

## **UC Irvine**

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

#### **Title**

Mapping Emergency Medicine: Geographic Distribution of Emergency Medicine Clerkship and Residency Positions Based on 2016-2017 eSLOE Statistics

#### **Permalink**

<https://escholarship.org/uc/item/3q66n41z>

#### **Journal**

Western Journal of Emergency Medicine: Integrating Emergency Care with Population Health, 20(4.1)

#### **ISSN**

1936-900X

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#### **Publication Date**

2019

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in resident evaluations and other educational activities.

**Objectives:** We sought to determine if the implementation of a financially incentivized Educational Dashboard would lead to an increase in faculty conference attendance and the number of completed resident evaluations.

**Methods:** We conducted a pre- and post-intervention observational study at our EM residency training program between July 2017–August 2018. Participants were 17 full-time EM attendings at one training site. We compared the number of completed online resident evaluations by faculty (MedHub) and number of conference days attended (call-in verification) before and after the introduction of our Educational Dashboard, which included a financial incentive for faculty. The incentive required 100% completion of resident evaluations and at least 25% attendance at eligible didactic conference days. We calculated pre- and post-intervention averages and made comparisons using a chi-square test.

**Results:** Prior to implementation of the Educational Dashboard with a financial incentive, the 90-day resident evaluation completion rate by faculty was 72%. This increased to 100% after implementation.

**Conclusions:** Attaching a financial incentive to a tracked Educational Dashboard increased faculty participation in resident evaluations but did not change conference attendance. This difference likely reflects the minimum thresholds required to obtain the financial incentive.

## 25 Increased Space for Comments on End-of-Shift Card Associated with Longer Comments

*Nelson J, Hegarty C, Barringer K, Grall K, Henry K, Hernandez B, Miller P, Paddock M, Willenbring B, Woster C / Regions Hospital; HealthPartners Institute, St. Paul, Minnesota*

**Background:** Emergency medicine (EM) faculty members are expected to provide end-of-shift feedback to EM residents to enhance and focus their learning. However, quantity and quality of feedback is difficult to measure. We use paper cards to prompt an end-of-shift conversation, record faculty assessment of a Milestone and allow written comments for later review by the resident, clinical competency committee, and program leadership. We altered our end-of-shift feedback cards to allow for more space for comments hoping faculty would write more.

**Objectives:** Our primary objective was to assess length of written comments for three months before and after altering the structure of our feedback cards. A secondary objective was to assess how specific and actionable the comments were.

**Methods:** This was a prospective, observational study in which the authors counted the number of words written

on each card for all residents for three months before and after use of the new cards was implemented. Reviewers also rated how specific and actionable the comments were on a three-point scale (0 = not at all, 1 = somewhat, 2 = yes). To assess inter-rater reliability, we had 49 cards reviewed by two authors. Word count variables were summarized descriptively and compared using Wilcoxon rank-sum tests. We assessed inter-rater agreement using Cohen’s kappa.

**Results:** Nine EM faculty reviewed 1204 cards for 32 residents. On the new-format cards, faculty wrote a significantly higher number of words, both overall and for each “List tasks or behaviors done well” and “List specific suggestions for improvement,” when compared to word count on the previous cards. The rating of whether feedback was actionable was also significantly different when comparing the new cards with the previous cards, with a trend toward more actionable feedback on the new cards. There was no significant difference in rating regarding specificity between the two card types. For the subset of cards evaluated for inter-rater reliability, for specificity of feedback, kappa = 0.5837, and for rating on whether feedback was actionable, kappa = 0.9275.

**Conclusion:** By simply allowing more space on end-of-shift cards for comments, our faculty wrote 50% longer comments for our residents, including significantly more positive feedback and suggestions for improvement.

**Table 1.** Comparison of word count and whether feedback is actionable and specific, by type of card.

Variable	Original Cards (N=640)	New Cards (N=563)	p-value
Total word count, median (IQR)	10 (10)	16 (16)	<0.0001
Tasks or behaviors done well word count, median (IQR)	7 (6)	9 (9)	<0.0001
Suggestions for improvement word count, median (IQR)	0 (7)	0 (13)	<0.0001
Actionable (N, %)			0.0003
Not at all	362 (56.56)	280 (49.73)	
Somewhat	108 (16.88)	74 (13.14)	
Yes	170 (26.56)	209 (37.12)	
Specific (N, %)			0.1305
Not at all	150 (23.44)	149 (26.47)	
Somewhat	213 (33.28)	158 (28.06)	
Yes	277 (43.28)	256 (45.47)	

## 26 Mapping Emergency Medicine: Geographic Distribution of Emergency Medicine Clerkship and Residency Positions Based on 2016-2017 eSLOE Statistics

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**Background:** Visiting rotations are an essential part of the

emergency medicine (EM) residency application. Most programs require at least one Standardized Letter of Evaluation (eSLOE) from an away institution, which necessitates visiting rotations. (An eSLOE is filed electronically on the eSLOE website created by the Council of Residency Directors in Emergency Medicine.) However, there is little information regarding the geographic distribution of EM clerkship positions compared to ACGME-approved postgraduate year (PGY)-1 positions.

