Ambulatory Surgery

Data Insight

2023

MedPro Group

MLMIC
MLMIC Insurance Company
a Berkshire Hathaway company

Introduction

This publication contains an analysis of aggregated data from clinically coded cases opened between 2012-2021 and arising in an ambulatory surgery center location.

Keep in mind…

Our data system, and analysis, rolls all claims/suits related to an individual patient event into one case for coding purposes. Therefore, a case may be made up of one or more individual claims/suits and multiple defendant types such as hospital, physician, and other healthcare professionals.

Cases that involve attorney representations at depositions, State Board actions, and general liability cases are not included.

This analysis is designed to provide insured doctors, healthcare professionals, hospitals, health systems, and associated risk management staff with detailed case data to assist them in purposefully focusing their risk management and patient safety efforts.

Key Points - Clinically Coded Data

- **As would be expected, surgical allegations account for two-thirds of ambulatory surgery center case volume (and more than half of total dollars paid*).** Performance-related allegations account for half of those, with the majority involving ophthalmology, orthopedic and cosmetic-related procedures.

  - Management-related cases are noted also; these cases, involving the management of pre-, intra-, and post-operative surgical patients, are often related to the surgeon's response to developing complications. While complications of procedures may have been the result of procedural error, the failure to timely recognize and/or monitor/manage the issue prevents the opportunity for early mitigation of the risk of serious adverse outcome.

- **Anesthesia-related cases account for another 15% of ambulatory surgery center case volume.** Performance-related and management cases account for the majority of these.

  - Performance cases encompass procedural technique issues, including injections, intubation and extubation. Extubation cases (excluding those involving tooth damage) often reflect immediate post-extubation complications, bringing into question whether extubation was appropriate/timely. Management-related cases encompass recognition of and reaction to vital signs, awareness while under anesthesia, monitoring while receiving blood products and during the post-operative recovery process.

- **Contributing factors, which are multi-layered issues or failures in the process of care that appear to have contributed to the patient's outcome**, and/or to the initiation of the case, **provide valuable insight into risk mitigation opportunities**.

  - **Several factors**, including failures to follow policies/procedures, inadequate staff training, poor procedural technique, insufficient documentation and inadequate patient assessments, **are key drivers of both clinical and financial ambulatory surgery center case severity**.

MedPro Group + MLMIC cases opened 2012-2021, ambulatory surgery location (N=2395); *Total dollars paid = expense + indemnity

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Major Allegations & Financial Severity

Each case reflects one major allegation category. Categories are designed to enable the grouping and analysis of similar cases and to drive focused risk mitigation efforts. The coding taxonomy includes detailed allegation sub-categories; insight into these is noted later in this report.
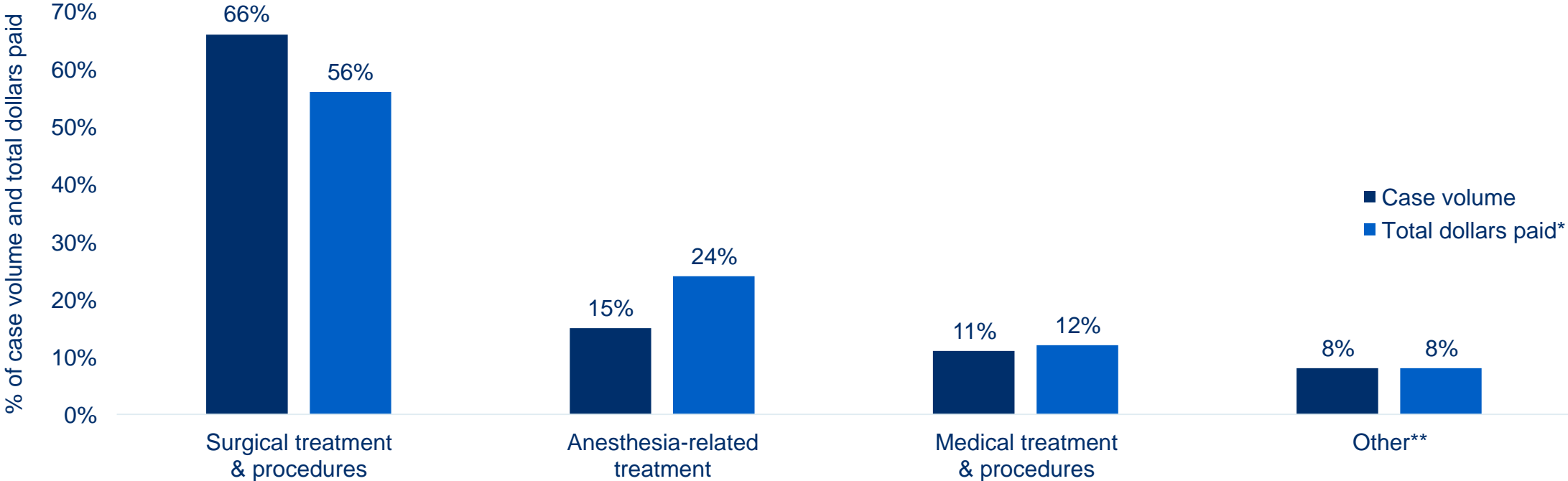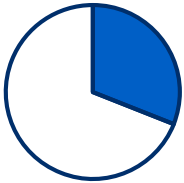

