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The Quadruple Threat Emergency Medicine Clerkship Curriculum

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Participants could prepare stories ahead of time, although this was not mandatory for attendance, and all participants were encouraged to tell a story. Large and small group formats were both utilized, based on venue and hosting institution. Themes ranged from emotionally devastating patient encounters to hilarious pearls and pitfalls of a long career in EM. When small groups were utilized, session facilitators were also tasked with weaving in discussions of how to deal with feelings of emotional exhaustion, depersonalization, compassion fatigue, medical errors, second victim syndrome, and other stressors.

Impact/Effectiveness: The post-event surveys revealed that 97% of responders (n=33) felt the event was worthwhile and they would be “extremely likely” (n=21) or “very likely” (n=11) to attend future sessions. They felt the optimal frequency of these events would be every 3-6 months. Themes from open-ended resident feedback included 1) the positive nature of the open, honest, safe, and supportive environment for discussion, 2) the camaraderie and relationships developed between residents and faculty, and 3) that the discussion can help individuals process the complex emotions associated with difficult situations. Given the overwhelming success of this ST program and the minimal budget and logistics required, this wellness initiative could easily be replicated at other programs to promote reflective practice, empathy, and a sense of community.

51 The Flipped Classroom in Medical Student Education: Does “Priming” Work?

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Background: Annually, approximately 160 fourth year medical students rotate in the general emergency medicine rotation at Los Angeles County + University of Southern California medical center. Weekly case-based interactive teaching sessions are facilitated by the faculty on pediatric fever and shortness of breath (SOB).

Educational Objectives: This educational innovation sought to evaluate if in-class learning could be enhanced by “priming” the students with educational online videos prior to the in-class session.

Curricular Design: Twenty minutes of video on the topics of pediatric fever or SOB (bronchiolitis and laryngotracheobronchitis) were recorded by pediatric emergency medicine faculty. Students rotating in 2015 -2016 were randomly assigned to either the fever or shortness of breath (SOB) group. All participating students took a pre-test prior to viewing the online lectures. Those in the fever group then received lecture links to two fever videos and those in the SOB group received links to two videos on SOB topics to view. They then attended an in-class didactic

session on both fever and SOB, followed by an immediate post-test. A delayed post-test was administered at the end of the rotation. To equalize the amount of material distributed, students were given a transcript of the video lectures not assigned at the in-class session. For analysis, test scores were placed into concordant groups (test results on fever questions in the group assigned the fever video and test results on SOB questions in the group assigned the SOB video) and discordant groups (crossover between video assigned and topic tested). Each subject contributed one set of concordant results and one set of discordant results. Descriptive statistics were performed with the Mann-Whitney U test.

Impact/Effectiveness: During nine months of data collection, 126 students were on rotation. Sixty-eight percent of students volunteered to participate in the study (n=86). In the analysis of concordant scores, the pre-test averaged 56.7% correct, the immediate post-test averaged 77.95% correct, and the delayed post-test was 67.18%. In the discordant groups, the pretest averaged 51.89%, the immediate posttest was 66.5% and the delayed by 69.78%. In the concordant groups, the immediate post-test scores improved by 21.3 percent, compared with only 14.8% in the discordant groups. (p = 0.565).

Conclusions: Priming the students for the educational experience enhances immediate learning but may not result in retained knowledge on the respective topic.

52 The Quadruple Threat Emergency Medicine Clerkship Curriculum

Pelletier-Bui A /Cooper Medical School of Rowan University, Camden, NJ

Background: The unique quadruple threat EM clerkship curriculum developed at Cooper Medical School of Rowan University uses a combination of asynchronous and synchronous learning to meet the important educational need of covering core EM concepts in multiple different learning formats. Many EM clerkships promote the use of FOAMed and SIM as adjuncts to their curriculums. However, we are unaware of any EM curriculums that have used home-grown interactive online lectures as a primary method of didactics in combination with weekly team-based SIM cases, oral board cases, and procedure labs to reinforce the same material.

Educational Objectives: By utilizing four different education modalities through both asynchronous and synchronous learning, we hope to reach each different type of learner and provide a fun yet educational way to solidify the core topics in EM.

