com

WHAT THE HELL ARE WE LOOKING AT?
Performance Dimension Training

Identify specific dimensions of a competency in behavioral terms

Discuss the criteria and qualifications required for each dimension of that competency

Develop an evidence-based SHARED MENTAL MODEL

Holmboe ES ABIM 2010
## Decide on Standard

<table>
<thead>
<tr>
<th>Compared to</th>
<th>Frame of reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>What I do</td>
<td>Self</td>
</tr>
<tr>
<td>What resident at similar PGY level does</td>
<td>Normative</td>
</tr>
<tr>
<td>Safe, effective, patient centered care</td>
<td>Criterion referenced</td>
</tr>
</tbody>
</table>

Readiness for unsupervised practice
Snapshots: A Sampling Strategy
ACGME Resources

- Faculty Development Courses in Assessment
  - Two week-long courses this October in Chicago
  - Includes simulation experience in direct observation
- Growing number of regional hub courses in assessment
- Check out www.acgme.org under Courses
- Assessment “101” 15-minute module on ACGME Milestones homepage
- Finishing RCT on spaced online learning for direct observation; expect results in early 2020
DocCom Overview

- Module authors - leading faculty
- 42 multimedia-rich interactive on-line modules (~1 hr in length)
- > 40 CME/MOC credits
- >400 videos realistic interviews (loved by learners)
- Annotated interactive videos
- Faculty Resources
  - Assignments
  - Assessment questions – essay & MCQs
  - Grading matrix
  - Resources
  - Curriculum guides for faculty.
Sample Module

Welcome to DocCom DEMO Module 33: "Delivering Bad News"
by Timothy Quill M.D., Carly Dennis M.D., Anthony Caprio M.D., Catherine Gracey M.D.

- Consistent format across modules
- Rationale
- Key concepts
- Learning goals
- Content
- Videos interspersed
- Behavior checklist
- References

© 2005-2016 by AACH, DUCom, and others. See copyright info for details

Facilitator Guide of this module for DocCom Residency Doctoring Curriculum

Credits:
Authors: Timothy Quill M.D., Carly Dennis, M.D., Anthony Caprio M.D., Catherine Gracey M.D.
Editors: Dennis Novack M.D., Bill Clark M.D., Ron Salzow M.D.
doc.com implementation: Christof Daetwyler M.D.
Standardized Patients: Robyn George (Patient), Frank Gallagher (Husband)
Clinician on camera: Timothy Quill M.D.
Video Director and Producer: Christof Daetwyler M.D.
Video Camera, Light and Sound: George Zeiset B.A.
Video Assoc. Director: Dennis Novack M.D.
4.1 - 5/6/2014 - Revision by Timothy Quill, et. al.
3.0 - 2/7/2012 - Enhanced with HTML5 code and MP4 videos
Version History:
2.1 - 1/21/2010 - Revision by Timothy Quill, et. al.
2.0 - 7/20/2009 - upgrade to DocCom Version 4.0
1.0 - 7/13/2006

DEMO Module 33: Delivery of Bad News - by Timothy Quill MD, Anthony Caprio MD, Catherine Gracey MD, Margaret Seaver MD
Annotated Video Examples

greet verbal and nonverbal
ask: what do you know?
ask: do you want to know? Are you ready for news?
tell: news direct words; self-reflection; warning
name, legitimize emotion

tell: news direct words; attentive listening
ask: what do you want to know?
attentive listening
reflection both events and emotions
tell: potential plans takes charge

I wish it were different shares distress
legitimize anger, sadness supports husband and wife
tell: news direct; and supportive nonverbals
allows interruption supportive nonverbal

attentive listening "am I going to die?"
tell: prognosis gives range
balance truth with compassion do not give false hope
tell: potential plans
partnership explore together
tell: advise explore options

play | pause | back 5 seconds | full screen - change video rate: 1x | 1.4x | 1.8x
1:07 / 11:07
Empathy Understanding
Residency Scores
Before/After DocCom Use

Empathy Understanding Test
MCQs Delta

Before DocCom
After DocCom

<table>
<thead>
<tr>
<th></th>
<th>Before DocCom</th>
<th>After DocCom</th>
</tr>
</thead>
<tbody>
<tr>
<td>Score 1</td>
<td>41%</td>
<td>75%</td>
</tr>
<tr>
<td>Score 2</td>
<td>10%</td>
<td>66%</td>
</tr>
<tr>
<td>Score 3</td>
<td>20%</td>
<td>52%</td>
</tr>
<tr>
<td>Score 4</td>
<td>30%</td>
<td>49%</td>
</tr>
<tr>
<td>Score 5</td>
<td>40%</td>
<td>34%</td>
</tr>
<tr>
<td>Score 6</td>
<td>50%</td>
<td>32%</td>
</tr>
<tr>
<td>Score 7</td>
<td>60%</td>
<td>25%</td>
</tr>
<tr>
<td>Score 8</td>
<td>70%</td>
<td>24%</td>
</tr>
<tr>
<td>Score 9</td>
<td>80%</td>
<td>9%</td>
</tr>
<tr>
<td>Score 10</td>
<td>90%</td>
<td>7%</td>
</tr>
</tbody>
</table>
Free Resources

• Webinars (>20)
  – Balance and Self-care
  – Responding to Strong Emotions
  – Delivering Bad News

• Podcast – Healthcare Communication: Effective Techniques for Clinicians (>16,000 downloads & >70 episodes)
  – Communication Skills Residents Learn from Spending a Night in the Hospital
  – Teaching Communication Skills at the Bedside
  – Providing Effective Feedback: Pitfalls and Pearls
  – How to End the Patient-Clinician Relationship
  – Improve Interns' Communication before Orientation