

Anesthesia Department Quality Assurance and Resident Education

EG Pivalizza, SL Luehr, P Szmuk, CA Hagberg, R Gebhard, SM Larson, RD Wartars, J Katz
Dept. Anesthesiology, University of Texas Health Science Center at Houston

Introduction

In response to voluntary and federally required performance improvement (PI) initiatives, the anesthesiology community, already at the forefront of patient safety efforts, is responding at national and local levels. We describe an initiative to accomplish quality assurance (QA) together with resident education and a potential method to evaluate the practice-based learning and improvement competency.

Discussion

Measurement of performance parameters leads to improved quality of anesthesia care (1), is required by regulatory agencies such as the Joint Commission for Accreditation of Healthcare Organizations (JCAHO) (2), and may be useful as an evaluation tool for the practice-based learning and improvement competency. In response to a request for more visible QA (than morbidity and mortality case conferences) from our institution, and incorporating the broadly defined American Council for Graduate Medical Education (ACGME) requirement for an 'academic project' to be completed in the CA-3 year, we recently instituted a QA program which would fulfill both obligations.

Four CA-3 residents are grouped over a 2 month period during rotations at the primary teaching hospital. The group chooses a QA-related project from a previously compiled list or one of their own choice, and are paired with a faculty mentor appropriate for their topic. They each receive 2 dedicated research days (without clinical responsibilities) in addition to time that coincides with their rotation (e.g., obstetric project during OB rotation), allowing adequate time to facilitate data acquisition.

Preparatory work includes a basic approach to clinical research, incorporating proposal and brief protocol (including method, references and basic statistical plan). After completion, data is presented to the department and a summary forwarded to the hospital QA coordinator. If an opportunity for PI is identified, this is discussed at the presentation and if necessary, modifications or changes to current practice suggested or implemented. A medium-term goal is to review certain practices/procedures every 2-3 years to gauge efficacy of any interventions made and impact on clinical practice.

Requirement for institutional review board approval has been waived because protocols are QA-related and as the majority are observational without patient identifiers, informed consent is usually not required. A few of the initial projects are discussed:

1. *Accuracy of central line placements in the recovery room.* On review of 53 chest X-rays, 45 % of the central lines placed were > 1 inch too deep. One response has been to remove all 20 cm central line kits from the OR and to use 15 cm catheters as the default catheter.
2. *Evaluation of endotracheal balloon pressure.* Although department members were initially unaware of this project, practitioners soon began removing excessive air from balloons after significantly high measured pressures. As this happened *before* and after the researcher's visit, the impact on clinical practice was immediate!
3. *Airway device review.* Review of the department's last 5 years anesthetics showed: direct laryngoscopy 83%, laryngeal mask airway (LMA) 12%, mask ventilation (MV) 4%, and alternative techniques in 1% of general anesthetics, a significant ↓ in MV and ↑ in LMA and adjunct devices compared to prior years.
4. *Incidence/ causes of unanticipated postoperative hypothermia.* The most recently initiated project.

Conclusion

Mandatory hospital QA and voluntary academic department QA necessitates that QA be part of resident education and we describe a method to accomplish this. Assessment of these projects will facilitate evaluation of areas of the 'practice based learning and improvement' competency such as resident's analysis of their own or group practice for needed improvements and their application of research and statistical methods to do so (3).

References

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3. ACGME Competencies: Suggested best methods for evaluation. ACGME/ABMS Joint Initiative Attachment/Toolbox of Assessment Methods (September 2000).

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