Bringing Students Up to Speed as They Enter Residency

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Disclosures

- I have no disclosures

By the end of this talk…

- Define who is responsible for early intern performance
- Determine areas where you could improve your own transition to residency curriculum
- Differentiate want versus need when it comes to early internship skills

Why is this important…

- “July Effect”
- High variability between new interns regarding medical knowledge, skill, and most recent patient contact
- Quickly shape expectation, efficiency, and performance in new interns

Who's Responsibility?

- Undergraduate Medical Education (UME) Frame:
  - Finished product ready to adapt to your system
- Graduate Medical Education (GME) Frame:
  - Numerous new physicians with high variability
  - Only so many people can start on ambulatory/elective
- Now think about it in a business model, who would be responsible?

When can we fill the void?

- Day #1 of internship/On the wards
- Intern orientation
- Post-match/pre-internship learning modules (homework)
- Push back on the medical schools (UME)

Day #1 of Internship/On the wards

- “Schedule for Success”
  - Lighten the load to get interns up to speed
- Intern-specific conferences
  - Tulane: Friday School
  - Penn: Interactive Learning Modules
- Mentorship programs

Intern Orientation Schedule

- Meet and Greet with Leadership
- Hospital Orientation
- Onboarding at Hospital(s)
- HR Paperwork
- Get hospital IDs, fingerprinting
- EMR(s) Orientation
- BLS/ACLS/PALS
- Compliance Training
- Physicals
- Library Orientation
- Research/Mentorship
- Clinic Orientation
- Get White Coats
- Community Tour
- Meet your new team
- What about specialty specific skills?

Post-Match/Pre-Internship

- University of Maryland Medical Center requires all new interns to complete Institute for Healthcare Improvement modules
- Programs could develop specific learning modules to address learning objectives
- Reimburse for required modules?
- Remediation plan?

GME: Not enough time…

- Why not push this back on UME?
- It is in UME's best interest to present a well-rounded product
- What do students do during 4th year anyway???

Before we force something on UME…

- Would this “something” overcrowd the curriculum?
- Should it be required of all medical students?
- How can we make students think it was their idea?

What do students do during 4th Year?

- The Answer: NOTHING!

- In reality:
  - Sub-internships
  - Away rotations
  - Licensing exams
  - Residency applications and interviews
  - Spend lots of money and accrue debt

What good is the 4th year?

- University of Colorado student perspectives:

- Strengthening one's residency application
- Developing career-specific skills needed in residency
- Pursuing personal interests
- Exploring diverse practice settings
- Identifying a career

Wolf et al, Acad Med 2014

What do students think of 4th year?

- Survey of 1,367 students from 20 MD-granting medical schools in 2014

- Main purposes of 4th year:
  - Ensuring that a graduating student has the necessary skills to be a successful first-year resident in any type of residency (58.4% strongly agree or agree)
  - Gaining a broad educational experience (56.8%)
  - Maximize likelihood of matching into residency of their choice (47.9%)

Benson et al, Acad Med 2015

What PDs recommend during the 4th year…

- 2007 Semi-structured interviews with 30 Program Directors

- Rotations across specialties
  - Internal medicine sub-internship
  - Sub-internship in the student's future field
  - Exposure to:
    - Critical care
    - Ambulatory medicine
    - Emergency medicine

Lyss-Lerman et al, Acad Med 2009

In what ways do Interns struggle?

- Common struggles identified by Program Directors:
  - Lack of self-reflection and improvement (40% of PDs reporting struggle)
  - Poor organizational skills (33%)
  - Underdevelopment of professionalism (30%)
  - Lack of medical knowledge (27%)

Lyss-Lerman et al, Acad Med 2009

Let’s take a look at what others do

- UCSF Internship Transition Course – 3 weeks
  - Management of common clinical situations
  - Management of medical emergencies
  - Communication
  - Procedures/skills labs
  - Life skills
- Johns Hopkins – Transition to Residency and Internship and Preparation for Life (TRIPLE)
  - 2 weeks
  - Patient-care skills, management skills, self-care skills

Teo et al, Acad Med 2011

Others around the nation

- Many schools have a month-long capstone course
  - Emory
  - George Washington
  - Penn
  - Ohio State
  - Washington University in St. Louis
- Longitudinal plus month-long capstone course
  - Duke
  - Jefferson moving in this direction

