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Transparency in the Culture of Assessment and Feedback: A Currently Opaque Environment and the Case for Resident Feedback Dashboards

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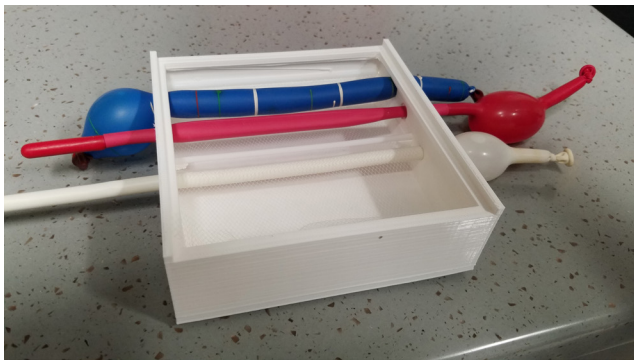
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patients with lower extremity and hip fractures, a femoral nerve block can be used. An economical device capable of demonstrating anatomic landmarks on ultrasound (US) is needed to make practice more accessible and ultimately lead to improved training and patient care.

**Educational Objectives:** This innovation was designed to meet the following educational objectives: 1) Identify anatomical features for femoral nerve block using US; 2) develop tactile and spacial skills for real-time US-guided femoral nerve block; and 3) design a training device that is inexpensive, provides realistic imaging representation, and can be replicated across multiple training programs.

**Curricular Design:** The femoral nerve block task trainer is composed of a 3D printed case with specific openings on its sides coinciding with anatomically correct femoral artery, nerve and vein dimensions. The interior of the case is filled with a superabsorbent polymer that will absorb water and give it a consistency comparable to subcutaneous tissue. A rubber “skin” placed over the trainer contains components and maintains an US interface. Thirty-six EM residents provided feedback on the task trainer after participating in a deliberate practice exercise.

**Impact/Effectiveness:** Using this low-cost, effective trainer allows for easier access to repeated practice as well as providing a safe method without the need for practicing on a human patient. Of the residents surveyed, 97% stated that this model was realistic, and 96% believed that the training activity using this model will help provide improved patient care.



## 40 Transparency in the Culture of Assessment and Feedback: A Currently Opaque Environment and the Case for Resident Feedback Dashboards

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**Background:** Proper feedback practice should encourage the development of self-reflection, encourage dialogue between teacher and learner, and provide a framework to move toward desired performance. It should be ongoing, frequent and dynamic (Swanwick, Tim. *Understanding Medical Education*). Unfortunately, satisfaction with feedback among emergency medicine residents is lower than it should be. Resident dashboards have been described as platforms that inform the clinical competency committees (CCC) in internal medicine. Resident dashboards allow residents to access their feedback data on a real-time basis.

**Educational Objectives:** The resident dashboard was designed to create a more transparent environment regarding performance. A dashboard enables residents to regularly reflect upon their feedback in an easy-to-understand visual format that identifies their strengths and weaknesses within the framework of the ACGME Milestones. This immediate, timely feedback allows residents to refine their clinical practice on an ongoing basis. Over time, the accumulation of data will make it feasible to create individually tailored education plans.

**Curricular Design:** After performing an internal needs assessment, we realized there was a need to change how evaluations of resident clinical performance were collected and communicated. Responses highlighted a need for increased quantity, specificity and transparency. We created a new evaluation tool that focused on obtaining Milestone-relevant clinical data coupled with focused qualitative questions. Rather than using a ranked scale to assess individual competencies within the Milestones