Curricular Design: Powerpoint® lectures from previous years were revamped into an interactive 30-40 min online format using Articulate Software®. Students review

3-4 online lectures each week (total of 10 lectures) on their own time for the first 3 weeks of their rotation. Lectures are grouped into themes as much as possible for each week (for example, Altered Mental Status, Headache, Toxicology & Trauma). At the end of each week, students are quizzed on the material and participate in a lab consisting of a team-based SIM session, an oral board case, and a procedure lab covering the same material from the online lectures. An end of rotation test assesses mastery of information.

Impact/Effectiveness: All students rotating in our emergency department (n=73) from July 2015 to October 2016 rated their preference for the new curriculum compared to a traditional curriculum from 1 (strongly preferring traditional) to 9 (strongly preferring new). Average ratings were 8.0, 8.4, 8.1, and 8.3 for interactive lectures, SIM cases, oral board cases, and procedure labs respectively. The mean end of rotation test scores for students engaged in our new curriculum are comparable to the mean test scores from past years during which the same home-grown exam, but a more traditional curriculum, was used. Our new quadruple threat EM clerkship curriculum seems to be an equally effective, yet preferable method to teaching the core concepts in EM compared to a traditional curriculum.

53 Using a Case-Based Blog to Supplement Emergency Medicine Education: One Residency's Experience

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Background: Emergency medicine (EM) resident education has embraced social media and web-based resources as critical teaching tools. While these resources provide a wealth of EM information, we hypothesized that more institution-specific, case-based online learning would enhance our EM resident education. Because our residents care for patients at both a highly-specialized quaternary-care hospital and community EDs, we selected topics beyond the typical scope of EM for additional instruction. In order to increase learner engagement, a case-based residency blog was developed.

Educational Objectives: 1) To provide continuous case-based education to EM residents, and 2) to promote resident engagement through online, case-based learning.

Curricular Design: The University of Pennsylvania's EM residency website (PennEM.com) had a pre-existing blog feature through WordPress, a free web-based site. Blog case entries were password protected and accessible only to emergency medicine residents. Cases were submitted by residents and selected by the blog editor. Cases included

diagnosis and treatment questions for residents to answer. Cases were posted at least monthly and tagged by category. Posts were announced via email, and residents were rewarded for correct answers with points redeemable for a small gift card.

Impact/Effectiveness: Since beginning the case-based blog initiative on March 8, 2016, the PennEM.com blog page was viewed 622 times. 15 cases were posted over 9 months on ultrasound, toxicology, critical care and clinical EM. The average number of emailed answers was 3.9 (range: 1-8). The average number of views on the case's first post date was 20 (range: 4-40 views). The top three most-viewed posts were two clinical cases (40 views, 35 views) and an ultrasound case (32 views). The top three most-answered posts were a toxicology case (8 responses) and two clinical cases (6 responses each). The data suggests that while residents may not participate in case competition, they view blog cases to supplement their EM education. Additionally, the trend towards increasing resident email participation supports increased resident engagement.

54 Utility of Alumni and Resident Survey in Curriculum Evaluation: Resident Perception and Alumni Perspective

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Background: In preparation for the Annual Program Evaluation, the Program Evaluation Committee (PEC) conducts an annual alumni survey, asking graduates about the residency's curriculum and how well it prepared them for their careers as Emergency Medicine attending physicians. These results, in conjunction with resident feedback, are used to enhance the clinical rotations and didactic components of our residency to maximize the residency experience.

Educational Objectives: We created a survey for our alumni and residents to obtain information about their current perception of their residency training and preparedness for clinical practice. Our goals included:

1. identifying potential deficiencies in clinical practices,
2. comparing current resident perception with that of alumni, and
3. establishing longitudinal feedback to ensure that our curricular interventions had an impact on our graduates skills.

Curricular Design: Utilizing Google Forms, we surveyed our residency alumni and current residents by email. We inquired about our residency training in the areas of Burn, Critical Care, Education, Neurology, Obstetrics/Gynecology, Ophthalmology, Orthopedics,