

Ultrasound Education (EUE) sessions (one per resident per EM block lasting 3 hours each) during which small groups of 5-8 residents of all PGY levels were scheduled to scan in the ED. Sessions occurred after our weekly conference and incorporated small group (2-4 residents) or independent scan time during which, an EUS faculty member rotated through groups in order to provide real-time feedback. Each session concluded with group image review.

Impact/Effectiveness: We believe EUE sessions are an effective way to incorporate protected bedside hands-on scanning into resident EUS education. One year after implementation of EUE, a cross-sectional survey was sent to 55 EM residents with a response rate of 67%. Based on survey results, EUE sessions were considered a successful addition to resident POCUS curriculum as they increased the majority of residents' confidence with POCUS (Figure 1) and added value to most residents' EUS education (Figure 2). In the future we will increase the amount of hands-on scanning by EUS faculty members during EUE sessions as 71% of residents wanted more hands-on scanning.

Figure 1. Resident Confidence in EUS after EUE implementation.

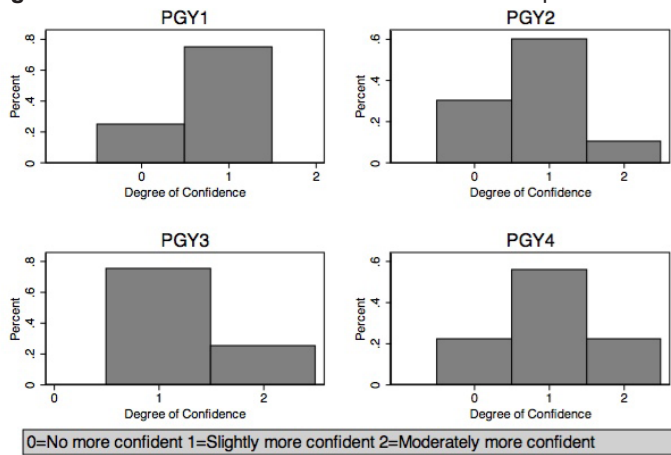
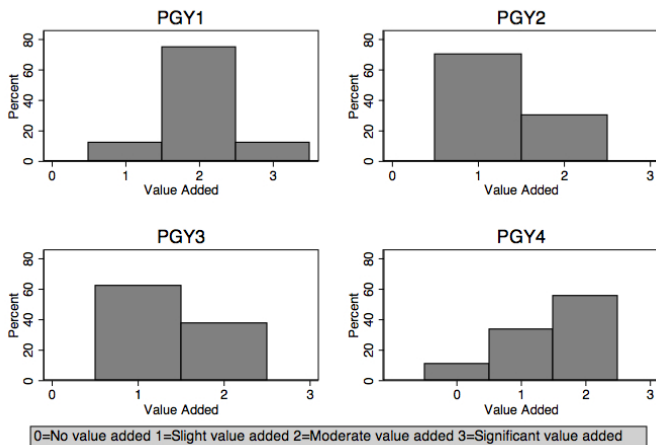


Figure 2. Value Added to Ultrasound Education by EUE Sessions.



32 Flipped Learning Initiative Program (F.L.I.P.): Flipping the Classroom with a FOAMed Supplemental Curriculum

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Background: The fusion of medicine, education and technology has resulted in an explosion of Free Open Access Medical Education (FOAMed) and demanded we tailor our emergency medicine curriculum to meet the needs of our learners. There has been much debate on how to successfully incorporate FOAMed into pre-existing 'traditional' residency curriculums which have been the standard. A residency-wide needs assessment demonstrated residents wanted FOAMed resources as part of the curriculum.

Educational Objectives: To incorporate FOAMed resources into a pre-existing monthly textbook reading assignment as a supplemental curriculum while employing the 'flipped classroom' concept.

Curricular Design: Each month a block of textbook chapters are assigned for residents to read focusing on a core concept and then discussed at monthly faculty led small groups. In order to incorporate FOAMed and the 'flipped classroom' concept we created a supplemental curriculum to parallel the assigned textbook chapters. Using the Delphi method, each month a F.L.I.P. (Flipped Learning Initiative Program) page is created comprised of podcasts, blog posts, videos, published articles and 3-5 board review questions related to the assigned chapters. Residents are advised to read the assigned chapters but use FLIP as supplemental resources to aid in knowledge retention. The small group sessions are designed to be case based, covering the core topics through group discussion rather than lecturing.

