Safety of Non–Operating Room Anesthesia

A Closed Claims Update

Zachary G. Woodward, MD[a],
Richard D. Urman, MD, MBA, FASA[a,b,*], Karen B. Domino, MD, MPH[c]

KEYWORDS

• Closed claims • Non–operating room anesthesia (NORA) • Remote anesthesia
• Gastroenterology • Cardiology • Radiology • Sedation • Medical malpractice

KEY POINTS

- Malpractice claims for non–operating room anesthesia care (NORA) had a higher proportion of claims for death compared with operating room (OR) settings.
- Aspiration pneumonitis occurred in a higher proportion of NORA malpractice claims, compared with claims in OR settings.
- NORA claims most frequently involved monitored anesthesia care. Inadequate oxygenation/ventilation was responsible for nearly one-third of NORA claims.
- Malpractice claims for NORA were less frequent than claims for OR anesthesia as assessed by the number of anesthetics in NORA versus OR locations.
- NORA claims occurred more frequently in cardiology and radiology locations compared with the number of anesthetics in these procedural locations, suggesting a higher risk of adverse events in these locations.

INTRODUCTION

Providing anesthesia services in non–operating room (OR) settings is a rapidly changing and growing challenge. As technologies advance and the financial landscape of health care continues to transform, many of the novel therapies and

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[a] Department of Anesthesiology, Perioperative and Pain Medicine, Brigham and Women's Hospital, 75 Francis Street, Boston, MA 02115, USA; [b] Center for Perioperative Research, Brigham and Women's Hospital, Boston, MA 02115, USA; [c] Department of Anesthesiology and Pain Medicine, University of Washington, 1959 Northeast Pacific Street, Box 356540, Seattle, WA 98195, USA
* Corresponding author. Department of Anesthesiology, Perioperative and Pain Medicine, Brigham and Women's Hospital, 75 Francis Street, Boston, MA 02115.
E-mail address: rurman@bwh.harvard.edu

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treatments being integrated into practice are now performed outside of the traditional OR. Increasingly complex procedures are calling for more invasive monitoring, deeper sedation, and a higher rate of general anesthesia.[1,2] The patient population is also increasing in age and disease burden as anesthesiologists are more frequently caring for patients with multiple comorbidities in unfamiliar locations.[3] Although the proportion of remote site anesthesia cases continues to increase, the risks and the rates of adverse outcomes in non–OR anesthesia (NORA) are poorly defined when compared with the OR setting.[4] Older analyses of closed malpractice claims suggested an increased risk of NORA compared with the OR setting.[5,6] Because procedures, patients, regulatory requirements, and anesthesia practice have changed considerably, we reviewed remote location anesthesia claims using the Anesthesia Closed Claims database for injuries occurring between 2000 and 2012 and compared them with claims from anesthesia care for OR procedures. In addition, we evaluated current trends and outcomes in NORA using data from the National Anesthesia Clinical Outcomes Registry (NACOR) and compared them with NORA closed claims.

METHODS

Closed Claims Project Methodology

The Anesthesia Closed Claims Project database is a structured collection of closed anesthesia malpractice claims described in detail elsewhere.[7,8] Briefly, on-site anesthesiologist–reviewers abstracted data from closed anesthesia malpractice claims onto detailed data collection instruments at participating professional liability companies across the United States. The panel of 22 companies (at the time of this report) insured approximately one-third of practicing anesthesiologists in the United States. Information was collected from medical records, consultant evaluations, expert witness reports, claims manager summaries, and legal summaries. Data collected included patient demographics, type of surgery, details regarding anesthesia care, patient outcomes, and legal outcomes. The on-site reviewer evaluated the outcome, severity of injury, and cause of injury (ie, damaging event), and summarized the claim in a brief narrative, including the sequence of events and causes of injury. The Closed Claims Project Investigator Committee reviewed the claims, and any disagreements in assessments were resolved by committee members.

For this report, we used the Anesthesia Closed Claims Project database of 10,357 claims. Inclusion criteria were claims associated with surgical or procedural anesthesia care. Claims associated with obstetric anesthesia (including cesarean section) and those associated with acute or chronic pain medicine were not included. NORA location claims were further reviewed to assess how sedation contributed to the primary damaging event. In-depth analysis was performed on NORA claims in which absolute or relative oversedation during the procedure precipitated the series of events leading to injury. Claims for the current report involved events that occurred from 2000 to 2012, of which 1900 were in OR or NORA locations.

NACOR data were provided by the Anesthesia Quality Institute (AQI) and adapted from Chang and colleagues.[9] NACOR is a large registry that collects electronic reports of anesthesia care in the United States. Reporting is voluntary and the AQI estimated that, in 2015, NACOR included 25% of all United States anesthesia cases.[10] The location of cases is listed for the majority of records, making categorization to OR and NORA possible. The NACOR dataset used 12,252,846 total cases, of which 9,890,875 were OR or NORA cases from January 1, 2010, to December 31, 2013. Cases for obstetric procedures and records without location data were excluded.