Risk management opportunities for Anesthesiology

1. Consideration of resources

Ambulatory surgery centers are expanding their practice to include more high-risk patients that might otherwise have been treated in a hospital setting. Preoperative evaluation to determine patient risk is crucial for patient safety. Consider what resources a surgery center has available to manage complex patients and transfer to an inpatient setting if more appropriate for the procedure.

2. Adequate pre-op assessments

Do anesthesiologists have opportunities to adequately assess patients in advance of surgery? High-risk patients should be evaluated in-person. Only low-risk surgeries and low risk medical patients should be evaluated by phone/tele-health. Pre-op assessments are important for anesthesiologists to prepare for complications that may result from comorbidities (bleeding, respiratory complications, and cardiac conditions).

3. Manage comorbidities with referrals

Consider pre-op referrals to specialists to manage comorbidities. A failure to monitor patient physiological status (other than medication responses) continues to be a top contributing factor in anesthesia claims from 2018-2025 (Candello).

4. Appropriate glycemic control

Regardless of medical specialty, diabetes mellitus is known to be associated with increased hospital morbidity and hospital stay.[75,77] Multiple studies have shown that diabetic patients undergoing major surgery are at increased risk of mortality and morbidity.[78, 80] Appropriate glycemic control before, during and after anesthesia decreases perioperative infection, improves wound healing and decreases length-of-stay. Anesthesiologists should be acutely aware of glycemic variability and aim to limit hyperglycemia.

Notes: 75. Aldam P, Levy N, Hall GM. Perioperative management of diabetic patients: new controversies. *Br J Anaesth*. 2014;113(6):906–909. **77.** Sampson MJ, Dozio N, Ferguson B, Dhatariya K. Total and excess bed occupancy by age, specialty and insulin use for nearly one million diabetes patients discharged from all English acute hospitals. *Diabetes Res Clin pract.* 2007;77(1):92–98. **78.** Lee TH, Marcantonio ER, Mangione CM, et al. Derivation and prospective validation of a simple index for prediction of cardiac risk of major noncardiac surgery. *Circulation*. 1999;100(10):1043–1049. **80.** Kon S, Thompson R, Dellinger P, Yanez D, Farrohki E, Flum D. Importance of perioperative glycemic control in general surgery: a report from the Surgical Care and Outcomes Assessment Program. *Ann Surg*. 2013;257(1):8–14.

Case Study: Anesthesia complications

A 40-year-old female patient with a primary history of sleep apnea, morbid obesity, hypertension, and a work-related injury to her right shoulder was scheduled for right shoulder repair at an ambulatory surgery center. The patient consented to surgery and anesthesia but did not specifically consent to an interscalene nerve block. The anesthesiologist faced challenges in identifying anatomical landmarks on the patient's shoulder due to her anatomy. Using a nerve stimulator to isolate the correct nerve, the anesthesiologist placed the needle and instructed the RN to administer the nerve block in preparation for the shoulder repair. Despite the RN reporting some resistance, the anesthesiologist felt confident in the needle placement and proceeded, noting no changes in the patient's vital signs. Seconds later, the patient suffered a total spinal anesthesia (TSA) event, leading to respiratory arrest. She was transferred to the operating room, intubated, ventilated, and monitored until she could breathe independently. The shoulder surgery was aborted and rescheduled for an inpatient hospital operation due to the patient's risk factors. The patient suffered a permanent right shoulder injury and weakness in her right hand, diagnosed as a brachial plexus injury that was not present pre-operatively. **An indemnity of $120K was paid.**

Contributing risk factors:

1. **Improper Performance of Anesthesia Procedure:** The anesthesia procedure resulted in temporary respiratory arrest.
2. **Inadequate Choice of Practice Setting:** The procedure was performed in an ambulatory surgery center rather than a hospital setting.
3. **Misidentification of Anatomical Structure:** The anesthesiologist misidentified the anatomical landmarks, leading to incorrect needle placement.
4. **Inadequate Informed Consent:** The patient did not specifically consent to the interscalene nerve block.

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