

Can We Facilitate Anesthesiology Residents' Research Activity?

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Learner Audience: Anesthesiology residents

Background: The ACGME currently allows a research rotation of up to six months in duration during a clinical anesthesiology residency. Research is one of the indispensable parts of the future growth of our specialty; successful promotion among the residents about the importance of research and education regarding research methodologies is crucial. However, methods to achieve success in this arena have not fully been established. Since 2006, we have implemented processes to promote the resident research rotation and encourage overall resident interest in research.

Needs Assessment: Prior to the implementation of the new practices, few residents (on average one CA3 resident per year during 2002-2005) elected to spend their time in the research rotation in our institution. Total research productivity by the residents was therefore limited.

Hypothesis: We hypothesized that establishing processes for the resident research rotation would strengthen the anesthesiology residents' interest in research. The degree of interest is measured by the number of residents who elected to participate in the resident research rotation.

Curriculum Design: The following practices for the resident research rotation were implemented: 1) encourage resident research activity in local/state/national meetings, 2) recognize the residents' research achievements in the departmental web news, 3) introduce the clinical/basic researchers in the department to residents during the CA2 lecture series, 4) establish an anesthesia research symposium, anesthesia research day, and anesthesia research PBLDs to educate all residents on a diverse range of topics ranging from research integrity, IRB and IACUC application process, grantsmanship, manuscript preparation, to the art of scientific presentations, 5) appoint a faculty member as the director of the resident research rotation, 6) mandate research residents' attendance at weekly research meetings/discussions with the aforementioned director, 7) establish the application process to the resident research rotation during the CA2 year, 8) encourage residents to apply for department seed grants under the guidance of a research mentor, 9) request submission of a letter of commitment by the research mentors, 10) award incentive to the faculty member for providing mentorship in the resident research, and 11) document the success of the residents in the research rotation by measuring their research productivity.

Outcome: After the implementation of the system, the percentage of CA3 residents who elected the resident research rotation increased from an average of 7.4% per year prior to 2007 to 50% in 2010-2011 (Figure 1). The number of faculty members mentoring the residents also increased (2 faculty members in 2002-2003; 3 in 2004-2005; 1 in 2005-2006, 5 in 2006-2007; 4 in 2007-2008; and 13 in 2008-2009).

Possible future enhancements include 1) creating a reference system for the residents to review potential projects by research mentors, 2) creating a residents' research starter grant in the department, 3) creating a reference library of resident research activity, 4) creating a resident research manual, and 5) following the future progress of residency graduates who completed the resident research rotation.

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