

UC Irvine

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

Title

Shuffling the Deck - Factors at Play in Applicant Program Ranking

Permalink

<https://escholarship.org/uc/item/07z8h2vg>

Journal

Western Journal of Emergency Medicine: Integrating Emergency Care with Population Health, 24(3.1)

ISSN

1936-900X

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Publication Date

2023

DOI

10.5811/westjem.61112

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factors affect clinical performance in airway emergencies and how thoughtful organization of airway carts can mitigate such factors (Chrimes et al. 2018, Bjurström et al. 2019). However, most of this research has focused on anesthesiologists intubating in ORs (Jones et al. 2018, Schnittker et al. 2018), a scenario that differs substantially from the emergent, unplanned intubations occurring in ERs (Stevenson et al. 2007).

Objectives: We aimed to develop a novel point-of-care airway organizational tool that integrates onto existing Video Laryngoscopy (VL) towers and improves resident readiness for first-pass intubation attempts.

Methods: This study was conducted at a Level 1 trauma center and university tertiary referral center. Prior to the study, VL towers were used as the principle intubating solution at our facility, but there was a large variety and disorganization of tools available on these towers (Figure 1A). Using principles of choice architecture (Redelmeier et al. 2021) we designed a compact, standardized solution that fits comfortably at the head of the bed and can be moved easily from room to room as intubation needs arise (Figure 1B). EM residents were surveyed throughout the process via convenience sampling. In response, the design then went through multiple revisions so that the solution would meet the needs of multiple situations and user preferences (Figure 1C, 1D).

Results: Residents reported an increased feeling of preparedness for first pass intubation attempts (pre = 2.94 (1.43), post = 4.33 (0.97), $p = 0.0024$).

Conclusions: Our VL airway tower solution combines established best practices for airway equipment design with the needs and preferences of EM providers in a high-intubation volume ER. Further work is needed to determine if a similar solution is generalizable to other settings.

48 Self-Assessment of Preparedness: A Two Year Evaluation of Incoming Emergency Medicine Interns in the Era of Covid-19

Lorie Piccoli, Ryan Briskie, Kathleen Williams, Amber Billet, Brent Becker, Barbie Stahlman, Katelyn Mann

Background: COVID-19 resulted in modification, limitation or cancellation of rotations that affected the clinical experience of fourth-year medical students (MS4).

Objective: The purpose of this study was to compare the preparedness of incoming emergency medicine interns (EM-1) from the classes of 2021 and 2022 in light of changes to clinical rotations incurred by COVID-19.

Methods: We conducted a prospective, survey assessment of MS4 from 2021 and 2022 matriculating into 7 distinct EM residency programs. The anonymous survey collected data on demographics, rotations, procedures, and subjective comfort levels for specific clinical scenarios. Each respondent was

assigned a procedural index score (PS) and a clinical comfort index score (CCS), defined as the sums of procedure counts and quantitative Likert values for clinical scenarios, respectively. PS, CCS, number of rotations and COVID-19-related limitations were compared between 2021 and 2022 using the Mann-Whitney U test ($p=0.05$).

Results: Completed surveys were returned by 63 and 56 respondents from 2021 and 2022, respectively. The class of 2022 reported significantly more EM rotations (median 3 [IQR 2-3] vs 2 [IQR 2-2], $p<0.001$) and fewer virtual rotations (0 [IQR 0-2] vs 3 [IQR 1-4], $p<0.001$). Based on Likert scale responses, the class of 2022 reported significantly less suspension of rotations (2 [IQR 1-2] vs 2 [IQR 2-3], $p<0.001$) and less clinical limitations due to COVID-19 (2 [IQR 1-2.75] vs 2 [IQR 2-3], $p<0.001$). Despite an improved, in-person clinical experience there was no significant change in 2022 PS (36.5 [IQR 32-41.75] vs 35 [IQR 30-39], $p=0.283$) or CCS (31 [IQR 28-34] vs 30 [IQR 27-32] $p=0.581$).

Conclusion: Based on self-reported data, the MS4 class of 2022 participated in more EM rotations, fewer virtual rotations and clinical rotations less impacted by COVID-19; however, this did not result in greater procedural exposure or clinical comfort levels entering their EM-1 residency year.

49 Shuffling the Deck - Factors at Play in Applicant Program Ranking

Joshua Timpe, Kathleen Williams, Alisa Hayes, Sam Corbo, Tom Yang, Ephy Love, Jason Reminick

Background: Geography significantly affects a medical student's choice when selecting a residency program. Other factors and sources of information are used. Nearly half of applicants alter their program applications as a result of Doximity rankings (DR). Alternatively, the AAAEM Benchmarking Survey & Acuity Index (AI), compare academic institutions objectively. Given EM trainees' desires to care for the sickest patients, we theorize that AI rankings should correlate with applicant competitiveness. Previous work has utilized subjective assessment of these factors, there are no studies utilizing objective data to determine how these influence applicants.

