

UC Irvine

Western Journal of Emergency Medicine: Integrating Emergency Care with Population Health

Title

Development of a Resident Lead Critical Care Equipment Checklist and Consistency of Equipment Readiness

Permalink

<https://escholarship.org/uc/item/4vb4j6xt>

Journal

Western Journal of Emergency Medicine: Integrating Emergency Care with Population Health, 23(1.1)

ISSN

1936-900X

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Publication Date

2022

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research skills, more than 85% desired CPD on teaching for simulation instruction.

Conclusions: This is the first study in the US to assess the needs of both the clinical and non-clinical domains of CPD for EM faculty. The identified preferential topics from the needs assessment will be utilized to develop a targeted CPD curriculum for EM faculty.

17 Defining the Clinical and Procedural Opportunities Available to Residents During Rural Rotations

Brandon Haefke, MD; James Homme, MD; Daniel Scholz, MD; Catherine Yang; Derick Jones, MD

Learning Objectives: The purpose of this research study was to objectively measure the clinical experiences that residents are exposed to during rural rotations, in order to more accurately assess their educational value.

Background: Many emergency medicine (EM) residency programs include clinical rotations in rural emergency departments (“rural rotations”) as part of their curriculum. These rotations are designed to expose residents to clinical scenarios which are less frequently encountered in tertiary centers. Additionally, they teach residents how to manage “routine” clinical scenarios in lower-resource settings, often without consulting services and less learner pressure. To date, these proposed benefits have not been empirically studied.

Objective: The aim of this study is to determine the rate at which residents were exposed to key clinical or procedural experiences (“CPEs”) while on rural rotations.

Methods: We conducted a retrospective chart review of all patient encounters involving EM residents at two rural hospitals in the upper Midwest from 7/1/2019 to 6/30/2020. An expert panel predetermined a list of 21 CPEs to be assessed. A total of 1377 encounters were reviewed. The frequency of each CPE was calculated and expressed as the number of CPEs expected for each 12-hour shift along with 95% confidence intervals.

Results: Of the 1377 patient encounters over a total of 1770 resident clinical hours, the most frequently encountered CPEs were: Ambulance Necessity Documentation (1.12 experiences per shift), Critical Care (0.6 per shift), Laceration Repair (0.4 per shift) and Splint/Cast Application (0.18 per shift).

Conclusion: Rural EM rotations provide residents exposure to a variety of valuable educational experiences, and for many, after just a few shifts. Future research will compare this data to a tertiary care center to determine whether rural rotations grant superior exposure to any CPEs. Additionally, we plan to expand this study to investigate other proposed benefits of these rotations, including independent decision making and resource allocation.

Table 1.

CPE	Experiences/Shift	95% CI
Ambulance Necessity	1.12	0.96-1.28
Critical Care	0.60	0.48-0.72
Laceration Repair	0.41	0.31-0.51
Splint/Cast Application	0.18	0.11-0.25
Trauma Activation	0.14	0.06-0.20
Psych Evaluation	0.10	0.05-0.15
Stroke Diagnosis	0.08	0.04-0.13
Incision & Drainage	0.08	0.04-0.13
Fracture Reduction	0.05	0.01-0.08
Procedural Sedation	0.05	0.01-0.08
Intubation	0.03	0-0.05
STEMI Diagnosis	0.02	0-0.04
Arthrocentesis	0.02	0-0.04
Cardiac Arrest Diagnosis	0.01	0-0.03
Complex Lac. Repair	0.01	0-0.03
Nailbed Repair	0.01	0-0.03
Lumbar Puncture	0.01	0-0.02
Vaginal Delivery	0	
Rule Out Labor	0	
Chest Tube	0	
Lateral Canthotomy	0	

18 Development of a Resident Lead Critical Care Equipment Checklist and Consistency of Equipment Readiness

Jared Ditkowsky, MD; Samia Cabezas, BS; Jose Miguel Juarez, MD; Arjun Prabhu, MD, MBE; Erick Eiting, MD MPH; Caroline Burmon, MD

Learning Objectives: This study investigates if the initiation of a resident lead interdisciplinary equipment checklist improves acute critical care equipment readiness in the Emergency Department. Furthermore, this study seeks to identify what barriers exist to consistent survey completion.

Background: Interdisciplinary efforts ensuring clinical readiness in Emergency Departments (ED) can lead to improved patient care. Studies report that equipment checklists can improve procedural and patient outcomes.

Objectives: To evaluate the impact of an resident-led equipment checklist on ED critical care readiness, and to identify barriers to survey completion.

