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Title

Does Emergency Department Sign-out Matter for Patient Safety and Patient Care Efficiency? A Survey of the Perception of Emergency Medicine Residents and Attending Physicians on the Effect of Sign-out

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key attributes of teaching faculty (teaching, clinical knowledge, administration, interpersonal skills, and scholarly contributions) on a five-item Likert scale, totaling 25 points per assessment. Only completed assessments (with all 5 questions scored) were included in the primary analysis. Those evaluations missing only 1 of the 5 responses were also analyzed separately.

Results: Resident assessments for 109 EM faculty were reviewed, including 27 junior faculty, and 36 females. The mean age for all faculty was 45.3 years, with mean ages of 45.8 and 44.3 years for males and females, respectively ($p=.4274$). A total of 12,733 evaluations were reviewed, with 6,056 (47.6%) completed assessments included in the primary analysis. Mean total assessment scores were 15.2 and 15.4 out of 25 possible points for males and females, respectively ($p=.4326$). Mean total assessment scores were similar for junior faculty and senior faculty at 15.8 vs. 15.9 respectively ($p=.7660$). Scores did not vary between different age categories: 15.5 for “40 and under”, 15.0 for “41-50”, 15.3 for “51-60”, and 14.8 for “>60 years” ($p=0.1369$).

Conclusions: We found no significant gender- or age-based differences in faculty assessments by EM residents over a 5-year period at two urban emergency medicine residency programs. We also found no differences in assessments based on level of faculty training in the primary analysis, although senior faculty received higher scores than junior faculty in the secondary analysis group. Also, the resident PGY year of the evaluator had no effect on faculty assessment scores. Further study is needed with larger data sets and a more diverse resident cohort.

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Background: The Joint Commission recognized improper handoffs/sign-outs as a major source of medical errors. Implementation of a standardized sign-out protocol in the ED was shown to lead to a decreased length of stay and increased frequency of ED bedside rounding. The question that has yet to be asked is: how does residency training affect one’s perception of sign-out on safety and efficiency?

Objectives: To evaluate how the effect of sign-out on patient safety and patient care efficiency differs among ED residents and attending physicians. **Methods:** Investigators surveyed attending physicians and residents of five EM programs via email and paper surveys. 85 survey samples were completed, with 31 PGY-1s, 16 PGY-2s, 19 PGY-3s, and 18 attending physicians. Descriptive statistics and t-test for comparison of items on a Likert scale were obtained.

The measured outcome is the participants’ perception of the relative importance of sign-out as a contributor to patient safety and care efficiency.

Results: 30% of respondents never received any training on proper sign-out. 13% considered sign-out as having “little effect” or “no effect” on patient safety and care efficiency. 74% thought sign-out affected safety “a great deal” or “a lot”, with 53% similar answers on care efficiency. PGY-1 residents’ perception on the relative importance of sign-out on care efficiency is lower than that of attending physicians’ ($p<0.05$), but this difference disappears between groups (ANOVA, $p>0.05$). There is no statistical difference between groups ($p>0.05$) in the perception of the relative importance of sign-out on patient safety.

Conclusion: The results of this survey suggest that training enhances residents’ perception of the effect of sign-out on patient care efficiency. Moreover, it suggests that greater efforts should be emphasized on sign-out education in the emergency department and the implementation a standardized sign-out protocol.

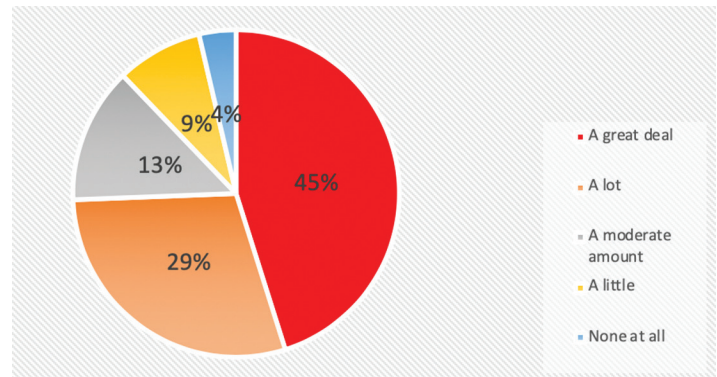


Figure 1. Perception on the effect of signout on efficiency of care.

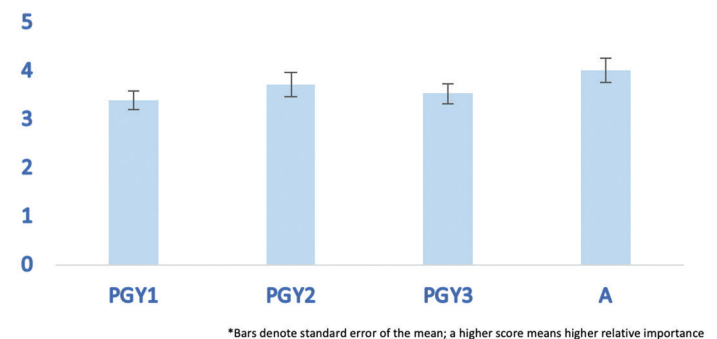


Figure 2. Perception of how sign-out affects patient safety among all residents and attending physicians.