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The Impact of an Emergency Department-Based Critical Care Unit on the Procedural Training Experience for Residents

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Methods: We evaluated two forms, 1) a gold standard, 8 question evaluation form used to rate speakers in classroom and competition settings (the “Competent Speaker” evaluation form), and 2) the CORD-EM form, a novel, 3 question speaker evaluation form created for the CORD-EM 2015 national conference. The Competent Speaker form was analyzed with two evaluators; the CORD-EM form was analyzed with three evaluators but randomized to select only 2 evaluators’ ratings to make results more generalizable to a generic audience evaluating the speaker.

Results: The Competent Speaker Form with 22 total evaluations was only moderately internally consistent (Cronbach’s alpha .509) and had poor inter-rater reliability (intra-class correlation, ICC, .540), despite 1.5 hours of evaluator training. In contrast, the 46 total evaluations of the CORD-EM form found the novel form to have exceptional internal reliability (Cronbach’s alpha .923) with an acceptable inter-rater reliability (ICC .617). Validity evidence was strong for both forms.

Conclusions: The CORD-EM speaker evaluation form is the first form with strong reliability and validity evidence to our knowledge specifically designed to help conference planners. Future research will examine if its exceptionally short length improves audience response rates for speaker evaluations.

56 The Impact of an Emergency Department-Based Critical Care Unit on the Procedural Training Experience for Residents

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Background: Clinical innovation can enhance operational metrics and patient outcomes; however, impacts on education are often not assessed. A new Emergency Critical Care Center (EC3) opened in a large University ED with a goal to provide seamless transition of care for critically ill patients from the ED to ICU.

Objectives: We aimed to quantify the changes in educational experience for EM and Internal Medicine (IM) trainees as a result so future iterations at other institutions could consider effects on the educational milieu.

Methods: A retrospective review of critical care procedures performed prior to and after the implementation of the EC3 at a single institution. Data was collected from procedure notes and billing records of the ED including EC3 and Medical ICU (MICU). Data from the first quarter of the year prior to the implementation was compared to the same quarter after the EC3 opened. In addition, EM and IM trainees were anonymously surveyed about their perceptions of the unit’s effects on their training environment.

Results: Senior EM trainees (63% response rate) reported

increased (50%) or unchanged (40%) comfort in caring for critically ill patients; However, IM trainees (79.1% response rate) felt it had a negative impact on their comfort level (64%). Comments revealed significant anxiety among both groups of trainees on the unit’s potential impact on their learning environment. Procedural experiences are summarized in Table 1 with Intubations, Non-Invasive Positive Pressure Ventilation (NIPPV), and Central Venous Lines (CVL) performed in the ED showing substantial increases after opening of EC3. MICU procedures showed decreases in endotracheal intubations (-21.7%) and arterial lines (-15.9%) while CVLs remained stable.

Conclusions: Implementation of the EC3 results in significant trainee anxiety about its effect on learning despite overall favorable impressions from EM trainees. EM trainees are exposed to more invasive procedures; whereas IM trainees in the MICU may experience small but significant decreases in procedural opportunities. Institutions considering an ED-ICU should carefully plan for potential changes in the educational environment including procedural training for all trainees. Further work will delineate changes in case mix and management opportunities for learners.

Table. Critical care procedures for quarter 1 of 2014 (pre-EC3) and 2015 (post-EC3) for both ED and Medical ICU.

	2014 Q1 ED (pre)	2015 Q1 ED (post)	ED Change (%Change)	2014 Q1 ICU (Pre)	2015 Q1 ICU (Post)	ICU Change (%Change)
Intubation	71	101	30 (42.3%)	23	18	-5 (-21.7%)
NIPPV	31	47	16 (51.6%)	N/A	N/A	N/A
Aline	31	47	16 (51.6%)	69	58	-11 (-15.9%)
CVL	16	25	9 (56.3%)	50	51	1 (2.0%)
Paracentesis	57	51	-6 (-10.5%)	10	9	-1 (-10%)
Pericardiocentesis	1	0	-1 (-100%)	0	0	0 (0%)
Thoracentesis	7	9	2 (28.6%)	8	3	-5 (-62.5%)

57 Trends in NRMP Data from 2007-2014 for US Seniors Matching into Emergency Medicine

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Background: Since 1978, the NRMP has published data demonstrating characteristics of applicants that have matched into their preferred specialty in the NMRP main residency match. There is limited information about trends within this published data for those students matching into emergency medicine (EM).

Objectives: To investigate and describe trends in USMLE Step 1 and Step 2 scores (compared to the national means), number of contiguous programs ranked and AOA membership