Anesthesiologists Made for This Moment

Anesthesiologists Help Ensure Safe and Efficient Growth of Nonoperating Room Anesthesia Amid Workforce Challenges

Executive Summary

The explosive growth in procedures requiring anesthesia outside of the hospital's traditional operating room (OR) suite–known as nonoperating room anesthesia (NORA)–has been propelled by a variety of factors, including medical advances enabling less invasive procedures so that patients with significant comorbidities can be treated safely, as well as payer incentives to shift cases to outpatient locations. NORA procedures range widely, from gastroenterology sedation, to the facilitation of radiology procedures, to interventional pulmonology, and can occur in various locations throughout the hospital and in outpatient facilities such as ambulatory care centers (ACSs). Managing this growth is compounded by the workforce challenges affecting every institution.

As the leaders and experts in safe and effective anesthesia care throughout the perioperative process, anesthesiologists are committed to maintaining high-quality outcomes while supporting their hospital's strategic priorities and resources. To ensure that NORA is equally safe, effective, and efficient as anesthesia provided in the OR, anesthesiologists are collaborating with surgeons, proceduralists, and hospital executives to redesign processes and procedures that facilitate the best use of limited resources.

> **NORA comprised 28% of procedures requiring anesthesia in 2010 and is expected to account for more than 50% of all procedures in the next decade.**[1,2]

While not every patient needs an anesthesia care team, it is vital that anesthesiologists oversee anesthesia care provided throughout a health care system, whether general anesthesia or sedation, in the OR or NORA. That oversight includes optimizing preoperative evaluation, improving procedural throughput, and facilitating communications and training to ensure that every patient has the appropriate anesthesia and feels safe having a procedure.

Optimize Preoperative Evaluation, Scheduling, and Staffing

Implementing a process to make NORA anesthesia safe and more efficient begins with a preoperative evaluation, which informs staffing and scheduling.

- All patients having a NORA procedure should undergo a preoperative assessment (in person or via telehealth) for guidance on the safest and most efficient anesthesia approach, as well as the most appropriate setting. A system-based triage or "grid model" can be used to evaluate the resources needed for anesthesia services vs. procedural sedation by stratifying patients according to risk category, e.g., a low-risk procedure in a high-risk patient (a nerve block in a patient with congestive heart failure), a higher-risk procedure in a low-risk patient (transcatheter aortic valve replacement in an otherwise healthy patient), or a low-risk procedure in a low-risk patient (a colonoscopy in a fit 50-year-old).
- The evaluation can help determine whether an anesthesiologist is required. For example, a patient with significant comorbidities or who is extremely ill or having a complex procedure would typically require anesthesia care led by an anesthesiologist, in contrast to simpler procedures on relatively healthy patients, which can be performed safely by a registered nurse (RN) trained in providing sedation under the direction of the proceduralist.

- Preoperative evaluations can also reduce the risk of same-day cancellations or post-procedure complications by identifying patients who need further testing or interventions in order to be optimized before having surgery. For example, if a patient is anemic, they could be given iron infusions before the procedure, reducing the likelihood that their blood counts will be too low the day of the procedure, which could result in a last-minute cancellation.

Improve Procedural Throughput

Improving procedural throughput creates efficiencies that enable more procedures to be performed in NORA settings, which is crucial to meeting the growing demand.

- The rules and culture of NORA should be established so they are equivalent to those of regular ORs. As with OR anesthesia, NORA rules need to be objective and uncompromising, and outcomes such as first-case on-time starts should be measured. Dashboards should be employed to track procedures and provide metrics for on-time starts, case length scheduling accuracy, delays, cancellations, and utilization of anesthesia minutes. These metrics should be shared regularly with all team members to ensure accountability and facilitate the development of solutions to improve efficiency.
- Processes and efficiencies can be improved by centralizing scheduling for both OR and NORA cases for anesthesia staffing and supporting personnel who may be deployed to these areas. Locations of NORA should be included in the master plan when facilities are being built or renovated and should be positioned as close as possible to OR locations. When this isn't an option, recovery spaces should be set up around suites where NORA is performed–such as interventional cardiology and gastroenterology–so patients don't have to be transported across the hospital. The electronic health record (EHR) in these sites should also be configured so the schedule can be viewed in real time by those managing anesthesia staffing across the system.
- Surgical block time overutilization and underutilization should be minimized, and it should be optimized with anesthesia block time. If an institution has sufficient volume, block time may improve utilization. Scheduling full days rather than partial days of coverage should improve efficient use of personnel. For example, lower-volume services may consider scheduling a long day every other week rather than shorter blocks every week.

Streamline Communications and Provide Training and Guidelines

Communication across the system is vital to the continuity of care. As anesthesiology leaders, anesthesiologists should train other providers and develop guidelines to ensure the best care.

- Communication between anesthesiologists, surgeons, proceduralists, and anesthesia services should be streamlined by using EHRs and health information exchanges to assess patient complexity, appropriate optimization of the patient, and assignment of resources.
- Due to the high demand for NORA, proceduralist physicians and RNs can be called upon to provide sedation in low-risk patients for low-intensity procedures. It is imperative that they are trained by the anesthesia care team so that they learn not only how to provide care safely, but also recognize when to call for an anesthesia care team consult if they have questions about a patient's care. This includes the development of specialized training for these professionals to safely and effectively provide sedation services in endoscopy, interventional radiology, and other procedural sites.
- Additionally, anesthesiologists should provide anesthesia guidelines and management programs for hypertension and other chronic comorbidities to proceduralists, surgeons, and other providers. These guidelines can help providers most effectively manage their patients before surgery, helping to reduce the risk of complications during the procedure.

Takeaway

Working closely with surgeons, proceduralists, and health care executives, anesthesiologists can and should lead the way in ensuring NORA is safe and efficient. Learn more about how health care executives can partner with anesthesiologists by visiting: https://www.asahq.org/madeforthismoment/health-care-executives/

References:

1. Nagrebetsky A, Gabriel RA, Dutton RP, Urman RD. Growth of nonoperating room anesthesia care in the United States: A contemporary trends analysis. *Anesth Analg.* 2017;124(4):1261-1267. doi:10.1213/ANE.0000000000001734
2. Boggs SD, Barnett SR, Urman RD. The future of nonoperating room anesthesia in the 21st century: emphasis on quality and safety. *Curr Opin Anaesthesiol.* 2017;30(6):644-651. doi:10.1097/ACO.0000000000000528

American Society of Anesthesiologists®

1061 American Lane | Schaumburg, IL 60173-4973 | (847) 825-5586 | Fax: (847) 825-1692
905 16th Street, N.W. | Suite 400 | Washington, D.C. 20005 | (202) 289-2222 | Fax: (202) 371-0384
www.asahq.org/madeforthismoment