Education

DOES THE EXPERIENCE OF THE WRITER AFFECT THE EVALUATIVE COMPONENTS ON THE STANDARDIZED LETTER OF RECOMMENDATION IN EMERGENCY MEDICINE?

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□ **Abstract—Background: The Standardized Letter of Recommendation (SLOR) was developed in an attempt to standardize the evaluation of applicants to an emergency medicine (EM) residency. Objective: Our aim was to determine whether the Global Assessment Score (GAS) and Likelihood of Matching Assessment (LOMA) of the SLOR for applicants applying to an EM residency are affected by the experience of the letter writer. We describe the distribution of GAS and LOMA grades and compare the GAS and LOMA scores to length of time an applicant knew the letter writer and number of EM rotations. Methods: We conducted a retrospective review of all SLORs written for all applicants applying to three EM residency programs for the 2012 match. Median number of letters written the previous year were compared across the four GAS and LOMA scores using an equality of medians test and test for trend to see if higher scores on the GAS and LOMA were associated with less experienced letter writers. Distributions of the scores were determined and length of time a letter writer knew an applicant and number of EM rotations were compared with GAS and LOMA scores. Results: There were 917 applicants representing 27.6% of the total applicant pool for the 2012 United States EM residency match and 1253 SLORs for GAS and 1246 for LOMA were analyzed. The highest scores on the GAS and LOMA were associated with the lowest median number of letters written the previous year (equality of medians test across groups, $p < 0.001$; test for trend, $p < 0.001$). Less than 3% received the lowest score for GAS and LOMA. Among letter writers that knew an applicant for more than 1 year, 45.3% gave a GAS score of "Outstanding" and 53.4% gave a LOMA of "Very Competitive" compared with 31.7% and 39.6%, respectively, if the letter writer knew them 1 year or less ($p = 0.002$; $p = 0.005$). Number of EM rotations was not associated with GAS and LOMA scores. Conclusions: SLORs written by less experienced letter writers were more likely to have a GAS of "Outstanding" ($p < 0.001$) and a LOMA of "Very Competitive" ($p < 0.001$) than more experienced letter writers. The overall distribution of GAS and LOMA was heavily weighted to the highest scores. The length of time a letter writer knew an applicant was significantly associated with GAS and LOMA scores. © 2014 Elsevier Inc.**

□ **Keywords**—emergency medicine; residency; standardized letter of recommendation; graduate medical education

INTRODUCTION

Every year, 4th-year medical students apply for admission into emergency medicine (EM) residency training programs through the Electronic Residency Application

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Service (ERAS®) and are matched via the National Residency Matching Program. Many components factor into the residency match selection process, including the applicant's United States (US) Medical Licensing Examination scores, the dean's performance evaluation, clinical rotation grades, extracurricular experiences, and the medical school's reputation (1–4).

The Council of Residency Directors in Emergency Medicine (CORD) recommends use of the Standardized Letter of Recommendation (SLOR) for applicants to EM residency programs (5). The SLOR was developed in 1996 in an attempt to standardize the evaluation of applicants, improve inter-rater reliability of letters of recommendation, and discourage the "upward creep of superlatives" (6,7). The SLOR has been revised several times over the years and a task force from CORD convened in 1999 and recommended that only EM faculty submit the SLOR (6). The current version of the SLOR includes the following variables: EM rotation grade, number of the EM rotation the student was performing, percent of students who received honors at the letter writer's institution, commitment to EM, work ethic, ability to develop a treatment plan, ability to interact with others, ability to communicate with patients, amount of guidance predicted during residency, prediction of success in residency, Global Assessment Score (GAS), and Likelihood of Matching Assessment (LOMA) (6). Each of these variables is reported on a scale of 3 to 5, ranging from best performance to worst.

Although the SLOR is an attempt to standardize students across regional and experiential boundaries, often the standard to which students are held is the writers' experience with other medical students. For example, writers are asked to compare this student against others they have known who applied for residency in EM. Although experienced writers will have a robust base to draw from, novice writers might be potentially biased due to their lack of a sizeable reference to use. Also, students might seek out faculty with whom they have an outstanding rapport to write an SLOR for their application, regardless of whether the writer has experience with the SLOR. These writers might be more likely to rank students as "Outstanding" or "Excellent" on the GAS, as compared with faculty who write SLORs for a more diverse student population. Despite widespread use and expectation, the validity of the SLOR has not been well studied.

In 2011–2012, there were 2370 US applicants and 951 foreign medical graduates, for a total of 3321 applicants who participated in the match using ERAS® (8). During the same time period, 917 of these applicants applied to at least one of the three EM residency programs at this University with affiliated academic and community hospitals. The majority of these applicants were 4th-year US

medical students. The majority of these applicants submitted one or more SLORs to support their application. The cohort analyzed represented more than a quarter (27.6%) of the total applicant pool for the match in EM in 2011–2012.

The primary objective of our cross-sectional analysis of all SLORs written on behalf of applicants to EM at the three university EM programs was to determine whether the distribution of scores for the GAS and LOMA differed between writers who have more experience writing SLORs compared to those with less letter-writing experience. We reported the number of letters written in the previous year by dividing them into quintiles and used these five categories as a proxy for letter-writing experience. We then compared the scores on the GAS and LOMA using the nonparametric equality of medians and a nonparametric test for trend for each quintile to test for significance. Additional objectives were to describe the distribution of the grades on the GAS and the LOMA, as well as see if the length of time a letter writer knew an applicant affected the scores on the GAS and LOMA (Figures 1 and 2).

The distribution of all other categorical variables on the SLOR are described, and differences, if any, between experienced and novice writers are reported.

METHODS

This was a retrospective review of applicants applying to one of three EM residency programs at a large university associated with several medical centers. Eight hundred and nine applications were submitted to one university program, 541 applications were submitted to the second
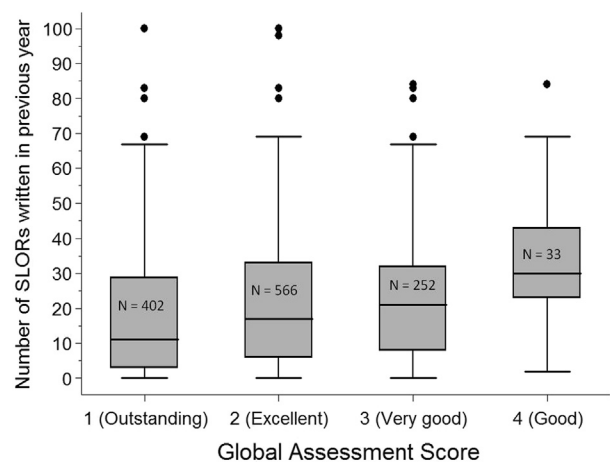

Figure 1. Box plot for number of letters written in previous year by Global Assessment Score. Box = 25th to 75th percentile, horizontal bar = median, whiskers = 5th to 95th percentile, and dots = outliers. SLOR = Standardized Letter of Recommendation.