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15 Advanced Ultrasound Workshops for Emergency Medicine Residents

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Background: Ultrasound has become a standard component of Emergency Medicine training. Most residency programs fulfill this requirement with a dedicated rotation.[i] At our institution this occurs in the intern year and focuses primarily on the ACEP core applications.[ii] This focused time allows intensive exposure, but for many residents, scanning declines after competency in the basic applications is achieved.

Educational Objectives: We sought to renew interest in ultrasound by presenting two advanced workshops on nontraditional content. Sessions covered ways ultrasound could augment or replace aspects of the physical exam. and ultrasound guided nerve blocks.

Curricular Design: Two workshops were implemented during a Post-Graduate Year (PGY) 2 resident class session. Each workshop was divided into brief modules which included a brief case-based didactics immediately followed by 10-15 minutes of hands-on practice scanning. This back-and-forth approach allowed the residents to immediately practice the presented content.

The physical exam workshop covered splenomegaly, acute mitral regurgitation, aortic dissection, hepatomegaly, jugular venous distension, patellar tendon rupture, and shoulder dislocation. The nerve block workshop covered posterior tibial, ulnar, radial, femoral, sciatic, interscalene brachial plexus, and supraclavicular brachial plexus nerve blocks.

Ideally every 3-4 learners in a workshop require: 1 instructor, 1 ultrasound machine, 1 standardized patient.

Impact/Effectiveness: Residents were given an anonymous self-assessment survey after the workshops. For the Physical Exam workshop, the residents all reported an increased level of comfort using ultrasound, and many of them reported they were using ultrasound more frequently after the session. For the Nerve Block session, the residents reported increased comfort performing these procedures, however there was not a significant difference in self-reported nerve block procedure numbers pre and post workshop. The main challenges reported with attempting ultrasound guided nerve blocks were difficulty identifying the nerve and lack of attending comfort level in supervising the procedure. These sessions could be easily replicated in other residency programs.

Table 1. Survey Results for Ultrasound as Adjunct to Physical Exam workshop.

	Yes	No	N/A
Attendance	9	3	
Use of Ultrasound increased after course?	6	5	1
Comfort Level increased after course?	10	1	1

Table 2. Survey Results for Ultrasound-guided Nerve Block workshop.

	Yes	No			
Attendance	8	4			
	zero	one	two	N/A	
# blocks done pre-session	5	2	3	1	
# blocks done post-session	6	3	1	2	
	Yes	No	Unsure		
Comfort level increased after session?	4	3	4		
	Finding appropriate patient	Time	Correctly identifying nerve	Attending comfort in supervision	N/A
Limitations in performing nerve block	1	1	3	1	3

16 An Airway Committee: An Innovative Way to Implement an Asynchronous Airway Curriculum

Dyer S, Wnek K, Romo E, Bobryshev P, Cook J, Leser E, Schindlbeck M, Nordquist E/John H. Stroger Hospital of Cook County, Chicago, IL

Background: It is imperative EM residents become competent managing difficult airways. Through an airway education needs assessment, it was learned that the PGY2 anesthesia rotation required improvement.

Educational Objectives: To improve the educational quality of the PGY2 anesthesia rotation and to increase the resident procedural competency and knowledge with difficult airways through asynchronous learning using a yearlong airway curriculum.

Curricular Design: An "airway committee", consisting of an EM attending with national airway teaching experience, a simulation fellow, and 5 upper level residents, was formed to outline and develop a novel asynchronous, multimodal airway curriculum to supplement the PGY2 anesthesia rotation and increase resident airway competency. A FOAM (Free Open Access Medicine) based reading list was sent to each PGY2 prior to the start of their anesthesia rotation to provide a foundation of airway management. This was paired with one-on-one simulation cases to apply this knowledge. Advanced intubation and peri-intubation topics were discussed quarterly in small groups during conference led by faculty and senior residents. Additional advanced airway procedural practice was provided in a cadaver lab twice a year and an in vivo demonstration of an awake intubation. Key articles regarding airway management were reviewed quarterly at attending led journal clubs.

Impact/Effectiveness: We present a novel approach on how to implement airway teaching into an EM residency through a yearlong multimodal curriculum guided by an "airway committee". Feedback has been favorable with 100% of residents reporting that the curriculum increased the

educational value of the anesthesia rotation. The total number of intubations obtained on the anesthesia rotation has significantly increased when compared to the previous year (15.0 vs 8.4, p=0.045). We believe this to be a successful approach to increasing resident knowledge and procedural competency.