Methods: A multidisciplinary team of ED/critical care attendings, residents and nursing staff developed an acute care equipment checklist via REDCap®. One week of control data was collected by investigators prior

to implementation. Survey availability was advertised to all residents at a three-site urban academic Emergency Medicine program and was implemented at one site. A postgraduate year 2 or 3 resident was asked to lead survey completion with members of ED staff each morning and evening shift. Once complete, an automated email initiated a restocking mechanism. Data was collected over 12 weeks, encompassing 3 academic blocks (each with new resident staffing), and analyzed retrospectively.

Results: The Control Block and Block 1 display similar equipment readiness, with a large number of items “Not Checked” in Block 1. Block 2 showed a marked improvement in percentage of equipment ready, which was maintained in Block 3. There was a ~21.47% response rate for surveys. Completion during night shifts was lower compared to days. Postgraduate year status did not play a major role in completion rates. Staff transitions did not result in consistent response trends.

Conclusions: Implementation of a resident-led critical care supply checklist completed by an interdisciplinary team improved equipment readiness across postgraduate years and staffing/block transitions. Working a night shift was identified as a barrier to completion, while postgraduate year was not. Identification of other survey completion barriers and survey impact on resident equipment familiarity requires further investigation.

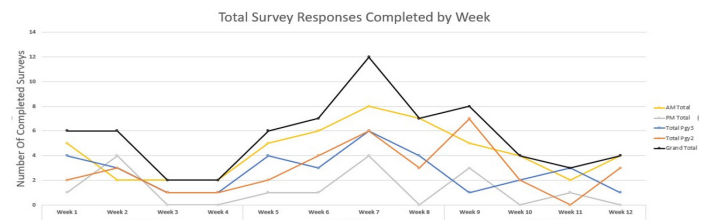


Figure 1. Total survey responses complete by week: displays total number of critical care equipment check surveys completed by residents by each week. Curves are broken down by post graduate year 2/3 and AM vs PM shifts.

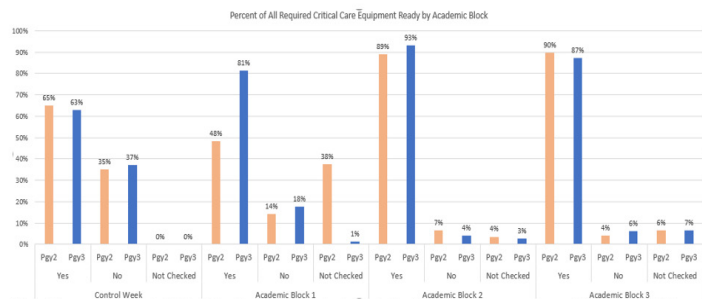


Figure 2. Percent of all required critical care equipment ready by academic block: displays the percent response of “Yes”, “No”, or “Not Checked” (survey default response) by academic block when responses are averaged across all survey items.

19 Do 4th Year Medical Students Applying to Emergency Medicine Match Where They Rotate?

Diana Labrada; Wesley Barnett, MD; Sameer Desai, MD

Learning Objectives: To identify if 4th year medical students applying to emergency medicine are more likely to match at a program where they rotated to identify factors influencing an applicant’s program rank list order

Background: An impactful portion of applying to an emergency medicine (EM) residency is participating in away rotations to obtain Standard Letters of Evaluations (SLOEs) to gain residency interviews to participate in the NRMP Match.

Objectives: To identify if fourth year medical students going into EM are more likely to match where they rotated. Since away rotations allow applicants to evaluate a program in person, we hypothesize most students match at a program where they rotated.

Methods: This is a retrospective observational survey. The survey was sent to EM residents in ACGME approved programs via the Council of Program Directors listserv sent by the EM Program Director of the University of Kentucky. Two hundred and thirty-nine responses from 12/06/2019-02/10/2020 were received. Inclusion criteria included being a current EM resident at an ACGME approved program. Exclusion criteria included an incomplete survey or not completing away rotations.

Results: Of 235 applicants, 106 applicants did 3 months of Emergency Medicine during their 4th year curriculum. Out of 226 applicants who ranked their away rotations, 73% ranked one of their away rotations in their top 3. Notably, 9/235 of applicants who rotated did not rank their away rotation, while 136/235 agreed that lack of a rotation at an institution would have affected their decision to rank a program. The top two factors affecting a programs’ rank included fit (n=99) followed by location (n=80). Finally, 121 (51.5%) students matched to a place they rotated.

Conclusions: Although 51.5% of students ultimately matched to a program they rotated, 48.5% did not. Fit and location continue to be the leading factors affecting rank list order. Limitations to this study were inability to separate students who did not initially match upon graduating medical school, inability to account for students who did not have a home program, and including a home rotation as an away rotation.

20 Does QBank Participation Impact In-training Exam Performance?

Lauren Walter; Maxwell Thompson, MD; Matthew Delaney, MD; Charles Khoury, MD

Learning Objectives: To assess the impact of QBank participation and performance as it correlates with EM resident ITE performance.