MedPro Group + MLMIC cases opened 2012-2021, ambulatory surgery location (N=2395); *Total dollars paid = expense + indemnity; **Other includes allegations for which no significant case volume exists

Clinical Severity*

| Clinical Severity Categories	Sub-categories	% of case volume	
LOW	Emotional Injury Only	5%	**Typically, the higher the clinical severity, the higher the indemnity payments are, and the more frequently payment occurs.**
LOW	Temporary Insignificant Injury	5%	
MEDIUM	Temporary Minor Injury	34%	
MEDIUM	Temporary Major Injury	34%	
MEDIUM	Permanent Minor Injury	34%	
HIGH	Significant Permanent Injury	61%	
HIGH	Major Permanent Injury	61%	
HIGH	Grave Injury	61%	
HIGH	Death	61%	

Focus on high severity cases for the top three allegations (percentage of each allegation category's high severity cases)

**Surgical cases 31%**
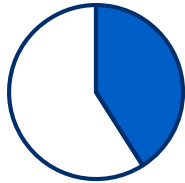
Anesthesia cases 41%
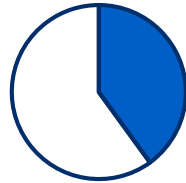
Medical cases 40%

Primary Responsible Services

Each case reflects one primary responsible service. This is the specialty that is deemed to be most responsible for the resulting patient outcome. Cases can also reflect one or more 'secondary' responsible services. In the ambulatory surgery setting, nursing staff and anesthesiology are the two most common services noted as secondarily responsible.
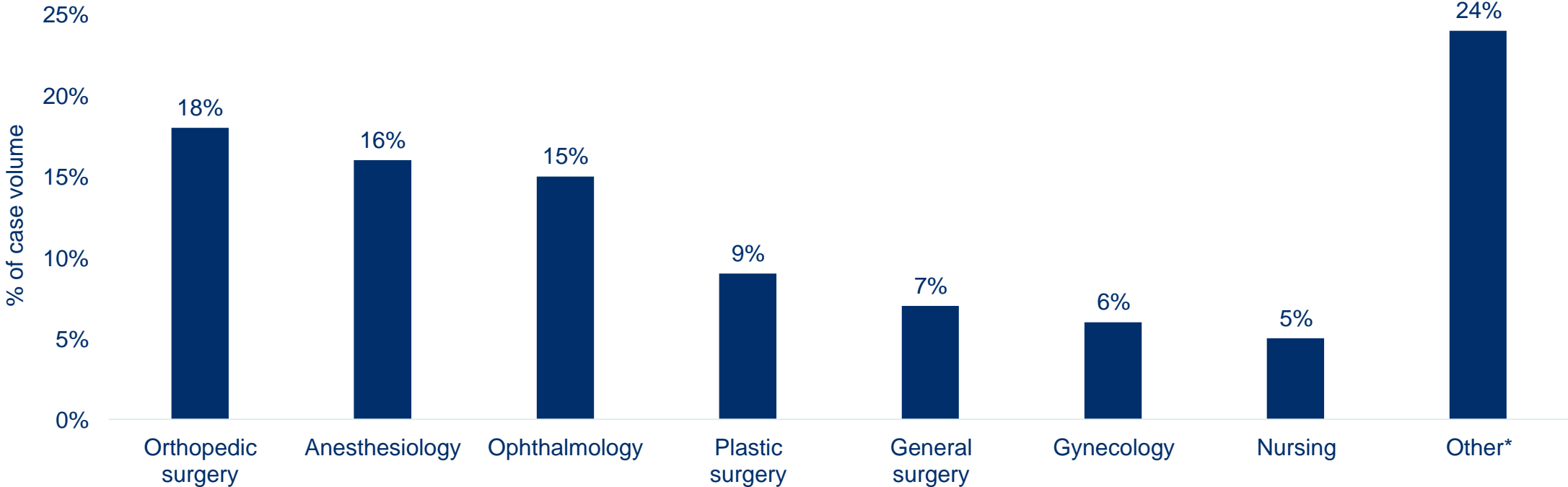
MedPro Group + MLMIC cases opened 2012-2021, ambulatory surgery location (N=2395); *Other includes services accounting for </=4% of case volume