Objectives: We aimed to determine which factors correlate best with residency application preference: Geography, DR or AI. First, we hypothesize that geography continues to play a major role in application to residency. Second, we hypothesize the AI will correlate with applicant competitiveness.

Methods: We analyzed 2021 EM match outcome data from Thalamus ($n=3158$ applicants, 63 programs) using GLM regression of applicant-program pairs to study the relative contribution of variables including standardized USMLE scores, AOA status, US News and World Report medical school ranking and geographic relation. Correlations of applicant competitiveness with DR and AI are compared.

Results: As hypothesized, geography plays a significant

role in applicant choice. Conversely, we did not find support for the hypothesis that acuity and competitiveness are correlated (fig1). We still see a strong correlation between competitiveness and DR (fig2).

Conclusions: Despite EM leadership repeatedly criticizing the use of DR, they continue to correlate with competitive EM applicants' preferences. This will continue until we provide our applicants compelling data on the clinical environment of programs. We should therefore consider making an objective score, such as the AAAEM methodology and rankings available to applicants.

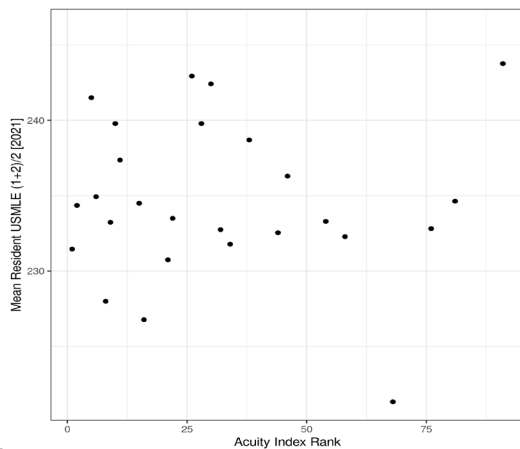


Figure 1.

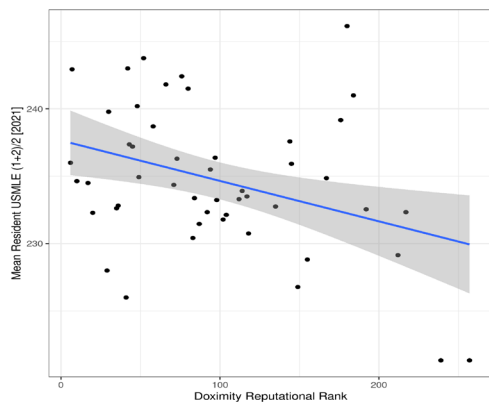


Figure 2.

50 Simulation in Emergency Medicine Residency Training Programs: A National Survey

Andrew Bloom, Briana Miller, Jaron Raper, Charles Khoury

Background: The use of simulation-based medical education (SBME) has been proven to be an effective instructional strategy both procedurally and clinically.

Emergency Medicine (EM) residency programs utilize SBME in a variety of ways and settings. Simulation (sim) in EM has not been recently evaluated in light of the expansion of residency programs and fellowships. The current state of SBME utilization in EM is unknown.

Objectives: To assess the current state and utilization of sim in ACGME-approved EM residencies given the growth of the field of sim and expansion of EM training.

Methods: This was a national survey study performed from July through September 2022. The survey was sent to the residency program directors of all 277 ACGME-accredited EM residency programs in the United States. A literature search identified existing publications discussing the state of SBME in EM. From this, a 17-question survey was developed and focused on technology, types of sim (procedural vs. case-based), barriers to growth, and overall sentiments of sim in EM.

Results: Of the 277 EM programs at the time of this abstract, 244 programs were successfully contacted, with a total of responses. Nearly all programs reported access to a dedicated sim center (98%), with available high-fidelity mannequin simulators (94%) and task trainers (91%). Most programs engage in sim didactics monthly (54%), followed by more than monthly (24%) and quarterly (21%). Few programs reported barriers in sim implementation (15%). Of those, funding (35%), sim lab availability (24%), and equipment (21%) were identified most frequently. Programs frequently used sim (82%) to perform the majority of rare but required procedures. Finally, half (50%) of the programs have simulation fellowship-trained faculty on staff.

Conclusions: SBME is an important aspect of EM residency and training. A majority of residency programs report dedication and resources to developing and integrating sim into their curriculum.

51 Strong Correlation Between Depression/ Stress and Self-Reported Microaggressions in Emergency Medicine Residents

Brian Walsh, Claire Delong, Frederick Fiessler, Nicole Riley, Marc Wheaton

Background: Residents' well-being and their perceptions of microaggression may be correlated.

Objective: We sought to measure resident wellness objectively and determine if it is correlated with a resident's perception of how frequently they are victimized by microaggressions.

Methods: All the residents at a three-year EM program were surveyed using an anonymous questionnaire in Google Forms. Resident wellness was assessed using the Depression, Anxiety and Stress Scale (DASS), a validated psychometric scale that is used across multiple industries. Using a 5-point Likert scale, residents were also asked how often they feel like