

Methods: This was a retrospective review of EM resident productivity from 2012-2017 over the course of a 3-year training program. It was performed at a level-1 community academic tertiary care referral center. Data collected included patients/hour, RVUs/patient and RVUs/hour. Mixed effects models were used to assess change in outcome over PGY levels for graduating classes during the study period. The models included the interaction between graduating class and PGY to detect patterns between classes. Statistical significance was set at $p < 0.05$.

Results: There was a statistically significant increase in RVU/patient for each graduating class ($p = 0.032$) but the pattern of change over PGY was not the same for graduating classes (Figure 1). There was a statistically significant increase in RVU/hour ($p < 0.001$) and mean increased from 3.0 to 5.5 to 6.6 over PGY levels (Figure 2). Lastly, there was a statistically significant increase in patients/hour that was essentially the same for all graduating classes ($p < 0.001$). Mean patients/hour increased from 0.75 to 1.2 to 1.4 over PGY levels.

Conclusions: There is a statistically significant increase in patients/hour, RVU/patient, and RVU/hour during the course of a residency. This descriptive study will allow the emergency medicine programs to have an enhanced understanding of the overall productivity expectations from their residents.

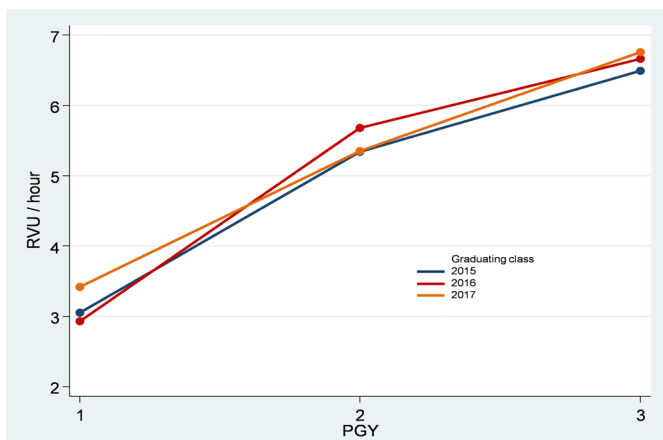
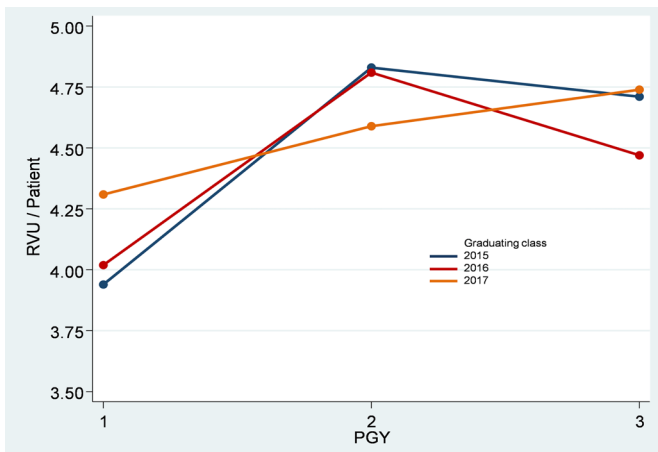
2 Improving the Quality and Standardization of Resident Handoffs through Interspecialty Handoff Training

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Background: Transitions of care present a major risk for to patients. Formal handoff training during medical school varies. While many residency programs have implemented handoff training, it is variable, resource-intensive, and doesn't promote interspecialty standardization.

Educational Objectives: We developed a handoff training program for incoming interns that would improve and standardize handoffs.

Curricular Design: We provided handoff training during intern orientation; 120 interns participated, representing 12 of 15 programs. Pre-course online modules were used to introduce the IPASS and TeamSTEPPS concepts. The workshop began with a didactic review followed by 3 simulated hand-off scenarios: ED to floor, shift change, and transfer of service. Interns were assigned to groups of 3 and given a checklist to ensure each team member completed all activities: giving handoff, receiving handoff, observing handoff. Additionally, each team was observed by a trained facilitator (1 facilitator for every 3 groups). The observer completed a tool on handoff quality. The workshop concluded with a debriefing and evaluation (5 point Likert scale with 1 - "strongly disagree" and 5 - "strongly agree").



Intern IPASS Workshop 6/19/2017

Which specialty are you? _____

Had you received formal education in handoffs during medical school? (Please describe)

This session had clear goals.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
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This session was organized.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
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This session was relevant to my needs.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
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I feel more confident handing off a patient after attending this workshop.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
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I will use IPASS during patient handoffs.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
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Please describe the most important take home point from today's workshop.

Please provide suggestions for improving the workshop

Impact/Effectiveness: Learners were highly satisfied with the workshop; most agreed the session was relevant to their needs (4.6), had clear goals (4.6), and was organized (4.6). Even among those who had received formal handoff training in medical school (56%), satisfaction was high. This group was equally likely to report increased confidence in handoff skills after the workshop (mean of 4.4 for both). Interns planned to use IPASS during their handoffs (4.6). Interns entering procedural specialties were less likely than those entering non-procedural specialties to report likelihood of using IPASS (88% vs 100%, p=0.0032) or that the session was relevant to them (81% vs 99%, p=0.001). Both felt equally more confident with handoffs after the session (83% vs 90%, p=0.27).

