23 Does Predicted Ranking on SLOE Correlate With Final Rank Order List

Moreira M, Angerhofer C, Sungar W, Buchanan J, Byyny R / Denver Health Medical Center,

Introduction: The Standardized Letter of Evaluation (SLOE) has been cited as the most important factor for Program Directors in the assessment of emergency medicine residency applicants. Arguably, the most important part of this letter is the global assessment and the predicted rank order placement for a given applicant. Our study looks at the concordance of this predicted rank order placement compared to the final ranking of our applicants within a single program. Our hypothesis was that there would be a low proportion of agreement.

Objective: Our study looks at the concordance of the predicted ranking on the Standardized Letter of Evaluation (SLOE) compared to the final submitted ranking of our applicants to the NRMP within a single program.

Methods: The study was performed at a 4-year Emergency Medicine Residency Program with 68 residents at an urban Level 1 Trauma Center. The SLOEs for emergency medicine rotators from 2015-2017 were reviewed looking at predicted rank. The predicted rank was then compared to the final rank on the submitted rank order list based on categories - Top 10%, Upper third, Middle third, and Lower third.

Results: Between 2015-2017, 206 students rotated with our residency program, 161 SLOEs were uploaded to ERAS and reviewed for the purpose of this study. There were 47 (29.2% [95%CI: 22.3-36.9]) that were concordant. Of the discordant ranks, 82 (50.9% [95%CI: 42.9-58.9]) were off by one category, 56 (34.8% [95%: CI 27.5-42.7]) were off by 2 categories, and 30 (18.6% [95%CI: 12.9-25.5]) were off by 3 categories.

Conclusion: There was poor concordance between predicted rank order on the SLOE compared to the final position on the submitted rank order list. This calls into question the validity of the ranking on the SLOE and the amount of emphasis that should be placed on that value. The next step is to perform this study at multiple programs to assess whether this is a national trend.

24 Does the MSPE Change the Decision to Invite Residency Applicants?

Thimm T, Kilpatrick J, Aloi M, Davenport M, Jennings L, Bush J, Davis S, Quedado K, Kiefer C, Shaver E / West Virginia University; Allegheny General Hospital, Medical University of South Carolina,

Background: Although EM residency program directors (PDs) have multiple sources to evaluate each applicant, many await the release of the medical student performance evaluation (MSPE) to finalize interview invitations. No prior work has evaluated the impact of the MSPE on this decision.

Objective: The purpose of this study was to determine whether MSPE review changes the decision to invite. Given the prior literature supporting the importance placed on the standardized letter of evaluation (SLOE), our hypothesis was that there would be no significant change in invite status after MSPE review.

Methods: We conducted a prospective observational study analyzing applications to 3 EM residency programs during the 2019-2020 match cycle. Reviewers first assessed applications without the MSPE, and subsequently, with the MSPE. Using an online survey tool, faculty scored each review on a Likert scale indicating likelihood to invite. Descriptive analysis was then performed.

Results: A total of 1,001 applications were reviewed. Invitations were extended to 103 applicants prior to MSPE review and 2 applications were missing data; these 105 applications were excluded from analysis. Of the remaining 896 applications, reviewers' impression changed ≥ 1 point on the Likert scale 166 times—with only 1 application changing from 1 or 2 (definitely/probably no) to 4 or 5 (probably/definitely yes) and 34 changing from 3 (unsure) to 4 or 5. Thirteen applications changed from 4 or 5 to ≤ 3. For applications with no change, the SLOE was the driving decision 534 times (73%). When the MSPE changed the impression, narrative comments were the most influential factor in 74 reviews (45%).

Conclusions: Review of the MSPE rarely changes a PD's decision to invite an applicant. Therefore, awaiting the release of the MSPE to invite applicants may be low yield. Further work is needed to determine PDs' comfort level with offering invitations prior to MSPE review.

25 Does Visual Instruction Improve Emergency Medicine Residents' Competency in Performing Cricothyrotomy Over Written Instruction?

Beaulieu A, Patel V / University of Massachusetts

Background: Cricothyrotomy is a rare, but lifesaving procedure which all EM physicians must be able to perform during critical airway events. Traditionally, procedural training in residency has been taught utilizing written instruction; with access to free open access media (FOAM), there has been an increase in the number of videos available to learn procedural skills. Our goal was to compare teaching strategies to improve resident competency and overall comfort level of rare procedures.

Objectives: The purpose of this study was to compare the efficacy of written vs visual instruction of cricothyrotomy technique in a cohort of emergency medicine resident trainees.

