Novel Curriculum for Anesthesiology PGY-1s: Academic Medicine Rotation (AMR)

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Hypothesis
Focused comprehensive instruction of academic medicine (AM) topics in PGY-1 will increase the residents’ academic medicine confidence and productivity over time.

Abstract

Background: Beyond the delivery of safe and effective anesthesia, the role of anesthesiologists is expanding to include the ability to solve systems and process issues. The exponential growth of data relevant to patient care also requires skills in evidence-based medicine and critical appraisal. Anesthesiology residencies do not typically incorporate these skills into the curriculum.

Needs Assessment: We surveyed our interns prior to beginning this rotation to determine their previous formal training in critical appraisal of the literature, process and quality improvement techniques, professional advocacy, and teaching. The majority of the interns reported “minimal” or “some” formal training in these areas.

Curriculum Design: The interns had no critical commitments during the rotation. We recruited experts from academic institutions and private practices to teach various topics in four domains: critical appraisal, quality improvement, professional development, and teaching. Course faculty included anesthesiologists, health science librarians, IRB members, economists, researchers, grant experts, legal staff, pediatrics, obstetrics, surgeons, and radiologists. The curriculum was delivered using small group discussions, didactic activities, didactic lecture, and self-directed learning modules. Seminars covering health policy, specialty advocacy, and leadership were also included in the course. Instructor led sessions totaled approximately 62 hours with additional time allowed for self-directed learning and research projects. With the aid of an assigned faculty mentor, the interns pursued research in one of two categories: qualitative improvement or evidence-based literature review. At the completion of the rotation, the entire alignment was invited to the graduation symposium where each intern delivered an oral presentation of their research. Curriculum components link to all ACGME core competencies except direct patient care.

Needs Assessment Pre-AMR Survey

10 PGY-1s, November 2011

How much formal training do you have in medical literature searches?

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How much formal training do you have in quality improvement in medicine?

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Covered Domains

Critical Appraisal

Quality Improvement

Professional Development

Teaching

Curriculum Design

Instructors: Invited experts from academic institutions and private practice included:

- Anesthesiologists
- Epidemiologists
- Health Science Librarians
- IRB members
- Researchers
- Grant experts
- Legal staff
- Pediatricians
- Obstetricians
- Surgeons
- Risk managers

Capstone Research Projects

- Lumbar Drain Management for Thoracoscopic Aortic Surgery
- A Computer Generated Page Reminder Improves Compliance with Properly Capped Intravascular Catheter Hubs
- Grant Writing as a Cost-Saving Measure
- A Learning Module for Ultrasound Guided Regional Anesthesia
- Institutionalization of the Operating Room to Post-Anesthesia Care Unit
- Hand-off
- Effects of an Increase in the Standardization of Intern Sign Out

Evidence-Based Review Project Titles

- Effect of Antibiotic Prophylaxis on Surgical Site Infection in Pediatric Thoracoabdominal Aortic Surgery
- Postoperative Ileus and Anesthesia: a Review
- Red Blood Cell Transfusion Thresholds Based on Hemoglobin Values

Baseline Survey of All UNC Residents, July 2011

16 questions on Likert scale survey. In June 2011, establish baseline data from residents who did not have this rotation.

Sample Baseline Survey Questions

- Rate your confidence in your ability to assess the airway.
- Rate your confidence in your ability to critically appraise a medical study.
- Rate your confidence in your ability to design, conduct, and analyze results for a quality improvement study in anesthesia practice.
- I understand and am comfortable using an evidence-based medicine system for patient care.
- I have the tools to teach medical students basic principles of anesthesiology in the perioperative period.

Observations: Increased interpersonal and communication skills by participating in high-level discussions and problem solving sessions in a small group format.

- Feedback from the course by the interns and the faculty session leaders was overwhelmingly positive.
- Successful targeting of the ACGME required for annual automotive conference presentations this year—a first for this department.

Next Steps

- Revise curriculum content based on post-evaluation sessions.
- Repeat AMR survey of interns every July to determine if AMR participation increases self-reported AMR confidence during residency.
- Repeat pre-AMR survey of interns to stay current with their incoming academic medicine development needs.