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

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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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**Background:** In an effort to improve resident performance on the ABEM In-Training Exam (ITE) and simultaneously increase their depth of medical knowledge, we developed a three-pronged approach to adequately prepare residents. This approach included:

1. Creation of small-group learning sessions to replace hour-long didactics. We also eliminated one hour of weekly conference time and replaced it with one hour of asynchronous learning. Half of conference time was devoted to small group sessions. The other half remained as large audience sessions, thereby preserving Grand Rounds, M&M, and joint specialty conferences such as Trauma and Critical Care.
2. Institution of a weekly one-hour focused board-review session during the five months preceding the ITE.
3. Utilization of an online database of EM board-style questions with a built-in self-assessment tool.

**Educational Objectives:** The primary focus and objective of this educational innovation was to improve the overall medical knowledge of residents while simultaneously preparing them for the annual In-training examination.

**Curricular Design:** The first part of our intervention was taking two hours of conference time and devoting them to small group learning. We divided residents into four smaller groups. Each group rotated through four 30-minute stations. Each station was led by a resident group leader who had been previously paired with a core faculty member, providing a more intimate learning experience given the smaller educator:learner ratio.

The second part of our intervention included a weekly one-hour, high-yield board preparation session instructed by core faculty. Attendance was mandatory for PGY-1s and residents on academic remediation. Attendance was optional for all other residents.

The third part of our intervention included a subscription to an online database of 2,000+ board-style questions. Residents individually completed these questions as part of asynchronous learning. The database included self-assessment tools, which utilized personal statistics to identify individual strengths and weaknesses.

**Impact/Effectiveness:** Implementation of this three-pronged strategy led to significant improvement of ITE scores from 2014 to 2015. In 2014, residents were substantially below the national average. Whereas in 2015, resident scores improved significantly and class averages were substantially above the mean. Our PGY-1 mean score increased by 9 points, moving this group from 3 points below the national mean to 6 points above the national mean. Our PGY-2 mean score increased by 5 points, moving this group from 2 points below the national mean to 3 points above the national mean. Our PGY-3 mean score increased by 3 points, moving this group from 2 points below the national mean to 1 point above the national mean. As supported by the data above, implementation of this three-pronged strategy was successful in improving ITE scores and overall improving resident medical knowledge.

## 36 Improving Emergency Medicine Residency Documentation Training: A Needs Assessment

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**Background:** The medical record is complex, serving to communicate to other providers, bill for services and mitigate medicolegal risk. Emergency medicine (EM) program directors and residents agree that documentation skills are often not taught well during residency. However, the areas of documentation that residents feel most lacking in are not known.

**Educational Objectives:** To identify perceived areas of need in documentation education using a cohort of junior emergency medicine residents.

**Curricular Design:** An anonymous survey was developed by medical education faculty, edited for content validity by an online cohort of medical educators, piloted on the target audience for relevance and clarity and then emailed to PGY1 and PGY2 residents. Junior residents were felt to be most likely to have knowledge gaps regarding documentation. Survey assessed self-reported competency in documentation for communication with other providers, billing, and medicolegal reasons, attitudes towards documentation, barriers to effective documentation, as well as previous education and interest in further education on documentation. A 5-point Likert scale was used to record answers.

**Impact/Effectiveness:** The response rate was 83% (25 of 30). Attitudes toward documentation education were very favorable, with 96% of respondents somewhat or strongly interested in learning more. Residents felt weakest about their knowledge of how to chart to protect themselves medicolegally, with only 16% somewhat or completely agreeing that they know what to include. They felt best about documenting to communicate with other providers, with 50% of respondents somewhat or completely agreeing that other providers could understand the patient's emergency room course by reviewing the chart. The next step will be to create a curriculum that fills these gaps which can be utilized by EM programs across the country to improve residents' knowledge and efficacy with documentation.

## 37 Innovation in EM Education Design Challenge - A Novel Approach to Advance Medical Education

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**Background:** The 21st century is defined by increasingly rapid cycles of change not just in technology, but in education and medical knowledge. This "disruptive" process brings