FAER Foundation for Anesthesia Education and Research

Foundation for Anesthesia Education and Research

Rapid Growth in NORA Will Continue: Science Must Follow!

Richard P. Dutton, MD, MBA, FASA

A 2017 paper that looked at data from the National Anesthesia Clinical Outcomes Registry (NACOR) noted the rapid rise in anesthesia cases performed outside of the traditional OR suite (*Anesth Analg* 2017;124:1261-7). At the time, non-operating room anesthesia (NORA) cases accounted for about one third of all anesthetics in the United States. Today, the percentage is higher and is growing faster.

The broadest definition of NORA includes anesthetics in a hospital but outside the OR, as well as outpatient anesthetics in ambulatory surgery centers (ASCs) and office suites. NORA includes everything from labor epidurals to gastroenterology lab sedation to facilitation of radiology procedures to outpatient cataracts, joint replacements, and pediatric dental sedation. Unlike cases concentrated in the OR suite, NORA cases are scattered across multiple units of the hospital and small outpatient facilities, presenting a challenge to safe and efficient staffing.

Demand for anesthesia outside the OR is driven by multiple factors. Advances in surgical technology have made traditional inpatient procedures safe enough to move to ASCs; examples include knee, hip, and shoulder replacement, many minor surgeries, and – more recently – robot-assisted hernia, prostate, and intraperitoneal surgery. On the non-surgical side, technology has enabled minimally invasive procedures that are complex enough to require an anesthesia clinician for support. Examples include complex endoscopic retrograde cholangio pancreatography procedures, cardiac electrophysiology ablations, and transcatheter aortic valve replacement.

When anesthesiologists provide care for non-OR procedures, three benefits accrue:

- Patient safety improves (probably) – this is difficult to validate due to our very low rate of perioperative adverse events, but it makes sense that adding experienced anesthesiologists to the mix would improve decision-making.
- Patient satisfaction improves – this is easy to demonstrate, but it's hard to define the economic value of this improvement (*J Arthroplasty* 2018;33:3402-6).

- Efficiency of the unit improves – more procedures are done in the same amount of time (*J Med Syst* 2019;44:1).

Increased efficiency is partly explained by the presence of extra personnel to keep things moving. It is also due to the expertise of anesthesia clinicians in using agents such as propofol, remifentanil, and dexmedetomidine that provide good procedural conditions with rapid emergence and readiness for discharge. While safety is a *sine qua non*, and patient satisfaction is nice to have but hard to value, it is the increase in efficiency that leads hospitals and outpatient facilities to request more NORA service. Even units such as cardiac catheterization laboratories that have historically managed procedural sedation on their own are now requesting anesthesiologist involvement. Combined with a fixed supply of anesthesia personnel – already fully utilized – the demand for new and expanded coverage is the largest challenge facing most anesthesia practices today and what drives an arms race to recruit and retain clinicians.

Shifting cases to ASCs is incentivized by commercial payers, who will often pay higher rates to surgeons for procedures performed on an outpatient basis, based on reduction or elimination of the facility fee normally charged for an inpatient procedure. Joint venture models that give surgeons, and sometimes anesthesiologists, partial ownership of the outpatient facility further increase the financial incentive for moving procedures out of the hospital.

Given equivalent safety, patients generally prefer outpatient over inpatient care. ASCs are typically more convenient geographically, more efficient for the patient's time, and newer and nicer physical environments than large community hospitals. While patients are justifiably anxious about recovery at home, their concerns can be mitigated by appropriate education and good communications preop, postop, and in transition (*J Med Syst* 2019;44:1).

Anesthesiologists play a critical role in regulating the migration of hospital procedures to ASCs. We are the gatekeepers who must determine whether anesthesia for a given patient or procedure can be safely conducted outside the hospital. The "can we do this in an ASC?" question is a frequent one on anesthesia discussion boards. Arbitrary standards barring patients from the ASC with high body mass index, high ASA Physical Status, comorbidities like chronic renal failure, or having procedures such as pacemaker insertion are eroding rapidly. What was impossible yesterday is being tried today and will be the standard of care tomorrow.

Richard P. Dutton, MD, MBA, FASA
Member, FAER Development Committee, Chief Quality Officer, US Anesthesia Partners, and Adjunct Professor, Texas A&M University College of Medicine, Dallas.
@TraumaDinosaur

Anesthesiologists also play a direct role in enabling outpatient surgery by offering facilitating techniques such as regional analgesia blocks and multimodal pain management. As we further embrace telemedicine technologies, our ability to assess patients in advance and monitor their recovery at home will improve; these gains will enable safe outpatient scheduling for increasingly challenging procedures and patients.

The rapidly evolving NORA landscape has created a gap in anesthesia science and has become a fruitful area for health sciences research. The Foundation for Anesthesia Education and Research (FAER) has funded research grants, resident research presentations, and even medical student projects in this area in the past and is eager to support future work on topics related to out-of-OR anesthesia. There are specific opportunities to examine aggregated multicenter data in NACOR and other large administrative data sets to continue documentation of trends in NORA and validation of the safety and economic benefits of NORA for our patients and facility partners.

Applications for FAER research grant funding open June 1 and December 1 each year. Anyone interested in pursuing research related to the quickly growing spheres of ambulatory anesthesia and NORA should apply for FAER funding. ■

Disclosure: *Dr. Dutton holds stock in US Anesthesia Partners.*

Downloaded from http://asa2.silverchair.com/monitor/article-pdf/86/6/43/670933/20220600.0-00032.pdf by guest on 19 April 2024