Methods: EM residents at an academic medical center were randomized to either read a textbook chapter or watch

a video on cricothyrotomy. Residents with prior clinical cricothyrotomy experience were excluded. All enrolled residents performed a cricothyrotomy on a simulation model. Primary outcomes included time to completion and number of mistakes which were recorded by a blinded surveyor. Secondary outcomes, rated on a Likert scale, included comfort level and preparation level. Outcomes were compared by paired t-test.

Results: Of the 31 of residents enrolled, 27 met inclusion criteria, 15 received visual instruction and 12 received written instruction. Both comfort level of cricothyrotomy and average time to completion were significantly better for visual instruction compared to written instruction. Level of preparation and number of mistakes was not significant between groups. Year of training did not influence results.

Conclusion: Visual instruction improved the time to completion and resident level of comfort when compared to written instruction for residents performing a cricothyrotomy on a simulation model. With limited time and resources for rare procedural training during residency, visual instruction from FOAM prior to procedural training may help improve resident competency.

26 Ethical Issues Confronting Beginning Medical Students During a Clerkship in Emergency Medicine

Jones J, Ladaga N, Sapp T, Singh M, Emery M / Department of Emergency Medicine, College of Human Medicine, Michigan State University

Background: Little is known about the ethical issues confronting medical students during their first exposure to emergency medicine (EM).

Objectives: The aim of this study was to review student narratives for insight into ethical situations and the impact they might have on our students as they adapt to the clinical world.

Methods: This was a prospective observational study of first and second-year medical students, completing an EM clerkship at three university-affiliated hospitals between 2014-2017. During the study period, medical students were asked to write a short narrative description of three cases that had the greatest impact on them. Each narrative essay was deindentified and independently analyzed by three EM investigators using a national classification scheme. Descriptive and kappa statistics were used to summarize the data.

Results: During the four-year study period, 292 consecutive student essays were evaluated from 103 medical students. A total of 194 specific incidents were coded across 20 categories of ethical standards. Common categories were incidents related to: access to and equity in healthcare (16.5%); consent (10.8%); miscommunication (9.3%); death and dying (8.8%); and the right to refuse treatment (8.8%). Overall, 74.2% (144/194) were depictions of exemplary instances of ethical issues, 13.9% (27/194) were considered normal interactions, and 11.9% (23/194) were categorized as unethical behavior. While students were impressed by their observations of EM physicians and staff, their eyes were opened to the improper treatment of acutely ill patients, be it poor pain management, discrimination, inadequate education, or a perceived lack of empathy.

Conclusions: Student narratives provide insight into learning not easily measured by traditional evaluation. Analysis of these cases reveals that many interactions are intimately tied to the student's role on the medical health care team, and how that role can lead to ethical compromise.

27 Evaluating Evaluations: Can Emergency Medicine Residents Reliably Evaluate Medical Students

Milman B, Dodson J, Gentges J / University of Oklahoma Health Sciences Center

Background: Evaluation of learners is a critical task in medical education. The standardized letter of evaluation (SLOE) is the most important factor in determining which applicants to interview. At most programs, residents evaluate students on shift and these evaluations contribute to the SLOE. To date, there is limited published data evaluating the ability of residents to evaluate medical students.

Objectives: The hypothesis of this study is that the scores that residents give to rotating medical students do not follow a normal distribution. This study aims to better characterize the way residents evaluate medical students.

- Discuss methods for student evaluation by residents.
- Describe the skewed distribution that residents assign to students.

Methods: We conducted a retrospective cross-sectional study. We obtained evaluations performed by residents for all students that rotated with the University of Oklahoma Department of Emergency Medicine between July 2019 and October 2019. Evaluators are asked to assign each student to a tertile based on the clinical areas outlined in the SLOE. We used chi-squared testing to determine significance.

Results: Between July and October 2019, 35 fourth year medical students rotated through our emergency department. We collected 283 on-shift evaluations from the residents. When asked the question, "How does this student compare overall to peers?" 20% of students were assigned "Top 10%," 47% of students fell in the "Top 1/3," 30% of students in the "Middle 1/3" and 3% of students in the "Lower 1/3" ($p < 0.0001$). Distribution was also statistically significant for all other questions on the shift evaluation form.

Conclusions: Residents are hesitant to assign a "lower 1/3" designation to medical students. Letter writers are required to redistribute students for the SLOE and eventual rank list. Future interventions and training to more accurately