Measuring Quality for Individual Anesthesia Clinicians

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KEYWORDS

- Quality improvement • Quality management system (QMS)
- Quality data collection and reporting • Physician measurement
- Privileging: ongoing professional practice evaluation • Safety culture

KEY POINTS

- The quality management system (QMS) must have a system focus. Measuring quality for individual anesthesia clinicians should occur at the system level.
- Provider-specific outcome measures should be avoided.
- Quality data must not be used for provider privileging.
- A strong safety culture provides the foundation for a robust QMS.

INTRODUCTION

For more than 20 years, our private group has collected data about the anesthesia experience of our patients. In the early years, our focus was on data collection and how to do this effectively and efficiently. Over time, we began to analyze our data and address system issues to improve our care of patients. The discussion that follows discusses core principles that should guide the quality management system (QMS), how the work is done, and examples of challenges and successes along the way.

Our educational goals for this article are to help readers to understand the following:

- How to collect and report data to anesthesia clinicians
- Why quality data should be separate from privileging data
- Why outcome measures are not useful at the individual provider level
- Meaningful use for the QMS and how these data allow groups of anesthesia clinicians to demonstrate their value to the facilities at which they work

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- How a strong safety culture and multidisciplinary quality improvement (QI) committee supports the QMS

DATA COLLECTION AND REPORTING

Our original data collection tools were paper based. These collection tools were developed for providers to use at the point of care and were designed to minimize disruption of work flow to maximize completion rates; this was reported by providers as critical to gaining acceptance and participation with data collection. Preformatted forms with unique case identification codes were attached to each anesthetic record, which contained the same identifier. Billing information, which contained many critical quality data elements, including providers' names, time and duration of case, and specific *Current Procedural Terminology* (*CPT*) codes, was abstracted from the clinical record and linked back to each case using the unique case identification code, thus, reducing any redundant data entry required at the point of care. Data elements actually collected on the form were limited elements of care not available in the billing extract, such as medications used during cases and clinical outcome indicators. Originally, the clinical outcome indicators were developed through an internal consensus process and gradually became based on literature and recommendations from the Anesthesia Quality Institute and the National Anesthesia Clinical Outcomes Registry.[1] At sites of service where we have converted from paper charts to an electronic health record (EHR), we changed to an integrated electronic data collection form that is launched from within the EHR; this was in keeping with our principle of minimizing the disruption of workflow. Case identification information is extracted from the EHR as the form is launched, which again allows us to gather quality data from our billing files and link them to the quality data gathered on the data form. Our ultimate goal is to extract all our quality data directly from the EHR; presently, we are extracting time, medication, and some clinical outcomes, such as temperatures, blood sugars, and postoperative pain scores, as has been described elsewhere.[2] We continue to rely on our quality data entry tool for other clinical outcome indicators, such as possible aspiration, myocardial infarction, and new neurologic injury, which are not as easily extracted from the clinical record (refer to **Table 1**). Also, using a self-reported quality data collection tool separate from the clinical record likely provides for collection of data unique from that which can be directly extracted from the clinical record, including text comments that are not part of the medical record. Studies have shown more adverse outcomes may be identified using self-reported quality tools than are extracted from the medical record by chart reviews.[3,4] The reasons for this are multifactorial but likely include fear of litigation from reporting such events in the medical record. Although underreporting is always a concern, we have used methods to increase our reporting, including a strong culture of safety that emphasizes frequent feedback and system-based improvements over individual blame or accountability. These principles have recently been shown to substantially improve incident reporting at one institution.[5]

We also provide continuous feedback at the individual provider, service line, and site of service levels. Feedback at every level is critical to the success of any program. Individual provider reports are provided annually and on request. This information serves to motivate individuals to participate fully in the collection of the data and allows them to reflect on their own practice. Providing individual feedback of this nature has been shown to encourage behaviors that can lead to improved participation and outcomes.[6,7] Aggregate service line and site of service level reports allow respective clinical directors, committees, and administrators to assess the ongoing