

Providing Value in Ambulatory Anesthesia in 2015



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• Ambulatory anesthesia • Regional anesthesia • PONV • PDNV • OSA • DM

KEY POINTS

- Ambulatory anesthesia's popularity continues to increase and anesthetic techniques will continue to morph and adapt to the needs of patients seeking ambulatory surgery.
- Alterations in already existing medications are promising because these modifications allow for quicker recovery from anesthesia or minimization of its already known undesirable side effects.
- Postoperative nausea and vomiting, pain, obstructive sleep apnea, and chronic comorbidities are perioperative concerns in ambulatory settings.
- Regional anesthesia has multiple advantages over general anesthesia, providing a minimal recovery period and a decrease in postanesthesia care unit stay.
- Implementation of the Affordable Health Care Act affects ambulatory settings specifically as the demand and need for patients to have screening procedures with anesthesia increases.

Ambulatory anesthesia continues to be in high demand for many reasons: it provides value to patients and surgeons because both parties want their procedure to be swift, involve minimal postoperative pain, have a transient recovery time, and avoid an admission to the hospital. Factors that have made this possible for patients are improved surgical equipment, volatile anesthetic improvement, ultrasound-guided regional techniques, nonnarcotic adjuncts for pain control, and the minimization of postoperative nausea and vomiting (PONV). The decrease in time spent in a hospital also decreases the risk of wound infection, minimizes missed days of work, and is a

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socioeconomically favorable model, when possible. Recently proposed strategies that will allow surgeons and anesthesiologists to continue to meet the growing demand for a majority of surgical cases being same day include pharmacotherapies with less undesirable side effects, integration of ultrasound-guided regional techniques, and preoperative evaluations in appropriate candidates via a telephone call the night before surgery. Multidisciplinary communication among caregivers continues to make ambulatory settings efficient, safe, and economically favorable.

It is also important to note the future impact that health care reform will have specifically on ambulatory anesthesia. The enactment of the Patient Protection and Affordable Care Act of 2010 will allow 32 million more people to gain access to preventative services that will require anesthesia, such as screening colonoscopies.^{1,2} With this projected increase in the demand for anesthesia services nationwide comes the analysis of its financial feasibility. Some early data looking at endoscopist-administered sedation concludes that it offers greater patient satisfaction, fewer adverse effects than anesthesiologist-administered sedation, and economically advantages. This and future retrospective studies will help to guide health care policy-makers and physicians to come to a conclusion about providing ambulatory services for these millions of patients, but may require confirmation in prospective studies.

The notion that ambulatory anesthesia is an emerging and modern concept is incorrect; since the birth of anesthesia in the 1840s, the first published accounts of successful anesthetics in patients was on an outpatient basis.^{3,4} As anesthesia delivery and surgical techniques improved in the mid nineteenth century, both the medical and dental communities used anesthesia for their minor office-based procedures and for tooth extractions, but the use of anesthetics was not deemed appropriate for ill or hospitalized patients quite yet.⁴ The marriage of improved operative interventions and anesthetic delivery made for faster recovery and this combination gave way to the 'same-day' or ambulatory surgery concept as we know it today.⁵

Anesthesiology as a medical specialty has matured profoundly since its rudimentary beginning in the mid nineteenth century. Consistent with the advancements in the field of anesthesiology have been the technologic improvements in operative techniques and equipment, decreasing skin-to-skin time, decreasing blood loss, and a need for smaller incisions, which decreases the chance of postoperative wound infection. These factors make the popularity of ambulatory surgery widespread as an attractive and safe option for the more than 35 million patients yearly who undergo same-day operative procedures.^{6,7} Luckily, these changes have allowed ambulatory anesthesia to satisfy the increasing economic pressure for cost effectiveness and patients' desires to stay out of the hospital. Multiple factors have made the appeal of same-day surgery a lasting one; adjuvants such as nonsteroidal antiinflammatory drugs, improved ultrasound equipment for regional anesthetics, short-acting narcotics, and the use of induction agents with faster recovery profiles.

POSTOPERATIVE NAUSEA AND VOMITING AND POSTDISCHARGE NAUSEA AND VOMITING

One of the oldest, most common and most challenging complaints about receiving general anesthesia is PONV. Despite advances in antiemetics and multimodal approaches to combat PONV, there is a marked discrepancy between the 2 independent factors; postoperative nausea comprises approximately 20% of complaints and vomiting roughly 4%.^{1,2,8-11} It is one of the most common complaints from surgical patients and in a subset of high-risk patients with either a known history of PONV or a coexisting history of motion sickness the incidence can be as high

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