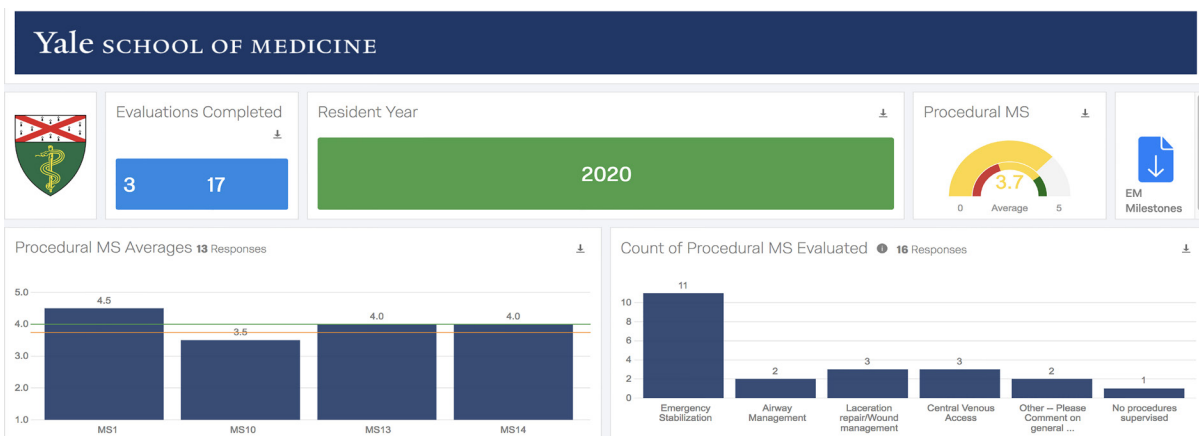


Figure for Abstract #40.

framework, we now collect Milestone data using a “check all that apply” evaluation system. The data collected from both attendings and nurses are mapped in real time into a visually easy-to-understand dashboard that allows residents and residency leadership to identify deficiencies and access specific qualitative feedback. While development of a dashboard is time intensive, it is easy to maintain. The cost of this project is supported by an internal grant, and the technology is currently being provided free of charge by Qualtrics as a pilot.

**Impact/Effectiveness:** Using a feedback dashboard that is easily accessible to both residents and residency leadership provides the opportunity to significantly improve transparency regarding performance. The promise of being able to individually tailor resident education using similar technology is encouraging. Thus far, residency leadership and residents have been pleased with the ability to access the robust data quickly.

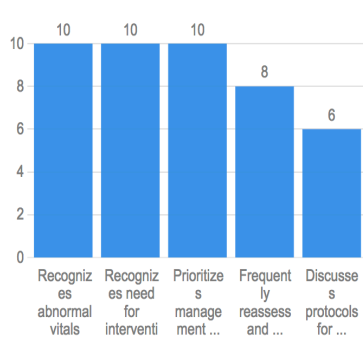
**Example of Evaluation question:**

MS1 - Emergency Stabilization of the Critically Ill Patient. (check all that apply)

- Recognizes abnormal vitals
- Recognizes need for intervention
- Prioritizes management for stabilization
- Frequently reassesses and Recognizes need for further intervention
- Discusses protocols for managing critically ill patients

**Example of how the question is mapped to Resident Dashboard:**

MS1 - Emergency Stabilization of the Critically Ill Patient 10 Responses



## 41 Using a Novel, Online Relational Database Tool to Track Attendance and Increase Didactic Evaluations in Graduate Medical Education

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**Background:** The ACGME requirement that emergency medicine (EM) residents attend a specific percent of planned didactic experiences, makes accurate recording of attendance critical in residency program administration. Additionally, adequate evaluation of conference material is essential for program evaluation and faculty development and promotion.

**Educational Objectives:** Our goal was to implement a system to automatically track resident conference attendance and to increase the number and quality of evaluations completed for sessions presented at the weekly didactic conference within our EM residency program.

**Curricular Design:** Through a re-design of our conference curriculum we adopted a new curriculum management system (Emergency Medicine Curriculum Assessment Tool [EMCAT] created by MedEd Guru), operated through Airtable, a free cloud-based relational database system. This tool allows for curriculum mapping and scheduling, and further functionality was developed to collect online evaluations and track attendance. Due to the ease of the system, a new mandatory evaluation process was instituted within our program, whereby attendees – both faculty and residents – only receive attendance credit if they complete an evaluation for each session that they attend. Following each didactic session, attendees are reminded to access the online evaluation form via their smartphone to complete an evaluation. To evaluate effectiveness, we compared the number of evaluations completed in our old format, in which evaluations were completed through an e-mailed form, to the new process.

**Impact/Effectiveness:** Using this system, attendance is recorded automatically and in real time, decreasing the amount of administrative efforts that were previously required, and allowing faculty and residents to access their attendance records at any time. Additionally, we have seen a drastic increase in the median number of evaluations that we receive for each conference session (3 [interquartile range (IQR) 2-4] vs 31 [IQR 25-40], difference 27 [95% confidence interval,