Primary Responsible Services: Focus on **Primary Roles***

"**Roles**" reflect the **specific position within the specialty service team that was involved at the time of the event**. There may be multiple primary roles within the same service team (i.e., an attending/consult and a CRNA – both practicing under the anesthesiology responsible service).
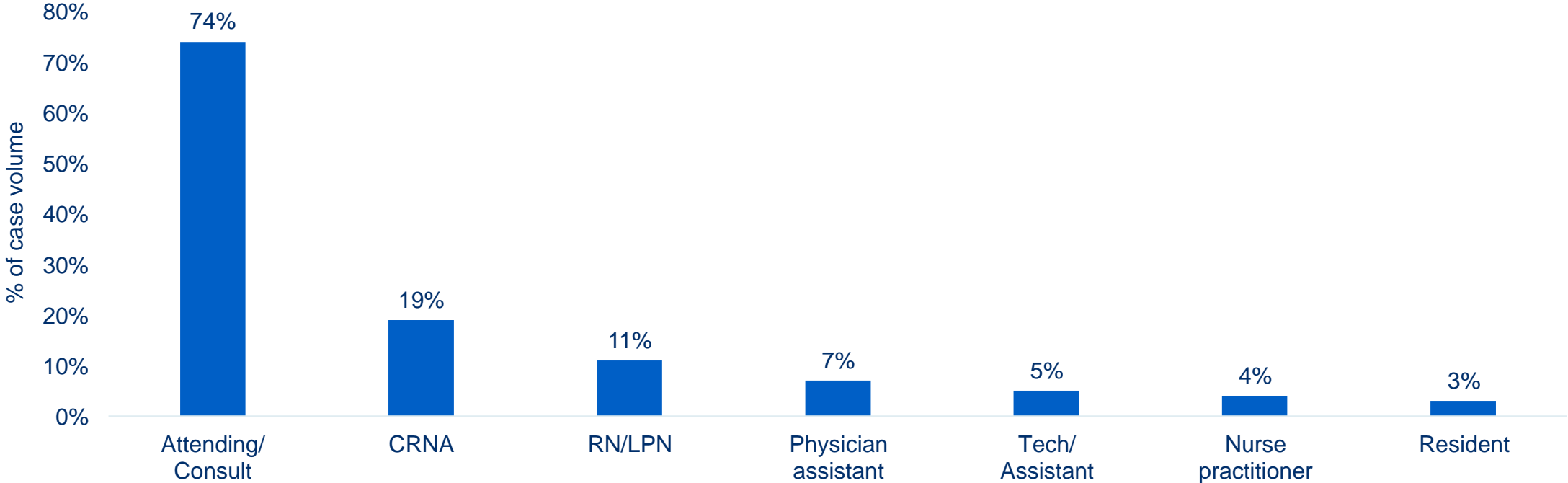
MedPro Group + MLMIC cases opened 2012-2021, ambulatory surgery location with an identified role (N=687); *Role codes have been evolving for several years. The role code portion of the taxonomy was enhanced and made mandatory in July 2021, therefore not all cases coded prior to that date have a role indicated.

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Contributing Factors

"Contributing factors reflect both provider and patient issues. They denote breakdowns in technical skill, clinical judgment, communication, behavior, systems, environment, equipment/tools, and teamwork. The majority are relevant across clinical specialties, settings, and disciplines; thus, they identify opportunities for broad remediation."

CRICO Strategies. (2020). The Power to Predict: Leveraging Medical Malpractice Data to Reduce Patient Harm and Financial Loss. Retrieved from https://www.candello.com/Insights/Candello-Reports/Power-to-Predict.

Contributing Factors

Despite best intentions, processes designed for safe patient outcomes can, and do, fail.