How we got started…

- In 2013, University of Maryland SOM Clinical Years Committee tasked members to brainstorm about a way to develop a capstone course
  - Goal: Practical knowledge that will be useful during intern year

- Our team:
  - Emergency Medicine Physician - former Program Director
  - Internal Medicine Physician - former Associate Program Director and current Assistant Dean
  - Internal Medicine Physician - Associate Program Director and Sub-I Director

Needs assessment

- We created a focus group consisting of medical students and clinical faculty from most major departments
  - Developed a topic list

- Asked the 4th year class leaders to survey their peers
  - Topic list was compared results to Association of American Medical Colleges (AAMC) Graduation Questionnaire results from recent years
  - Month long elective vs. shorter boot camp
  - Peri-Match day vs. prior to graduation

Logistics

- Targeting week before graduation
- Cover 3 half days
- Volunteer participation for students
- Mix of lecture based, small group, and simulation/skills sessions
- Each session would last 30 minutes
- Speakers were the best of the best
- Practical knowledge and skills only

Who was there

- Students:
  - Voluntary experience open to all senior students in good standing
  - Students sacrificed pre-graduation free time
  - Half of the senior class attended
- Faculty:
  - 18 attending physicians
  - 2 pharmacists
  - 3 Internal Medicine chief residents
  - 1 registered nurse

Student wants

- Running a code: What to do until help arrives
- “On call” scenarios
- Prescription and order writing
- Fluids
- Simulation center/procedure practice

What we covered

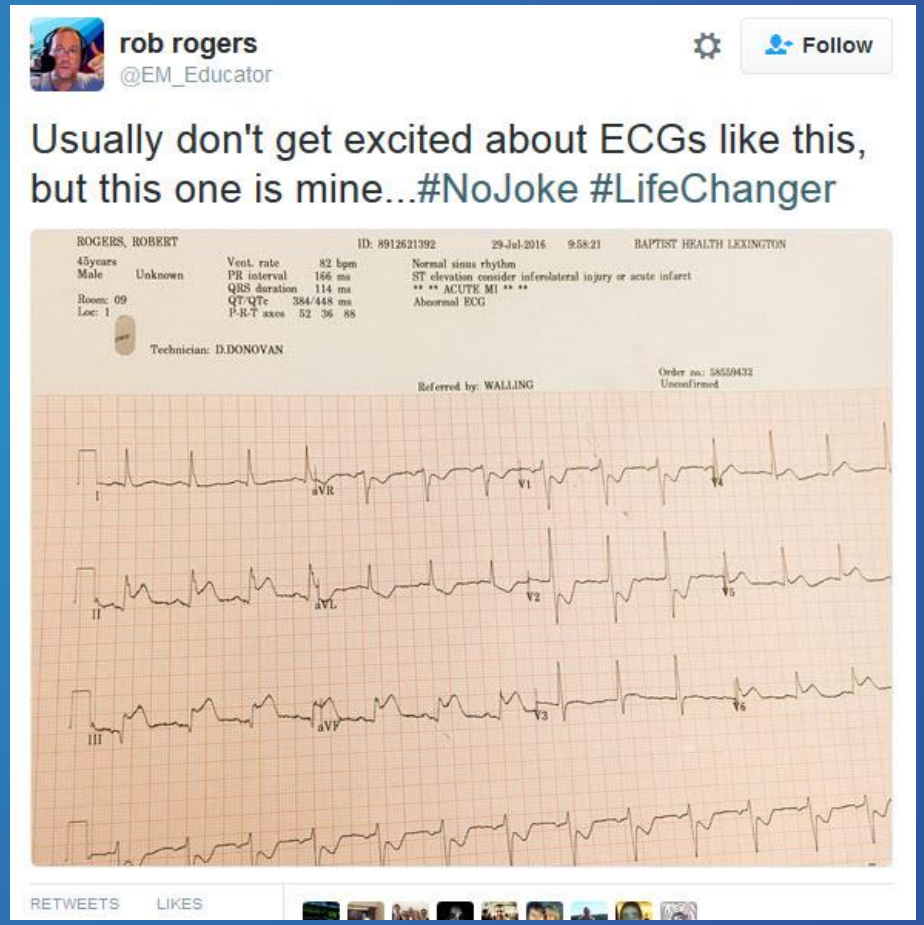
- Is there a doctor in the house?
- Dangerous EKGs
- Business of medicine
- Breaking bad…news
- Competence and compassion-based medicine
- Things that go “beep” in the night
- Time management and prioritization
- Dangerous inpatient medications errors
- Fluids and electrolytes
- The acutely psychotic patient
- Anaphylaxis: when meds can kill
- Calling a consult
- What do to until your resident arrives