**Objectives:** Our goal was to examine the geographic distribution of EM clerkship spots to ACGME-approved PGY-1 residency positions. Through a geographic distribution, state and regional imbalances in academic EM training can be identified. Our hypothesis was that states with a large number of EM graduate medical education (GME) spots would also have a high capacity of EM undergraduate medical education (UME) clerkship spots.

**Methods:** We performed an observational, retrospective analysis of all EM eSLOEs written during the 2016-2017 residency application cycle, categorizing authorship by institution and state. All ACGME-approved EM residency programs in the United States, registered in the 2017 National Resident Matching Program were also categorized by state. UME to GME ratios were calculated for each State and the geographic distribution was determined. We also identified the top 25 institutions with the largest EM UME volume.

**Results:** In 2016-2017, 6715 eSLOEs were submitted on 3138 unique EM applicants, written at 222 different institutions. Ratios of UME to GME positions varied from 1.6 in Connecticut to 21 in Vermont, with a nationwide average of 3.3. The top 25 institutions authored 1660 eSLOEs, accounting for 25% of the total eSLOEs.

**Conclusion:** There were large differences in the geographic distribution of UME and GME EM positions in 2016-2017. These data identify states and institutions with large EM clerkship capacities, which can enhance EM student advising for visiting rotations and geographic residency goals. EM subspecialty elective rotations and institutions with non-group eSLOE authorship are potential confounding limitations to this research.

**Distribution of Emergency Medicine Undergraduate Medical Education Positions vs Graduate Medical Education Positions in the United States**

State	Number of GME Spots	Number of UME spots	Ratio of UME/GME	State	Number of GME Spots	Number of UME spots	Ratio of UME/GME
Vermont	0	21	21	Puerto Rico	17	52	3.1
Oklahoma	8	78	9.5	Arkansas	10	31	3.1
Alabama	10	67	6.7	Michigan	137	425	3.1
Iowa	9	57	6.3	Indiana	21	62	3
District of Columbia	21	117	5.6	Hawaii	0	3	3
Nevada	8	45	5.6	Tennessee	34	102	3
New Jersey	60	264	4.4	Massachusetts	68	188	2.8
Louisiana	32	136	4.3	Mississippi	13	37	2.8
Georgia	25	107	4.3	Pennsylvania	154	413	2.7
Delaware	12	50	4.2	Washington	12	31	2.6
New Mexico	12	50	4.2	South Carolina	41	108	2.6
Virginia	41	171	4.2	Utah	11	29	2.6
Maine	10	41	4.1	Arizona	35	87	2.5
Rhode Island	15	62	4.1	Kansas	8	20	2.5
Maryland	25	100	4	North Carolina	61	154	2.5
Minnesota	30	117	3.9	Missouri	39	99	2.5
West Virginia	10	39	3.9	Nebraska	10	20	2
Wisconsin	22	86	3.9	South Dakota	0	2	2
Colorado	17	67	3.9	Florida	118	221	1.9
Ohio	97	371	3.8	Connecticut	33	54	1.6
New York	297	1063	3.6	Alaska	0	0	0
Oregon	11	37	3.4	Idaho	0	0	0
Texas	121	399	3.3	Montana	0	0	0
Illinois	120	383	3.2	New Hampshire	6	0	0
Kentucky	22	69	3.1	North Dakota	0	0	0
California	184	579	3.1	Wyoming	0	0	0
				<b>Total</b>	<b>2047</b>	<b>6712</b>	<b>3.3</b>

## 27 A Novel Method for Blinding Reviewers to Gender for the Purposes of Gender Bias Research

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**Background:** Research has shown a gender gap on ACGME Milestone evaluations, with the largest differences in procedural competency. There are currently no established methods by which researchers can blind reviewers to gender to evaluate for bias.

**Objectives:** This study evaluated whether a novel method could effectively blind evaluators to the gender of trainees performing simulated procedures. Since correct gender identification would be 50% based on chance, it was hypothesized that blinding would be effective if the reviewers did not correctly identify proceduralists' genders in  $\geq 50\%$  of assessments.

**Methods:** After removing all jewelry from their hands, proceduralists were gowned, double-gloved, and filmed by a professional videographer while performing simulated procedures. Only their double-gloved hands, gowned forearms and lower torsos were visible in the videos. Five residents (two male and three female) performed three procedures each (lumbar puncture, chest tube, and central line placement), yielding 15 videos. Short video clips (30-45 seconds) were scored by seven graduate medical educators on a Likert scale (1 = definitely male, 3 = likely male, 5 = can't tell, 7 = likely female, 9 = definitely female). A response concordant with proceduralist gender with a confidence level of likely or higher (1-3 for males, 7-9 for females) was considered correct

Distribution of Emergency Medicine Undergraduate Medical Education Positions vs. Graduate Medical Education Positions in the United States

