distinct episodes of feedback were logged using the online form: 9 by emergency medicine faculty, and 27 by senior-level residents. The learner targets included 30 interns and 6 senior-level residents. The feedback scenarios included 4 "Code-1" (high acuity), 2 "Code-2" (medium acuity), and 30 "Code 3" (low acuity) trauma resuscitations. The initial implementation of this innovation was successful in encouraging feedback and providing a favorable, objective framework to provide it. The feedback log suggests more initial enthusiasm for and engagement with the innovation among residents than faculty. Future plans include more targeted education for the physician faculty, and mapping the feedback form to ACGME Milestones for use by the Clinical Competency Committee as a data point to inform milestone assignments. Additionally, for proof-of-concept, this pilot project focused exclusively on trauma resuscitations, but will be expanded to include a pre-identified series of discrete observable behaviors (i.e., providing discharge instructions, calling a consultant, performing a procedure).

20 Effectiveness of Simulation-Based Mastery Learning Curriculum for Tube Thoracostomy in Emergency Medicine (EM) Residents

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Learning Objectives/Educational Objectives:

1. Diagnose pneumo- and hemothorax on chest x-ray and ultrasound

2. Confidently and competently place a chest tube using sterile technique

Abstract:

Introduction/Background: For rare, high-risk procedures in EM, simulation is an ideal modality to supplement clinical training. Simulation allows for deliberate practice of procedural skills without concern for patient harm. Simulation-based mastery learning is the gold standard for procedure training, and has been used to successfully train residents in a variety of procedures.

Curricular Design: We developed a simulation-based mastery learning course for tube thoracostomy to train residents at our institution. The course consists of independent pre-work followed by a 2-hour hands-on session. The rubric used for assessing competence was based on the published, validated TUBE-iCOMPT checklist. The in-person session consists of 1)baseline assessment; 2) deliberate practice on individual aspects of the procedure; 3) final assessment. If a minimum passing score is not achieved, additional coaching and practice occur until the learner achieves the minimum passing score.

Impact/Effectiveness: 23 PGY-2 residents have completed the course. There was a statistically significant increase in learners' modified TUBE-iCOMPT score out of 79 points (pretest M=60.04, SD=8.35 to posttest M=74.26, SD=4.68, $p<0.001$). Learners' confidence in their ability to correctly place a chest tube also increased on scale from 1 to 10 (precourse M=4.38, SD=1.95 to postcourse M=7.78, SD=0.95). Our course was well received by learners and effective in improving their directly observed procedural skills in simulation. A next step will be to assess outcomes data to see if our course has any effect on complications rates for chest tubes placed at our institution. We are also implementing a similar course for pigtail catheter placement.

21 Emergency Medicine Clerkship Curricular Revision Using a Targeted Needs Assessment

David Wald, DO

Learning Objectives: Our objective was to perform a curriculum renewal for our EM clerkship using a targeted needs assessment.

Abstract:

Prior updates of our EM clerkship curriculum have been based largely on perceived need. A review of the published national curriculum set the groundwork for a formal approach to curriculum renewal using a targeted needs assessment. We felt this approach would provide us with valuable information as we moved forward with the curriculum renewal process.

A two part targeted needs assessment was developed. We first surveyed stakeholders; chief residents, clerkship and residency leadership to identify concepts, complaints, procedures / tasks, conditions and clinical decision rules perceived as important for all students to be exposed to during their required 4 week EM rotation. Responses were reviewed to identify patterns. A follow up needs assessment was distributed to a larger group of faculty, residents and students. This prioritized response options based on perceived level of importance; very, somewhat or less important.

All (n-14) participants responded to the initial survey. Data obtained populated responses for the follow up survey. Fifty three (87%, n-61) responded to the follow up needs assessment. Four key concepts were felt to be "Very Important" to emphasize during the clerkship; approach to the undifferentiated patient, performing a focused H&P, recognizing "Red Flag" symptoms, sick vs. not sick. These are now a focal point of discussion during orientation. Four complaints were felt to be "Very Important"; abdominal pain, altered mental status, chest pain and shortness of breath. These are incorporated into didactic cases used during the clerkship. Additional cases have been developed to reflect the importance of conditions identified through the needs assessment. Key clinical decision rules have been