What we covered

- Avoiding prescription errors
- Radiology findings not to miss
- Avoiding critical errors in patient handoffs
- How nurses can save you
- Rapid response simulation
- Airway lab
- Ultrasound skills lab

Heavy Hitters – What to do before your resident arrives

- Emergency Medicine Physician
- Spoke from personal experience
- Described how to bring focus to chaos
  - EM Mantra: IV, O2, Monitor



Heavy Hitters – Anaphylaxis

- Requires quick action by the intern
- Interns might react without supervision from the resident/attending
- Passionate speaker

Heavy Hitters – Rapid Response Simulation

- 5 students per group with a high fidelity mannequin
- “Bedside RN” present
- Instructor in the control room
- 15 minute case
- 10 minute debrief
  - Debriefing with good judgment

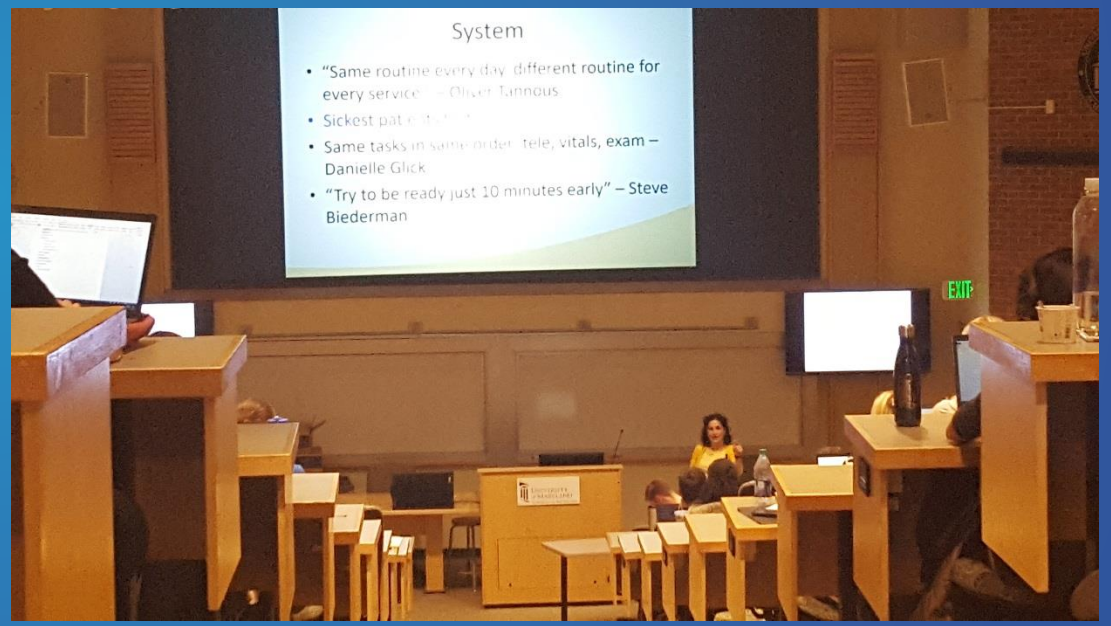
Rudolph et al, Anesthesiol Clin 2007

Heavy Hitters – Skills Sessions

- Anything “hands on”
- Point of Care Ultrasound
- Airway Lab

Heavy Hitters: Time Management & Prioritization

- Highest rated talk in terms of effectiveness
- Standard organizational and efficiency strategies for interns
- Helpful quotes from current interns



Post-Prep Camp Evaluation Data

- Before today, how much had you learned about the topic presented in this session?
- How often have you participated directly in the care of patient/patients with the discussed problem?
- How effective was this session and the presenter(s) in teaching you valuable intern skills?
- How would you describe your confidence in caring for patients before today's session?
- How would you describe your confidence in caring for patients after today's session?