Impact/Effectiveness: We propose a novel way to incorporate FOAMed into a residency curriculum as a supplement to traditional teaching that additionally employs the 'flipped classroom' technique. Feedback from a residency wide survey has been very positive with almost all respondents believing F.L.I.P. is an effective integration of FOAM. Furthermore a majority of respondents feel more comfortable and confident in FOAMed as a reliable resource and now use FOAMed more frequently.

33 Geriatrics Longitudinal Integrated Curriculum for Emergency Medicine Residents

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Background: In 2010 there were roughly 20 million ED visits by patients over the age of 65 and the number is

increasing. It is important for EM physicians to have an in-depth knowledge base for treating older adults. Despite this, most EM residencies do not have a formal training component that focuses on older adults. Geriatric EM is a growing subspecialty and should be a continuous thread throughout an EM residency curriculum.

Educational Objectives: To create an innovative Geriatrics Longitudinal Integrated Curriculum (GLIC) for training EM residents in the care of older adults that focuses on fundamental disease processes, presentations, and age-specific treatment considerations

Curricular Design: Many EM residency programs utilize a systems-based modular curriculum for weekly didactics that rotates every 18-24 months. Using this foundation, geriatric EM was integrated into EM conference to disseminate the fundamentals on an annual, continuous basis. Rather than creating a separate geriatric module, geriatric content was developed for each module, including but not limited to trauma, neurology, cardiology, gastroenterology/genitourinary, and psychiatry. Didactics were created to be innovative and interactive, case-based, and targeted to EM residents. Examples of geriatric content include small group activities in diagnosing and treating abdominal pain, workshops on evaluating standardized patients with delirium, lectures on polypharmacy and anticoagulation reversal in intracranial hemorrhage and trauma, and simulation exercises on geriatric trauma and ultrasound nerve blocks.

Impact/Effectiveness: EM residents have been very receptive to this longitudinal curriculum. It has reinforced the importance of special considerations when treating older ED patients. Residents now daily use terminology related to geriatric syndromes and consider the importance of entities such as delirium and recurrent falls. The curriculum has also helped EM conference and educational leadership to maintain consistent geriatric content in EM didactics in a sustainable manner. Through quizzes and direct observation of the GLIC, residency leadership is also able to evaluate residents on multiple milestones, including diagnosis, pharmacotherapy, pain management, professionalism, and patient centered communication.

	Geriatric content
Trauma	Lecture and simulation on Geriatric Trauma
Orthopedics	Lecture and simulation on hip fractures and/or femoral nerve block using US
Internal Medicine	Lecture on Iatrogenic Injuries
Neurology	Lecture on head bleeds/reversal
GI/GU	Small group workshop on abdominal pain cases
Resuscitation	Lecture on Palliative Care, Workshop on Delivering Bad News
Cardiology	Lecture on Atypical ACS & EKG workshop
Toxicology	Lecture on Polypharmacy
Psychiatry	Lecture & Standardized patient workshop on Delirium/Dementia
ID & International	Lecture on Care Transitions

Figure 1.

34 Implementation of a Resident-Driven Patient Safety and Quality Improvement Experience

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Background: As part of the ACGME's growing emphasis on patient safety and quality improvement (QI), residencies must deliver didactics and develop methods by which residents take part in meaningful activities related to these topics. Not only do the milestones emphasize involvement in patient safety, institutional CLER visits focus on resident exposure to these concepts.

Educational Objectives: In addition to traditional conference didactics, it is important for residents to identify potential patient safety and quality improvement projects with realistic interventions and measurable outcomes. We sought to develop a patient safety experience involving and driven by the residents in our three year EM training program.

Curricular Design: Each year, faculty deliver formal didactics on quality improvement topics related to the basic principles and methodology of continuous QI such as process mapping, LEAN and PDSA cycles. After the didactics and introduction, each resident must develop a proposal for a patient safety project over a period of several weeks. The resident's written proposal must identify a problem in the ED, complete a review of pertinent literature, and suggest interventions and measurable outcomes. Residents are then divided into small groups guided by a faculty preceptor, and ultimately select one team project per group. Over the duration of the academic year, teams meet outside of conference to develop and implement their project. The entire residency is brought back at the end of the academic year for team presentations on their intervention, outcomes, and lessons learned.

Impact/Effectiveness: We are now in our third year of this quality improvement and patient safety longitudinal experience. Examples of projects include: handwashing interventions, alarm fatigue, trauma resuscitation team training, door to urine dipstick times, airway box restructuring, and post-intubation care. As a result, all residents have had an immersion experience in a practical CQI and patient safety experience multiple times over the course of training satisfying ACGME and CLER requirements while contributing to resident-driven improvement in patient care.

35 Implementation of a Three-Pronged Strategy Improves Resident Performance on the In-Training Exam

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