

7 A Practical Curriculum for Emergency Medicine Intern Orientation Using Near-Peer Teaching

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Background: Most EM residency programs utilize a traditional learning model for intern orientation that relies on didactics to deliver EM core content. While this knowledge is preparatory for exams, it is presented outside the context of practical ED challenges such as resource bottlenecks or task prioritization and therefore may have limited real-world applicability. We propose a new orientation curriculum that places EM core content within the context of ED workflow to better prepare interns to work clinically.

Educational Objectives: Improve the clinical applicability of EM intern orientation by supplementing EM core content with interactive workshops, practice-based learning and near-peer teaching.

Curricular Design: The 4-week intern orientation curriculum at our PGY1-4 program consisted of 3-hour didactic sessions in which faculty review Tintinalli's Emergency Medicine Manual using PowerPoint slides. In our new curriculum, which was developed through the Harvard-Macy Future Academicians Course giving it face validity, these didactics were shortened to 1 hour and paired with 1-hour interactive workshops led by senior residents. Each workshop consisted of a walk-through of how to approach a chief complaint (Abdominal Pain, Chest Pain, Dizziness, Fever, Agitation, and Blunt Trauma) from arrival to disposition. All workshops were slideless, case-based, and interactive. Using near-peer teaching, senior residents addressed pitfalls in workflow based on their experiences, and reviewed skills related to clinical practice such as giving proper signout, calling consultants, and escalating care. To ensure quality, we created a faculty-approved Course Manual including workflow charts and instructor's guides for senior residents.

Impact/Effectiveness: Pre- and post-orientation surveys were conducted to measure the impact of our intervention. Overall, we found near-peer teaching and the emphasis on ED workflow to be powerful tools that can improve engagement and feedback. Interns received the new curriculum positively, with the majority recommending the new format for next year. Senior residents found the experience to be rewarding for their academic development. We plan to conduct a 6-month follow-up survey to assess the degree to which specific elements of the new curriculum contributed to intern preparedness.

8 A Shock Workshop For 1st Year Medical Students Using Novel Teaching Methods

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Background: With limited clinical context, pre-clinical students may find the concept of "Shock" difficult to understand. Simulation provides instructive clinical context early in the medical school curriculum. Asynchronous instruction allows students to reinforce key principles before more in-depth group discussion and clinical simulation. We developed a workshop that combines asynchronous instruction, group discussion, and clinical simulation to teach 1st year medical students about different shock states.

Educational Objectives: We challenged students to identify the pathophysiology of each shock state and to describe the expected compensatory physiology observed in representative clinical scenarios.

Curricular Design: A week before the workshop the entire MS I class was emailed the workshop objectives and a link to an "Overview of Shock" voice-over Power Point video lecture. A 5-question pre-workshop knowledge assessment was created to gauge students' baseline understanding of the topic. Three simulation cases were developed to illustrate cardiogenic shock (myocardial infarction), distributive shock (sepsis) and hemorrhagic shock (after MVC).

For each case, teaching focused on identifying the primary abnormality and understanding how the shock state affects vital signs and key hemodynamic parameters. Approximately 35 students were assigned to attend each 2-hour workshop, which was offered 6 times over one week to accommodate the entire MS I class. For each workshop, half of the students were brought into the simulation center and divided into 3 groups. In the simulation center each group of students encountered 3 consecutive cases of different shock states. After each brief case, faculty provided focused and consistent debriefing to reinforce predetermined teaching points. The other half of the students attended a classroom discussion on shock led by clinical faculty. For the second hour of the workshop, the groups switched.

Impact/Effectiveness: In 2015 and 2016, all 445 students completed the pre-workshop knowledge assessment. 365 students (82%) completed the post-workshop evaluation (Table 1). All clinical faculty preceptors were rated highly by the students.

The multi-modal session was successful, with many students requesting more sessions of this kind be developed for other topics as well.

Shock: Post-Workshop Evaluation

% of all students
(n=365) who
Agree/Strongly Agree

The workshop achieved the learning objectives.	100
The workshop was a valuable learning experience.	98.6
Reviewing the pre-workshop voice-over presentation helped to reinforce my understanding of shock.	96.2
Participating in the simulation component of the workshop helped to reinforce my understanding of shock.	94.4
The simulation cases were at an appropriate level of difficulty.	96.7

9 Adventures in Didactic Curriculum (Re) Design: Systems Thinking for Core Topics

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Background: The Residency Review Committee for Emergency Medicine requires 5 hours per week of didactic learning. Often lectures are given sporadically without consideration for targeted learners’ needs. Learning can be suboptimal and contextual goals and objectives unclear. Many undergraduate medical institutions have transitioned curriculum into system-based blocks with excellent educational results.

Educational Objectives: We redesigned our didactic curriculum to repeat on an 18-month cycle and organized it into intensive systems-based blocks (Respiratory, Neuro, GI etc.) assigning a “Topic Guru” from our Core Faculty. Our objective was to create a deliberate didactic curriculum that examines a specific system from multiple viewpoints. A secondary goal was ongoing engagement of our Core Faculty into the didactic curriculum.

Curricular Design: We designed an 18-month repeating curriculum based on physiologic systems. Topic Gurus were notified approximately 3 weeks in advance of their upcoming month and responsibilities. Repeating curricular elements included:

- Distributed reading and podcast / blogs/videos
- Core Topic discussion session using active learning / Flipped Classroom
- Core Topic Review Session
- Ask the Expert Q and A Session
- Emerging Issues / Advance Topic Session
- Pharmacology / Quality / Procedure (PQR) Rounds
- Regions RAP (Monthly Review of Podcasts, Blogs,

Videos) or Journal Club

This curriculum re-design was introduced in July 2017 and has been continued for the past 5 months.

Impact/Effectiveness: Bi-monthly meetings held with Topic Gurus to assess barriers to implementation, including difficulty scheduling outside speakers and understanding new recurring curricular elements. These barriers are less intrusive with each passing month. Overall curriculum changes have been extremely well received by both our residents and Topic Gurus based on conference feedback. Future goals are to further examine impact on our learners.

10 After Action Report: Reflective Practice Beyond the Core Curriculum

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Background: The sprawling core curriculum of emergency medicine leaves little time in the didactic schedule for reflective practice and attention to the topics outside the umbrella of medical knowledge, patient care and procedural skills. To that end, our ED has instituted “After Action Report,” a yearlong longitudinal thread to encourage residents to think and reflect on their practice. Sample topics for AAR include professional boundaries, working in a medical system with healthcare disparities, addressing practical ethical quandaries in the ER, dealing with inter-professional conflict, intrapersonal awareness in the stressful clinical environment, the hidden curriculum of emergency medicine, etc. The sessions emphasize reflecting on one’s actual practice and the lived experience of being an emergency physician. The goal, broadly defined, is professional development and development of humanistic values. We believe this curriculum also supports resident wellness.

Educational Objectives: At the close of this academic year, our residents are expected to:

- Maintain proper professional boundaries with the patient and within the medical team.
- Recognize and work through common ethical dilemmas that take place in the ED.
- Foster intrapersonal awareness in the stressful clinical environment.
- Develop skills to identify and respond to emotionally driven conflict.
- Acknowledge and resolve contentious behavior between colleagues, departments, and other staff.
- Recognize the reality of healthcare disparities in medicine and formulate a healthy internal narrative about encountering these disparities.
- Effectively analyze and participate in effective