Contributing factors are multi-layered issues or failures in the process of care that appear to have contributed to the patient's outcome, and/or to the initiation of the case, or had a significant impact on case resolution.

Multiple factors are identified in each case because generally, there is not just one issue that leads to these cases, but rather a combination of issues.

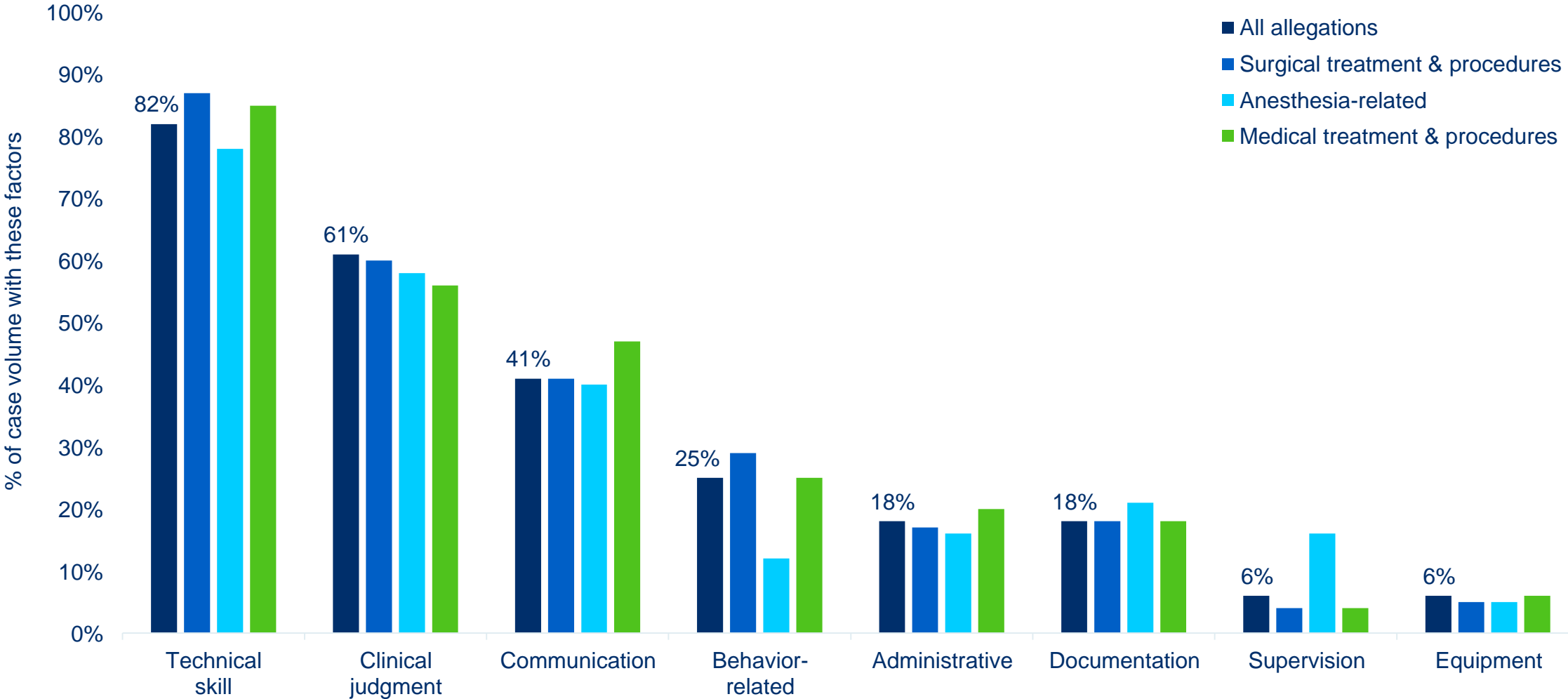| Administrative | Behavior-related | Clinical environment | Clinical judgment | Clinical systems | Communication | Documentation | Supervision | Technical skill |

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Contributing Factor Category Definitions

