Building a Resident Research Program

Permalink
https://escholarship.org/uc/item/3135r4gq

Journal
Western Journal of Emergency Medicine: Integrating Emergency Care with Population Health, 16(4.1)

ISSN
1936-900X

Authors
Nocera, R.
Ramoska, E.
Hamilton, R.

Publication Date
2015

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**Bridging the Gap: Implementation of a Near-Peer Resident-Medical Student Mentoring Program Within an Academic Emergency Medicine Residency Program**

Caretta-Weyer H, Masters M, Tillman D, Hess J / University of Wisconsin Hospital and Clinics, Madison, WI

**Background:** Many medical students find navigating the residency application and match process challenging. Medical students often cite mentors and peers as having the greatest impact on this process. Thus, we sought to develop a mentoring program where current emergency medicine residents mentor rising senior medical students through the application and interview process. Given their proximity to the process, these residents function as near-peer advisors. Currently, there is no literature within emergency medicine describing such a resident-medical student mentoring program (RMSMP).

**Educational Objectives:** The primary educational objectives of the RMSMP are (1) to provide senior medical students intending to pursue residency in emergency medicine with mentoring through the residency application and interview process; (2) to allow residents the opportunity to gain experience mentoring medical students; (3) to improve medical student comfort with the application and interview process.

**Curricular Design:** The RMSMP is open to both University of Wisconsin (UW) rising 4th year students and visiting students. UW students opt-in during the spring semester of 3rd year while visiting students opt-in on their first day of the rotation. Students are then paired with a resident mentor. There is no fixed agenda for meetings; however, it is recommended that they discuss away rotations, the personal statement, CV, interviews, and rank list formation. A post-mentoring survey was deployed to assess perceived benefits and potential improvements to the program.

**Impact:** Students responded overwhelmingly in support of the program with 94% responding that it was a beneficial experience. The most commonly cited positive aspects of the program included obtaining specific feedback and advice on the application process, personal statement, and interviews. Suggested improvements focused on increasing face-to-face meetings. We plan to collect and publish outcome data at the 5-year mark.

**Building a Resident Research Program**

Nocera R, Ramoska E, Hamilton R / Drexel University College of Medicine, Philadelphia, PA

**Introduction/Background:** Residency requirements state “residents participate in the development of new knowledge, learn to evaluate research findings, and develop habits of inquiry as a continuing professional responsibility”. However, there is little consensus regarding how best to achieve these requirements.

**Educational Objectives:** Implement a Resident Research Program emphasizing resident participation in empirical work.

**Curricular Design:** A 3-step program “Think, Do, Write” roughly follows the 3 years of the residency. During the 1st phase the resident chooses a topic, formulates a hypothesis, and completes standard research certifications. Phase 2 involves submitting an institutional review board (IRB) and conducting the study. The final phase entails analyzing and interpreting the data and writing an abstract to present during an annual research day. Residents are encouraged to submit their projects for presentation at scientific conferences and for publication. Multiple departmental resources are available, including a Resident Research Fund and full support of the faculty.

**Impact/Effectiveness:** Prior to the new program, most scholarly activity consisted of case reports, book chapters, review articles, or other miscellaneous projects. Starting in 2012 the new program was fully implemented. Within 1 year, there was a growth in original empirical works among residents (see Figure 1). Currently there is almost 100% participation in studies, and numerous residents have presented at national conferences and have peer-reviewed publications. There is increased enthusiasm for research, and the new program has demonstrated that emergency medicine (EM) residents can conduct high-quality projects. Implementation of similar programs across EM residencies can increase the presence of such work conducted by residents in the EM literature and scientific conferences.
Congratualtions! You Are an MD, But Are You Ready for the ER?

Crawford S, Monks S, Solomin D, Greer V / Texas Tech University Health Science Center, El Paso, TX

**Background:** Emergency medicine (EM) faculty were tasked with implementing the Accreditation Council for Graduate Medical Education (ACGME) Milestones Project for the evaluation of resident physicians. All incoming residents are expected to function at Level 1 proficiency. Many of the milestones can be assessed in a simulation center, a safe environment for teaching and evaluation.

**Educational Objectives:** At the end of the EM orientation month, interns would be able to recognize and treat five common emergency department (ED) complaints at a minimum Level 1 proficiency. In addition, faculty would have more direction for incorporating the milestones into the existing curriculum.

**Curricular Design:** Five common ED complaints were each developed into five cases to be treated by groups of 2-3 interns. Headache presentations included migraine, post lumbar puncture headache, meningitis and both subarachnoid and subdural hemorrhage. Shortness of breath presentations included asthma, pulmonary embolus, congestive heart failure, pneumothorax, and pneumonia. Chest pain presentations included nonspecific chest pain, ST-elevation myocardial infarction, aortic dissection, herpes zoster, and gastroesophageal reflux disease. Abdominal pain presentations included cholecystitis, appendicitis, abdominal aortic aneurysm, pancreatitis, and small bowel obstruction. Pelvic pain/bleeding presentations included ovarian torsion, ectopic pregnancy, pyelonephritis, pelvic inflammatory disease, and fibroids. A faculty member ran each case while the remaining interns viewed and scored the assigned groups. Scoring rubrics included 15 milestones to indicate Level 1 or 2 proficiency, or failed to meet Level 1 criterion.

**Impact/Effectiveness:** Interns were assessed on their ability to perform a history, physical exam, initial evaluation/management, and create a differential diagnosis/plan. Twelve interns participated; one group failed a case while the majority exceeded Level 1 proficiency. Assessing milestones in Year 1 is essential for both the intern and faculty to properly gauge the needs of the class and the individual. This also allowed for a debriefing discussion of local practice and hospital guidelines.

### Table 1. Milestone proficiency scoring form.

<table>
<thead>
<tr>
<th>Presentation</th>
<th>Group participants</th>
<th>Proficiency level (0, level 1, level 2, or N/A)</th>
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<tr>
<td>H&amp;P, history and physical; ICS, interpersonal and communication skills</td>
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Do You Come Here Often? “Speed-Advising” for Medical Students Matching in Emergency Medicine

McGrath J, Way D, Kman N, Greenberger S, Bachmann D, Gorgas D, Hill M, Martin D / The Ohio State University Wexner Medical Center, Columbus, OH

**Introduction/Background:** The number of 4th year medical students pursuing emergency medicine (EM) residency is increasing. Group sessions provide information about the match program in EM. However, students request personal meetings with multiple EM educators to establish relationships and ask individual questions. Meetings are time consuming and logistically challenging for faculty and students.

**Educational Objectives:** We implemented a novel “speed-advising” session (SAS) for students pursuing EM residency.