

STUDY OF AMBULATORY SURGERY FINDS BETTER OUTCOMES WHEN ANESTHESIOLOGISTS PROVIDE CARE

As health care policymakers seek to increase the value of health care services, attention is given to both quality measures and efficiency measures. Outpatient surgery is a major component of health care utilization and costs and now represents almost two-thirds of all surgeries requiring anesthesia in the United States.^{1,2}

In a 2012 study^{3†} of ambulatory surgery by Memtsoudis et al., the researchers found, among other results:

- **The odds of “unexpected disposition” after ambulatory surgery were 80 percent higher when the anesthesia care was provided by only a nurse anesthetist as opposed to a physician anesthesiologist.**
 - The implications are associated adverse patient outcomes and higher costs.
 - Similar results were reported in a comparable study conducted in 2005,⁴ strengthening the validity of this recent study and making it a strong basis for policy decisions relevant to the provision of anesthesia services.

WHAT IS AN “UNEXPECTED DISPOSITION”?

In the outpatient setting, patients are expected to undergo a relatively low-risk surgery and be discharged to their place of residence on the same day. Any other outcome was considered an unexpected disposition.

An unexpected disposition such as a hospital admission may be due to the patient experiencing an adverse outcome from their procedure or anesthesia care. An unexpected hospital admission increases costs to both the patient and the health care organization, which needs to dedicate additional resources to provide the required care, and this potentially results in additional costs to payers. Hospital admissions, particularly unexpected admissions, are associated with adverse outcomes such as hospital-acquired infections that can cause further harm and expense.

DATA SOURCE

The study was based on the most recent data from the National Survey of Ambulatory Surgery (NSAS). The NSAS is conducted by the Centers for Disease Control and Prevention and is the only national survey of ambulatory surgical care in hospital-based and freestanding ambulatory surgery centers⁵. The NSAS includes information about the location of the procedure, demographics of the patient and detailed statistics about the procedure such as duration, type of anesthesia given, type of anesthesia provider, complications and outcomes. In their study, Memtsoudis et al. examined all knee and shoulder surgeries included in this database for 1996 and 2006, which totaled almost 2.5 million cases.

METHODS AND RESULTS

The authors conducted a regression analysis that adjusted for patient age and gender, facility type, anesthesia type (general, nerve block, neuraxial, etc.) and anesthesia provider. **When adjusting for all of these factors, they found that rates of unexpected disposition were significantly higher when the anesthesia was provided by a nurse anesthetist as compared to a physician anesthesiologist.** The study also found significant differences between care by anesthesia professionals as compared to non-anesthesia personnel, further supporting the premise that more extensive training and experience is associated with improved patient outcomes and lower health care costs.

1. Anesthesia Quality Institute: National Anesthesia Clinical Outcomes Registry [2013 data].
2. Miller TR and Krentz Consulting LLC: Surgical/Invasive Procedural Volumes in the United States – Hospital-based data: 2007-2011 and Freestanding Ambulatory Surgery Center Data: 1996, 2000-2007.
3. Memtsoudis SG, Ma Y, Swamidoss CP, Edwards AM, Mazumdar M, Liguori GA: Factors influencing unexpected disposition after orthopedic ambulatory surgery. *J Clin Anesth* 2012; 24(2):89-95
4. Memtsoudis SG, Besculides MC, Swamidoss CP: Factors influencing patient disposition after ambulatory herniorrhaphy. *J Ambulatory Surgery* 2005; 12:67-73
5. Centers for Disease Control and Prevention: National Survey of Ambulatory Surgery – About NSAS. 2010. Retrieved from <http://www.cdc.gov/nchs/nsas.htm> on 20 January, 2014