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Improving General Surgery Resident Utilization and Confidence in Fast Exam with Emergency Physician Teaching

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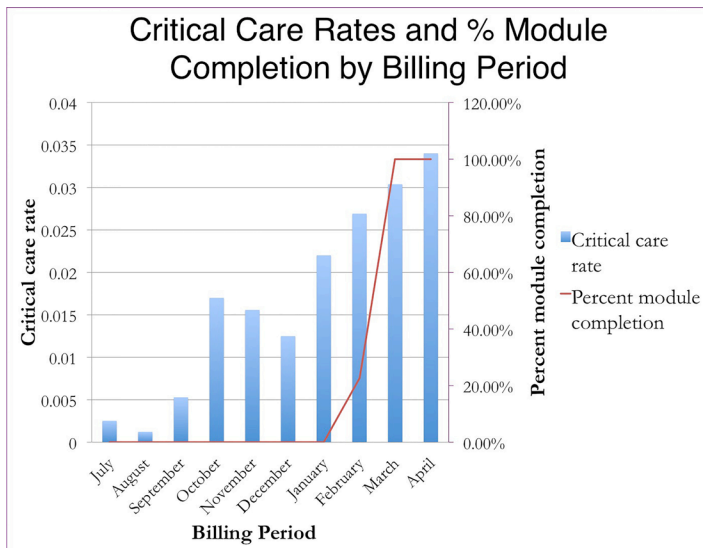
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urban tertiary care center with approximately 68,000 ED visits per year. Pre-intervention, 1.2% of charts were coded as “critical care”; less than the national average of 2.5%. Physicians completed a pre-module assessment, followed by a 15-minute online educational module, followed by a post-module assessment. Critical care rates were measured during the months preceding and following module completion.

Results:

1. Gaps in knowledge were defined when average correct pre-assessment response was < 75%, revealing deficiencies in specific aspects of critical care documentation, which may be reflected in the critical care rate.
2. Post-module assessments had an overall higher correct response rate (65.9% to 84.8%, $p < 0.001$). Specifically for knowledge gap questions, the correct response rate increased from 53% to 86.5% ($p < 0.001$).
3. After all clinicians completed the teaching module, ED critical care rates increased from 1.4% (Nov-Dec, 2015) to 3.22% (Mar-Apr, 2016), an increase of 129% that trended towards statistical significance ($p = 0.058$). This extrapolates to an annual increase in reimbursement of \$103,900, based on the ED’s specific average collection rates.

Conclusions: The training module was able to identify and correct gaps in critical care knowledge, likely leading to an increase in proper charting and coding and a subsequent increase in revenue. Additionally, the effectiveness of a short, easily distributed teaching module carries broad implications for future physician education initiatives.



27 Improving General Surgery Resident Utilization and Confidence in Fast Exam with Emergency Physician Teaching

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Background: The Focused Assessment with Sonography for Trauma (FAST) has been utilized by Emergency Physicians (EPs) since the 1980s for rapid assessment of free fluid in the pericardial or peritoneal spaces. In addition, the FAST is part of the Advanced Trauma Life Support protocol developed by the American College of Surgeons. Unfortunately, the FAST may be underutilized, particularly by surgeons, due to lack of familiarity or lack of confidence in exams obtained by EPs.

Objectives: Our goal is to demonstrate that education of surgical residents by Ultrasound Fellowship trained EPs will increase understanding and familiarity with the exam, and will increase confidence in EP performed exams and EP trauma management.

Methods: This was a pre/post-intervention trial of FAST education of general surgery residents in an urban, tertiary-care Department of General Surgery by four Ultrasound Fellowship trained EPs. 22 PGY 1-2 residents participated in a convenience sampling based on clinical scheduling. Intervention consisted of didactic lectures and a multi-station teaching exercise using high-fidelity ultrasound simulators and a standardized patient. Both pre- and post-intervention, a questionnaire assessed confidence in performing and interpreting FAST exams, as well as attitudes toward EP performed FAST exam and EP trauma care. Responses were in the format of a 5-point Likert scale (1=strongly disagree, 5=strongly agree).

Results: 36% (8/22) had not performed a FAST exam on a live patient pre-intervention. Average confidence in performing FAST exams increased significantly post-intervention, from 2.2 to 3.9. Participants noted improved likelihood of using EP obtained FAST in practice post-intervention, from 2.0 to 4.0. The intervention increased confidence in EP obtained FAST exams, from 3.7 to 4.2. Finally, surgery resident attitudes toward EP trauma care improved. Pre-intervention responses regarding EP capability of management of trauma patients averaged 3.8, increasing to 4.4 post-intervention. All results were statistically significant ($p < 0.05$).

Conclusions: Dedicated instruction by EPs leads to increased confidence with and utilization of the FAST exam by general surgery residents. It also increases residents’ confidence in FAST exams performed by EPs and improved attitude towards EP management of trauma patients overall.