the initial 6 months of post-implementation data. This is an implementation, time (AB) series design study, comparing data before and after changing to the modified NCAT-EM shift evaluation tool.

Results: A total of 1521 of the requested 3536 evaluations and a total of 947 of the requested 1081 evaluations were analyzed in 6 month post-implementation time period. Following our timeline pre implementation the average compliance rate From April 2017 through March 2019 was 43% (range 28-58%). Post implementation, over the 6 months following adoption of the modified NCAT-EM, the compliance rate improved to an average of 88% (range 82-94%). This shows a 104.6 % increase.

Conclusions: Implementation of the modified NCAT-EM shift card to acquire faculty evaluations of fourth year medical students on a required Emergency Medicine Clerkship showed an improvement in compliance from a baseline mean completion rate of 43% to 88% in the post-implementation period. Our strategy and tool was simple to implement, and offers an approach to improve compliance with faculty evaluations in the clinical setting.

5 The Effectiveness of Teaching Evidence Based Medicine to Medical Students Using a Journal Club Curriculum

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Background: Evidence-based medicine (EBM) is identified by the Association of American Medical Colleges as an Entrustable Professional Activity for medical students entering residency, yet competency is only achieved 63.8% of the time in incoming residents. To help prepare students for residency, the ACE Tool--a validated instrument for assessing EBM competence--was used as an initial needs assessment to measure students' knowledge. The authors then implemented a new EBM curriculum in a mandatory fourth-year emergency medicine (EM) clerkship, using a weekly journal club format. This interactive "flipped classroom" module was selected to allow problem- and team-based learning and reflection on articles relevant to the current practice of EM, including endovascular intervention for stroke, contrast associated nephropathy, and the HEART Pathway. After implementation, the ACE tool was again used for assessment of the students' knowledge.

Objective: To determine if this curriculum effectively increased the knowledge of EBM in fourth-year medical students. The hypothesis was that ACE would be significantly improved. To determine if the implementation of an evidence-based medicine curriculum in the format of a journal club effectively increased the knowledge of evidence-based medicine in fourth-year medical students.

Methods: This study retrospectively examined and compared the ACE scores of all fourth-year medical students enrolled in the EM clerkship from June 2017 to May 2019, a total of 304 students. The EBM curriculum was implemented in June 2018. The distribution of scores was not normal, so a Mann-Whitney U test was used to look for a difference in ACE test scores.

Results: All eligible students were included in the study with none excluded. There was a statistically significant difference in mean ACE scores of students not exposed to the new EBM curriculum (60.4%) compared to those who were (68.7%) ($p < 0.00001$).

Conclusion: Our focused EM-clerkship-based EBM curriculum improved knowledge in fourth-year medical students, as measured by the ACE tool. This curriculum is feasible and effective and could be implemented at other institutions.

6 Using the QSAT to Generate Multi-Source Feedback on an In-Situ Pediatric Simulation Case

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Background: Multi-source Feedback (MSF) is a suggested evaluation method by the Accreditation Council for Graduate Medical Education (ACGME). The Queen's Simulation Assessment Tool (QSAT) has been validated to discriminate between resident performances in a simulation (sim) setting. Our prior published work has demonstrated excellent inter-rater reliability (IRR) using the QSAT for MSF with an adult case in the sim lab.

Objectives: Using the QSAT, this study seeks to determine the degree of agreement of MSF on a single pediatric (peds) sim case conducted in-situ in the Emergency Department (ED).

Methods: This IRB approved study was conducted at a four year EM residency which trains 13 residents a year. A peds resuscitation case was developed with specific behavioral anchors on the QSAT, which uses a 1-5 scale in each of 5 categories. Data was gathered from each of 6 participants in the sim. The resident lead self-evaluated and also received MSF from each of a junior resident peer, a fixed peds ED nurse (RN), a random ED RN, and 2 faculty (one fixed, the other from a dyad). Reported are the mean scores and standard deviation (SD) for each. IRR is reported as Intraclass Correlation Coefficients (ICC) with 95% Confidence Intervals (CI) and are interpreted based on Cicchetti et al.

Results: The sim was run on 35 separate days over 2 academic years. Mean QSAT scores are in Table One. Table Two demonstrates ICC with fair IRR. Here all ICC CI's overlap, suggesting no statistically significant difference between sources of feedback. Removing self-evaluation led

to the highest IRR, achieving good consistency. IRR for any single or grouped non-faculty source of MSF was poor.

Conclusions: Using the QSAT, this single site cohort suggests that faculty must be included in MSF. The lower IRR in this cohort compared to our prior may be based on the case being peds in nature, the sim in-situ, or both. Self-evaluation appears to be of limited value in MSF.

Table 1. Mean QSAT Scores by Rater.