17 An Email Prompt with Weblink Improved Faculty Participation, Volume of Returns, and Distribution of Emergency Medicine Resident After-Shift Evaluations

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Background: Prior to September of 2013, the faculty of our Emergency Medicine residency program had initiated and submitted online after-shift evaluations per their own discretion. Overall engagement in the process, as evidenced by both raw number of generated evaluations as well as number of faculty routinely participating, had been disappointing. In addition, our Clinical Competency Committee had hypothesized that our process may have been subject to selection biases, resulting in a limited distribution of evaluated residents across the program's cohort. We endeavored to leverage the capabilities of our primary hospital's online trainee evaluation system (MyEvaluations.com Inc. c.1998 - 2015.) in order to positively impact these metrics.

Educational Objectives:

1. Increase overall number of after-shift evaluation returns.
2. Increase number of faculty members participating in the evaluation process.
3. Increase the distribution of collected evaluations across our cohort of residents.

Curricular Design: Starting in September of 2013, our faculty began receiving emails on the day of clinical shifts prompting them to log onto MyEvaluations.com through an imbedded link, and to complete an after-shift evaluation on a single specific resident. Assignments are manually inputted by our site Education Coordinators on a daily basis, with attention to both the resident and faculty shift schedules to ensure adequate opportunity for sufficient interaction. Our two primary clinical sites are urban emergency departments with a combined annual patient volume of 169,000 in 2014.

Impact/Effectiveness: See Figures 1 and 2 below. Due to logistical constraints, the new process was rolled out at our two clinical sites on two separate dates. Prior to rollout of the new process, the average number of monthly evaluations submitted was 61, with an average of 17 faculty participating. Post rollout, the average monthly returns increased to 185 submissions, with 45 faculty members participating.

With regard to distribution of evaluations among our 39 residents, the average number of residents evaluated monthly was 28 (72%) prior to the rollout date. After adoption of our new process, we demonstrated a positive trend (more residents receiving at least one evaluation,) with the average number of residents evaluated per month improved to 33 (85%.)

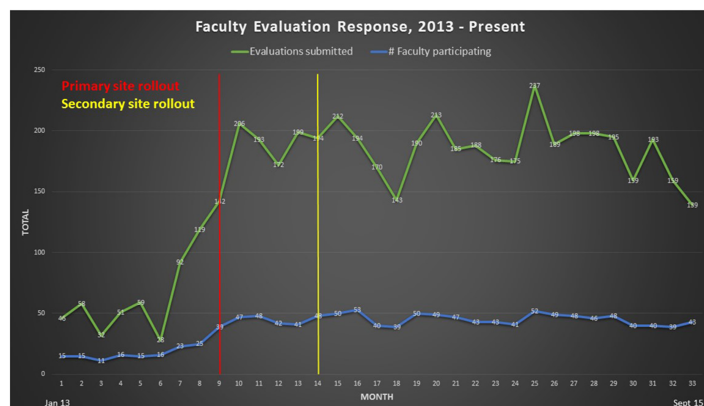

Figure 1.

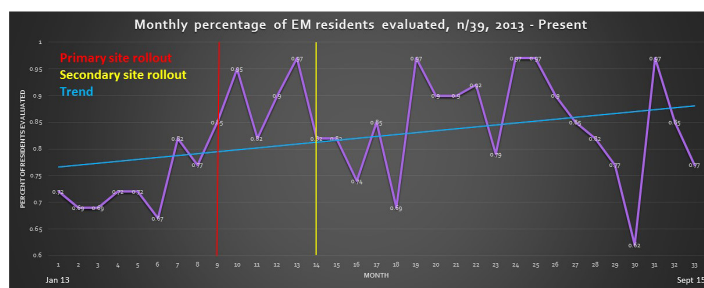

Figure 2.

18 Are the Top EM Residency Applicants Declining Interview Invitations Earlier in 2015: A Review of Declined Invitations from 2013-2015

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Background: One of the major discussion points of Emergency Medicine (EM) program directors (PDs) has been that the top EM applicants, identified by high USMLE scores and AOA status, are applying to too many EM residency programs and accepting too many interview invitations based on their above average academic credentials. In addition to the time and cost associated with interviews, there are a finite number of EM interview spots. As a result, some of the other EM applicants, most of whom are solid students, are struggling to obtain enough interviews. As a point of emphasis, EM PDs have discussed making a more concerted effort to better advise their top students about the correct number of EM programs to apply and the number of interviews to accept. They are also encouraging the top students to cancel undesired interviews as early as possible to preserve interview spots for other applicants.

Educational Objectives: The question we sought to answer