Experience Introducing Physician Assistant Students Into a Medical Student Emergency Medicine Clerkship

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**Background:** Physician assistants continue to play an increasingly important role in our healthcare system. However, physician assistant student (PAS) training in the emergency department has not been previously described.

**Objectives:** The objectives of our study were to determine the impact of the introduction of PAS into a learning environment that already serves medical students (MS) and residents, and to assess the readiness of PAS to participate in an established MS emergency medicine clerkship.

**Methods:** A survey was constructed by a team of emergency physicians and PAS educators with expertise in medical education and based on competencies endorsed by the school of medicine and the PAS program at our institution. The survey contained 18 questions in two domains: 11 questions asking about the effect of PAS on the emergency department learning environment and 7 questions comparing the skills of PAS with MS. It was distributed to emergency medicine faculty and residents shortly after the introduction of PAS into two academic emergency departments. Data from MS evaluations of the clerkship and shift evaluations were also collected.

**Results:** The majority of preceptors were either neutral or positive regarding the impact of PAS on the overall learning environment with only 9% believing PAS negatively impacted the learning milieu. Fifty-two percent felt that the presence of PAS offered a valuable interprofessional educational experience for MS and 67% felt the experience was valuable for residents. Sixty-one percent of preceptors felt that PAS were well prepared to handle the ED environment, and preceptors rated PAS performance similar to MS in a majority of competencies. However, 53% of preceptors believed PAS fund of knowledge was not equivalent to MS. Medical student evaluations of the quality of the clerkship were similar before and after the introduction of PAS. The quantity of MS evaluations decreased from an average of 15.7 per month to an average of 14.7 per month following the introduction of PAS.

**Conclusions:** The impact of introducing PAS to a MS emergency medicine clerkship is viewed as being mostly positive, though preceptors did express some concerns. More research is needed to understand and optimize the learning involvement for all learners.

**Table 1. Medical Student Evaluations of Clerkship.**

<table>
<thead>
<tr>
<th>Student Evaluation of Clerkship</th>
<th>September 2013-April 2014</th>
<th>September 2014-April 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate the overall quality of your educational experience in this clerkship</td>
<td>3.67 (N)</td>
<td>3.68 (N)</td>
</tr>
<tr>
<td>I had an opportunity to follow a variety of different patients with different medical conditions</td>
<td>4.69 (N)</td>
<td>4.67 (N)</td>
</tr>
<tr>
<td>Faculty members provided me with sufficient feedback on my performance</td>
<td>4.29 (N)</td>
<td>4.35 (N)</td>
</tr>
<tr>
<td>Faculty provided effective teaching</td>
<td>4.59 (N)</td>
<td>4.56 (N)</td>
</tr>
</tbody>
</table>

1 Scale 1-4
2 Scale 1-5

Faculty and Resident Perception of Emergency Department Feedback

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**Background:** One of the core components of resident development is feedback of clinical performance. Prior studies have evaluated faculty and resident satisfaction with feedback in the emergency department (ED). However, there are no recent studies that evaluate how feedback is conceptualized and what topics residents and faculty find most useful when giving or receiving feedback. Such information would provide an understanding of the current state of this essential educational opportunity and help guide a feedback improvement plan.

**Objectives:** The purpose of our study is to ascertain the perception of feedback delivered from faculty physicians to residents during and after an ED shift.

**Methods:** We performed an observational study comparing perception of feedback between ED faculty and residents through an online survey. Specific aims include comparing perception of feedback as it is performed currently between faculty and residents as well as how each group believes feedback should be performed to be the most effective and useful.

**Figure 1. Impact of PA students on ED staff, learning environment, and workflow.**

*ED, emergency department; PA, physician’s assistant; IPE, Interprofessional education*
**Results:** Twenty-eight faculty members and twenty-seven residents completed the survey. Responses were compared using Chi-squared tests and Fisher’s Exact tests. Faculty and residents differed significantly on multiple factors. Notably, 82.2% of faculty believed they provided feedback on most shifts versus 37% of residents believed this (p=0.001). 71.4% of faculty respondents believe they provide feedback both during and after a shift while 22.2% of residents agree with this statement (p=0.006). Also, 85.7% of faculty believe both residents and faculty should initiate feedback, while only 48.2% of residents agree with this (p=0.003). Other factors that differed significantly between the two groups include when feedback is and should be given, and what feedback is and should be focused on.

**Conclusions:** Feedback is an essential component in resident development, however faculty and residents differ significantly on their perception of the current state of feedback as well as what effective and useful feedback means. By informing of faculty and residents regarding this gap in the perception of feedback, we hope to develop a method of improving feedback in our program.

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**FOAM in the EM Clerkship: Clerkship Director Attitudes and Practices Using FOAM in Emergency Medicine Clerkships**

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**Background:** Free Open Access Medical Education (FOAM) is increasingly utilized by emergency medicine (EM) practitioners. Prior research has focused on FOAM use by EM residents and program directors. Little is known about FOAM use within EM clerkships.

**Objectives:** This study describes current clerkship director (CD) attitudes and practices using FOAM. It explores how CDs recommend FOAM resources to students as a supplements to existing clerkship resources.

**Methods:** Participants: All US CDs listed in the Society for Academic Emergency Medicine (SAEM) clerkship database, accessed July 2017, were emailed an anonymous online survey.

Survey Design: In addition to demographic data, the 18 question survey addressed current curricula, CD personal use of FOAM, attitudes and practice patterns using FOAM in the clerkship curricula. Survey items were grounded in Schifferdecker et al.’s adoption of computer-assisted learning in medical education as a conceptual framework. Questions were created via an iterative process using cognitive interviews with current CDs and pilot testing.

**Results:** Of 150 invited participants, 37.3% (56/150) started the survey and 54 surveys were complete. The majority of respondents were male (66.7%, 36/54) with a mean of six years average experience as CD (SD=4.4 years, range 0-20 years). Many (66.7%, 36/54) use FOAM in their own learning, citing ease of access and general education as major reasons. Textbooks were the most commonly recommended resource (71.4%, 40/54) but FOAM resources were also frequently recommended (Figure 1). Only 20 respondents felt that their current clerkship offerings were sufficient for medical student learning. While 79.6% (42/54) agreed/strongly agreed that FOAM is a helpful curricular supplement, 61.1% (33/54) expressed concern over medical students’ ability to critically evaluate FOAM content (Figure 2). Still, 67.98% (38/53) of respondents reported willingness to use a curated, high quality online asynchronous learning curriculum if developed.

**Conclusions:** While many CDs recommend FOAM resources to students and feel it is a helpful supplement to current curricula, they doubt students’ ability to critically appraise the resource or if the material is appropriate for novice learners. This suggests a need for continued development of high-quality, peer-reviewed FOAM resources for medical students.