QSAT Variable	Self (n=35)	Fixed Attending (n=35)	Dyad Attendings (n=35)	Peer (n=34[b])	Fixed Nurse (n=33[c])	Random Nurse (n=34[d])
Primary Assessment *mean ± SD*	4.2 ± 0.6	4.4 ± 0.7	4.4 ± 0.7	4.8 ± 0.4	4.5 ± 0.8	4.7 ± 0.5
Diagnostic Actions *mean ± SD*	4.0 ± 0.7	4.0 ± 0.8	4.3 ± 0.7	4.4 ± 0.6	4.2 ± 0.9	4.3 ± 0.7
Therapeutic Actions *mean ± SD*	4.3 ± 0.7	4.2 ± 0.8	4.5 ± 0.8	4.8 ± 0.5	4.2 ± 0.9	4.5 ± 0.6
Communication *mean ± SD*	4.3 ± 0.7	4.2 ± 0.8	4.6 ± 0.6	4.7 ± 0.5	4.4 ± 0.7	4.4 ± 0.7
Overall Assessment *mean ± SD*	4.0 ± 0.6[a]	4.4 ± 0.6	4.2 ± 0.5	4.7 ± 0.5	4.4 ± 0.7	4.4 ± 0.6
QSAT Total *mean ± SD*	20.7 ± 2.6[a]	21.2 ± 2.5	22.3 ± 1.9	23.4 ± 1.9	21.7 ± 3.1	22.4 ± 2.4

[a]One self-rater did not answer Overall Assessment question, QSAT Total unable to be calculated for simulation, n=34.
[b]One simulation is missing data from a peer-rater, n=34.
[c]Two simulations are missing data from the fixed nurse rater, n=33.
[d]One simulation is missing data from the random nurse raters, n=34.

Table 2. Intraclass Correlation Coefficients (ICC) and 95% CI for Inter-Rater Reliability of Mean Total QSAT Score.

ICC Type	ICC 1	ICC 2	ICC 3	ICC 4	ICC 5	ICC 6
Inter-rater Consistency	0.570 (0.279-0.771)	0.429 (0.027-0.698)	0.557 (0.245-0.765)	0.538 (0.213-0.756)	0.608 (0.332-0.792)	0.411 (-0.028-0.693)
Inter-rater Absolute Agreement	0.531 (0.244-0.742)	0.377 (0.017-0.651)	0.538 (0.232-0.751)	0.488 (0.173-0.718)	0.579 (0.303-0.772)	0.364 (-0.027-0.650)

ICC 1: ICC for all raters.
ICC 2: ICC with fixed nurse raters removed.
ICC 3: ICC with peer raters removed.
ICC 4: ICC coefficient with random nurse raters removed.
ICC 5: ICC with self-raters removed.
ICC 6: ICC with all attending raters removed.

Educational Soundbites Abstracts

1 Clinical Event Debriefing Curriculum to Empower Residents to Resolve Patient Safety Issues in Emergency Medicine

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Background: EM ACGME program requirements stipulate that residents "actively participate in patient safety systems and contribute to a culture of safety," while programs should provide "formal educational activities that promote patient safety-related goals." They state feedback and experiential learning are "essential to developing true competence."

Learning Objective: To actively engage residents in an experiential process to analyze and correct systems factors uncovered through real time Clinical Event Debriefing (CED).

Curricular Design: During their Administrative Rotation, senior residents participate in a 2 hour CED workshop led by Simulation Faculty to provide a structured framework to analyze team performance and clinical systems with interprofessional staff. The first hour focuses interactive discussions of case studies in team performance and systems based error models and the second hour is designed to allow residents to practice a scripted CED format on videos of simulated events. Strategies to elicit proposed solutions to identified active and latent safety issues are stressed. Residents are tasked to perform 4 CEDs during their rotation, the first being directly supervised by the workshop facilitator. Aggregated issues and solutions were formally presented to operational leadership to codify a QI plan, which residents were tasked to help implement. Formative and summative feedback was provided by Simulation Faculty, and the Administrative Rotation director.

Impact/Effectiveness: Over a 2 year period, a total of 83 CEDs were led by residents. Examples of identified issues included inadequate communication, equipment failure, and deficiencies in protocols. Residents identified 124 issues and helped resolve 102 of them. Consistent with the ACGME mandate, CED provides a meaningful experiential platform for residents to promote a culture of safety by facilitating open dialogue amongst team members, reporting back to administration with systems issues, and taking an active role in resolving patient safety vulnerabilities.

2 Impact of a Paired Student-Resident Rotation Schedule on Medical Student Education and Impression of Residency Programs

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Background: For many students, their ED rotation is their first exposure to emergency medicine and their first opportunity to evaluate a program as a fit for residency. Traditionally, shifts are scheduled with different residents and attendings and students receive little continuity in their education and are often unable to develop relationships for accurate evaluation.

Educational Objectives: We evaluated two different scheduling modalities- student-resident paired shifts vs unpaired shifts - and their effects on student education, ability to evaluate a residency program, and ability to showcase knowledge and skills. We sought to evaluate two different scheduling modalities-student-resident paired shifts vs unpaired shifts - and their effects on medical student education, ability to evaluate a residency program, and ability to showcase knowledge and skills.

Curriculum Design: For four months, all fourth year medical students (M4's) rotating through our ED spent two weeks in each format. During unpaired shifts, students were assigned shifts irrespective of any resident or attending schedule. During paired shifts, they worked with the same PGY-3 or 4