Bringing Students Up to Speed as They Enter Residency

Philip C. Dittmar, MD
University of Maryland School of Medicine
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 4\textsuperscript{th} 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 4\textsuperscript{th} 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

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