What we heard back from students

- “Put in perspective what will be most vital for me for next year.”
- “Focused a lot on practical skills that will help you as a new physician.”
- “Many of these sessions or similar sessions should have been done earlier in med school.”

Snap back before the dust settles

- Matched evaluation data with audits of sessions by course masters
- Modified or dropped sessions that were rated poorly
- Recalibrated many talks to be more clinically relevant
- Heaped praise on the most successful sessions

Self Assessment vs. Competence

- Systematic Review
  - Compared self-rated assessments with external observations

- A number of studies found the worst accuracy in self-assessment among physicians who were the least skilled and those who were the most confident

- Suggests physicians have limited ability to accurately self-assess

Davis et al, JAMA 2005

Dunning-Kruger Effect

- “Unskilled and unaware of it”
- Paradox:
  - Sessions helped to improve skills of students.
  - Sessions also increased metacognitive competence and helped them recognize the limitations in their abilities
- We noticed that students highly rated some sessions but did not see is similar boost in confidence

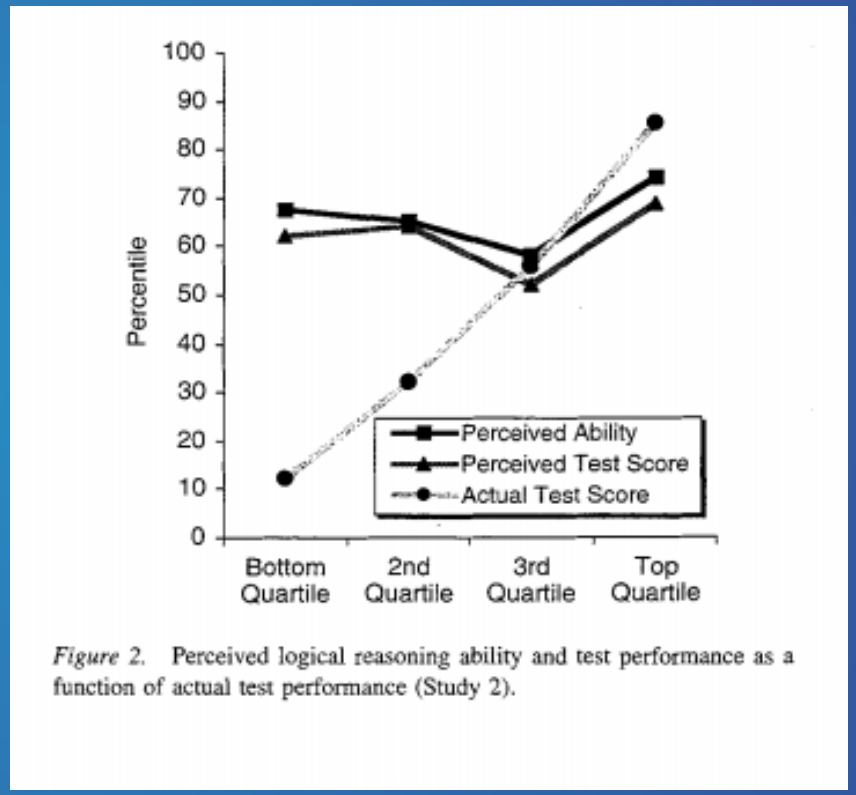


Figure 2. Perceived logical reasoning ability and test performance as a function of actual test performance (Study 2).

Kruger and Dunning, J Pers Soc Psychol 1999

3 months out

- We resurveyed attendees with a 3 month follow up survey
- 29 students completed the survey (45% of original attendees)
- 81% of respondents reported using the information learned during the course hourly, daily, or weekly

By the end of this talk…

- Define who is responsible for early intern performance
  - Everyone – the student/intern, UME, and GME
- Determine areas where you could improve your own transition to residency curriculum
  - Target highly rated faculty, targeted small group sessions, hands on
- Differentiate want versus need when it comes to early internship skills
  - What to do before your resident arrives, rapid response scenarios
  - Efficiency, organizational skills