

Olive View – UCLA Medical Center
Department of Anesthesiology
Quality Assurance and Performance Improvement

Purpose

- To provide a comprehensive system of reviewing Anesthesia care.
- To provide a routine, systematic process to monitor and evaluate the quality and appropriateness of Anesthesia care at Olive View–UCLA Medical center.
- To provide a mechanism for patients to provide feedback with respect to the Anesthesia care they received at Olive View–UCLA Medical Center
- To provide a mechanism to resolve problems or potential problems identified by the monitoring process.
- To provide a system designed to inform anesthesiology staff of quality assurance issues with the department and identify issues for improvement and for educational processes.
- To report, on a regular basis, the results of data collection to various areas throughout the hospital from which data is gathered in order to assist them in improving care in those areas.

Background

The Department of Anesthesiology has a long history of data collection and analysis in the interest of quality assurance and performance improvement. Performance improvement data historically has been collected by a daily review of all anesthesia records.

Chart reviewers note name, date of operation, type of operation, type of anesthesia, ASA physical status classification, anesthesia care provider(s) involved, and whether an indicator *fallout* was primarily attributable to the anesthesia care. Particular attention was focused on five perioperative complications (previously identified as the *JCAHO perioperative indicators*): 1) death, 2) cardiac arrest, 3) central nervous system complications, 4) peripheral nervous system complications, and 5) myocardial infarction as well as on twenty-two clinical indicators.

In addition to chart reviews, events are presented and discussed at M&M conferences. Perioperative deaths are presented and discussed at death reviews. The tabulated data, together with the summary findings of these reviews, are compiled and presented on a quarterly basis to the departmental staff, the hospital's performance improvement department, and hospital administration.

Following years of data collection and analysis of these clinical indicators, which showed the department to be well below nationally established threshold values, the decision was made to revise the list of core measures.

2008 Quality Assurance and Performance Improvement

The Department's QA/PI project for 2008 consists of four components:

- Quality Assurance
- Patient Safety
- Workflow/Productivity
- Customer Satisfaction

Quality Assurance

For 2008, the Department's QA/PI project will continue to look at perioperative morbidity and mortality related to anesthesia care. The QA/PI project selected those morbidities identified by the ASA Closed Claims Project as areas of high liability. The ASA Closed Claims Project was initiated for the purpose of identifying major areas of anesthesia-related patient injury and to provide data for the design of strategies to improve patient safety. Major perioperative morbidities include cardiac events (myocardial infarction, cardiac arrest), neurologic events (CNS, neuropathy), and respiratory events (inability to establish an airway, airway/dental trauma, aspiration pneumonitis). Complications related to the performance of neuraxial and peripheral blocks will also be tracked.

Surgical site infection is a significant contributor to patient morbidity and mortality. An important component to preventing surgical site infections is the prophylactic administration of antibiotics when appropriate. Anesthesia staff play a crucial role in ensuring the timely and appropriate administration of prophylactic antibiotics. The Surgical Care Improvement Project's Phase I includes the following procedures: cardiac surgery, colon surgery, hip and knee arthroplasty, vascular surgery, and hysterectomies. Compliance will be monitored by reviewing the University HealthSystem Consortium's (UHC) quarterly SCIP data.

In October 2004, the Joint Commission on Accreditation of Healthcare Organizations issued a Sentinel Alert on preventing and managing the impact of unintended intraoperative awareness under anesthesia. The report states that the frequency of anesthesia awareness has been found to be between 0.1 - 0.2 percent of all patients undergoing general anesthesia. The administration of general anesthesia to 21 million patients annually in the United States translates to the occurrence of 20,000 to 40,000 cases of anesthesia awareness each year. While awareness is not as easily recognizable or quantifiable as other anesthesia-related injuries, its sequelae are no less debilitating. Patients report permanent disability due to recurrent nightmares, sleep disturbances, impaired social interactions, and post-traumatic stress disorder. Despite a historically low incidence at Olive View Medical Center (1 reported case over the last 18 years), unintended intraoperative awareness is an area for increasing patient concern, with up to 50 percent of patients expressing anxiety over intraoperative awareness.

Ambulatory surgery has become the dominant mode of surgical care, having grown not only in the quantity of procedures, but complexity as well. The rate of unplanned hospital admission after ambulatory surgery is a common measure of unsatisfactory outcome. Overall, the rate of unplanned admissions is 0.85%. Pain control, cardiopulmonary, and bleeding problems as well as larger than anticipated procedures accounted for 73% of the admissions. Identifying contributory factors could be helpful in developing improvement strategies.

Patient Safety

Procedures performed by anesthesiologists outside of the OR are held to the same standards of care as those performed in the OR. In line with the Joint Commission's expectations for implementation of the Universal Protocol for Preventing Wrong Site, Wrong Procedure and Wrong Person Surgery, documentation of a time-out must be performed on all invasive procedures outside of the OR. This includes, but is not limited to, epidurals, peripheral nerve blocks, and vascular access for invasive monitoring.

Drug administration errors appear to be a major source of iatrogenic harm to hospitalized patients. A recent study estimated that drug-related errors occur in one out of five doses given to patients in hospitals. Administration errors were found to account for 38 percent of drug-related errors and the annual cost of drug-related errors was estimated to be approximately \$2.8 million for a 700-bed teaching hospital. While there is relatively little information about drug administration errors made by anesthesiologists, the available data suggest that anesthesia-related drug administration errors are relatively common. Drug errors include omissions (drug not given), repetition (unintended extra dose), substitution (unintended drug given instead of desired drug), incorrect dose/route, or documentation errors.

Workflow/Productivity

Clinic cancellations, patient waiting times, and outside OR procedures will be tracked as measures of workflow, productivity, and efficiency. The data will be evaluated to help develop strategies for improving efficiency through the allocation of resources and manpower.

Last-minute cancellations of elective surgical procedures are costly and lead to inefficient utilization of OR resources. They can also be a source of great patient dissatisfaction. The Department of Anesthesiology has enjoyed a long history of keeping *anesthesia-related* cancellations to a minimum. The 2008 QA/PI project will continue to track this data and examine the contributory factors when such cancellations do occur.

Customer Satisfaction

The Department of Anesthesiology strongly believes that patient feedback is an integral component to improving patient care. Patient satisfaction will be assessed both in the Anesthesiology Preoperative Clinic (via a customer satisfaction survey) as well as by a follow-up telephone survey of Ambulatory Surgery patients.

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Summary

Quality Assurance

- Perioperative morbidity/mortality related to anesthesia care ^{1,2} (cardiac events³, neurologic event⁴, respiratory events⁵)
- Neuraxial & Peripheral nerve block (failed/complications) ¹
- SCIP (timeliness/appropriateness of prophylactic antibiotic administration)
- Ambulatory Surgery/Outpatient (unplanned admission, return to hospital)
- Awareness under general anesthesia ¹

¹ *OB and non-OB to be looked at separately*

² *Requires departmental peer review*

³ *Including myocardial infarction, cardiac arrest*

⁴ *Includes CNS complication or neuropathy*

⁵ *Includes inability to intubate, airway/dental trauma, aspiration pneumonitis*

Patient Safety

- Documentation of *time-out* for procedures outside of OR
- Drug administration/documentation errors ¹

¹ *Includes unintended drug omissions, repetitions, substitutions, incorrect dosing or route of administration, and documentation errors*

Workflow/Productivity

- Clinic cancellations/waiting times
- Outside OR procedures
- Elective surgery cancellation, anesthesia-related

Customer Satisfaction

- Clinic (customer satisfaction survey)
- Ambulatory Surgery/Outpatient (follow-up telephone survey)