Large scale interspecialty handoff training using the IPASS tool is feasible for implementation. Our workshop was well-received. Interns reported increased handoff confidence. Next steps include monitoring of IPASS use through observation of resident handoff in real time to evaluate quality and assess standardization. Future research will explore how maintenance interventions can ensure continued good handoff practices.

3

Qualitative Analysis of Residency Applicant Perceptions of Social Media Use by Emergency Medicine Residency Programs

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Background: Studies have demonstrated that program specific websites are important sources of information for applicants; playing a role in decision-making during the application cycle. Social media can be utilized in a similar manner, offering expanded information about the unique qualities of residencies and perhaps influencing candidates' decisions to apply, interview, and rank a particular program. There is a lack of understanding of applicants' perceptions of social media use by residency programs.

Objectives: We hypothesized an overall positive perception of social media use by residency programs, allowing for increased communication and provision of information. The purpose of this study was to assess overall sentiment toward residency program social media use and gain insight to applicants' perceptions.

Methods: We conducted a survey-based, cross sectional study of all applicants to the Emergency Residency Program at the University of Pennsylvania during the 2015-16 application cycle. Applicants were asked if they thought residency programs should have a presence on social media and to provide an explanation of their answer. We utilized descriptive and qualitative thematic analysis of responses. This study was determined to be exempt by the Institutional Review Board at the University of Pennsylvania.

Results: We received 275 (26.3% response rate, 41% female) responses with 52.4% stating that programs should have a social media presence (n=144) and 39.6% of applicants being unsure (n=109). We identified themes with positive, negative, and neutral sentiment. Emerging positive themes included: (1) Provision of deeper insight to programs, (2) Ease of access to program information, (3) Increased avenues for communication, (4) Important for innovation and relevance. Emerging negative themes included: (1) Use as a source of distraction, (2) Presence as unprofessional, (3) Potential for inaccuracy of content. Two neutral themes included: (1) Respondent indifference (2) Potential redundancy (Table 1).

Conclusions: A majority of residency applicants believe programs should have a social media presence. Our findings can serve as a resource for programs that have or are considering a presence on social media. Limitations of our study include a low response rate and inclusion of applicants to a single emergency medicine residency program.

Table 1. Themes of applicant perception of residency program social media use

THEME	POSITIVE	NEGATIVE	NEUTRAL
PROVISION OF INSIGHT TO THE CULTURE AND VALUES OF PROGRAMS	"It makes a residency more personable. I could judge if I can picture myself there or not by the types of posts they make!"	SOCIAL MEDIA USE IS A DISTRACTION	INDIFFERENCE TO PROGRAMS USING SOCIAL MEDIA
"I feel social media is a good way for students to learn about the current identity of a program. Many websites or other resources offering information on a program have not been updated in several years, and it can be hard to tell if the information reflects the current level of the program. Social media lets you see what the program is currently like."	"A means for bringing the current class together and also a means for applicants to get a bit of candid insight into their potential peers!"	"Times are different and social media is an important part of the image of any program, whether it's for residency or otherwise. It serves as a way to convey the mission and more about a hospital and school."	"Not important, at least to me"
EASE OF ACCESS TO PROGRAMS	"It can be a good way to find out more about a program, or to remind yourself of certain aspects prior to answering/asking, and an opportunity to ask questions."	USE OF SOCIAL MEDIA IS UNPROFESSIONAL	SOCIAL MEDIA USE MAY BE REDUNDANT
"Could make the process of learning about programs much easier for the applicant."	"Social media provides an excellent resource for students to learn more about EM in general as well as specific programs. I did not have an EM rotation during 3rd year in my program so internet and social media were helpful to me to get a sense for EM and the features of EM residency."	"I don't think that is a professional manner for a program to interact with applicants"	"They could. No real need for it though. Programs localize at regional and national events."
INCREASED AVENUES OF COMMUNICATION	"It allows for potential collaboration between residency programs and the EM community as a whole, and can be a much faster method of answering questions or dispersing information about the program."	SOCIAL MEDIA POSTS ARE IMPERSONAL AND RAISE QUESTIONS OF ACCURACY OR INTENT.	
"Social media is important in the field of EM. I only have a twitter account to view updates from a handful of leaders in EM. Presence on social media helps share the public face of EM and keeps programs connected with potential applicants and the public."	"It provides another avenue for dialogue with non-medical members of the community. Social media makes up a decent percentage of my daily communications."	"While it may be the wave of the future there is something that sometimes feels gimmicky about social media. As an applicant it is difficult to communicate on social media in a meaningful way as many of us are worried that our social media presence could work against us during the process. Overall, it can be a useful way to get information about a program and understand the "personality" but it does not replace actually meeting the residents and faculty in person."	
IMPORTANT INDICATOR OF INNOVATION AND RELEVANCE OF A PROGRAM	"It's how you interact with the applicants' generation. It's efficient, up-to-date (both unlike most resumes/ websites) and can be projected with ease."		
	"It's the 21st century and EM is a 21st century-type specialty. We're innovators and should keep up with the times!"		
	"Technology age, either get with it or get lost."		

4

The Use of Quick Response (QR) Codes to Improve Resident Compliance and Assessment

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Background: One of the key obligations of residency leadership and faculty is to provide trainees with timely and accurate feedback. In 2008, the ACGME introduced the Milestones project aimed to evaluate each resident on