Category	Definition
Administrative	Factors related to medical records (other than documentation), reporting, staff education/training, ethics, policy/protocols, regulatory issues
Behavior-related	Factors related to patient nonadherence to treatment or behavior that offsets care; also provider behavior including breach of confidentiality or sexual misconduct
Clinical environment	Factors related to workflow, physical conditions and "off-hours" conditions (weekends/holidays/nights)
Clinical judgment	Factors related to patient assessment, selection and management of therapy, patient monitoring, failure/delay in obtaining a consult, failure to ensure patient safety (falls, burns, etc), choice of practice setting, failure to question/follow an order, practice beyond scope
Clinical systems	Factors related to coordination of care, failure/delay in ordering test, reporting findings, follow-up systems, patient identification, specimen handling, nosocomial infections
Communication	Factors related to communication among providers, between patient/family and providers, via electronic communication (texting, email, etc), and telehealth/tele-radiology
Documentation	Factors related to mechanics, insufficiency, content
Equipment	Factors related to malfunction and failures to maintain/inspect equipment/materials
Supervision	Factors related to supervision of nursing, house staff, advanced practice clinicians
Technical skill	Factors related to improper use of equipment, medication errors, retained foreign bodies, technical performance of procedures

Most Common Contributing Factor Categories by Allegation

Legend:
- All allegations
- Surgical treatment & procedures
- Anesthesia-related
- Medical treatment & procedures

Y-axis: % of case volume with these factors

Categories (with All allegations values): Technical skill 82%, Clinical judgment 61%, Communication 41%, Behavior-related 25%, Administrative 18%, Documentation 18%, Supervision 6%, Equipment 6%

MedPro Group + MLMIC cases opened 2012-2021, ambulatory surgery location (N=2395); More than one factor per case, therefore totals >100%

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Contributing Factors: Focus on Drivers of Clinical & Financial Severity

These factors are commonly noted in cases with clinically severe patient outcomes and indemnity payments.

Administrative
- Failure to follow policy/procedure
- Inadequate staff training/education

Documentation
- Insufficient or lack of documentation regarding clinical findings (impacts team communication and makes subsequent defense of malpractice cases more difficult)
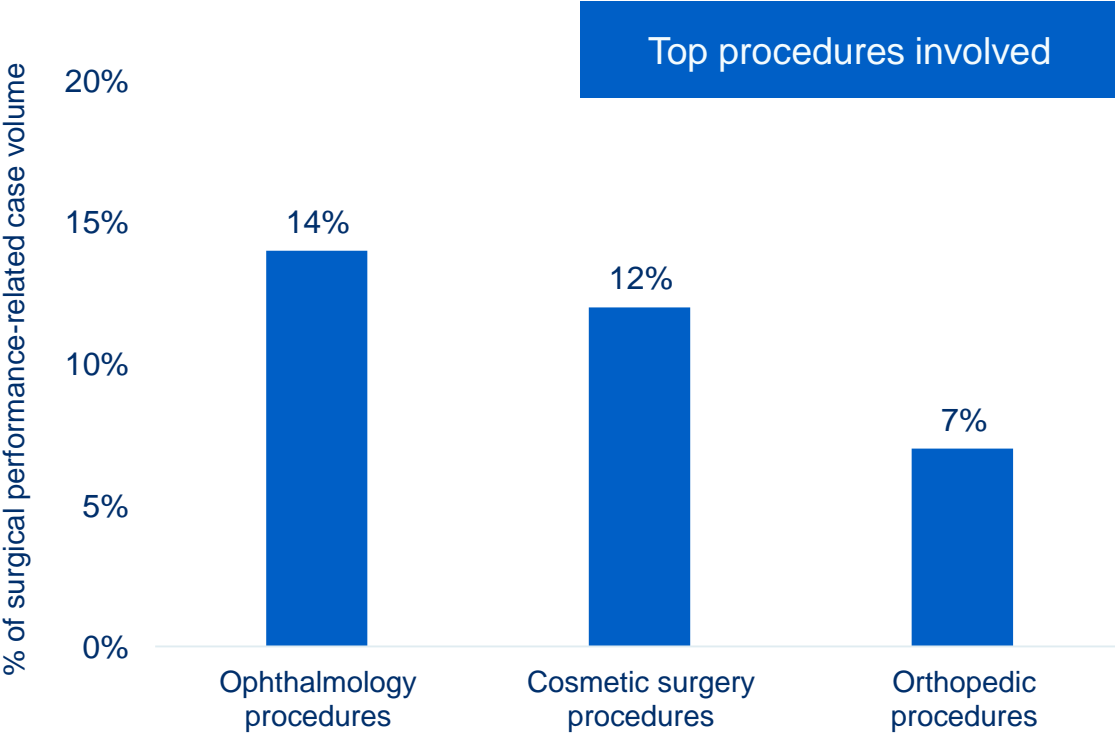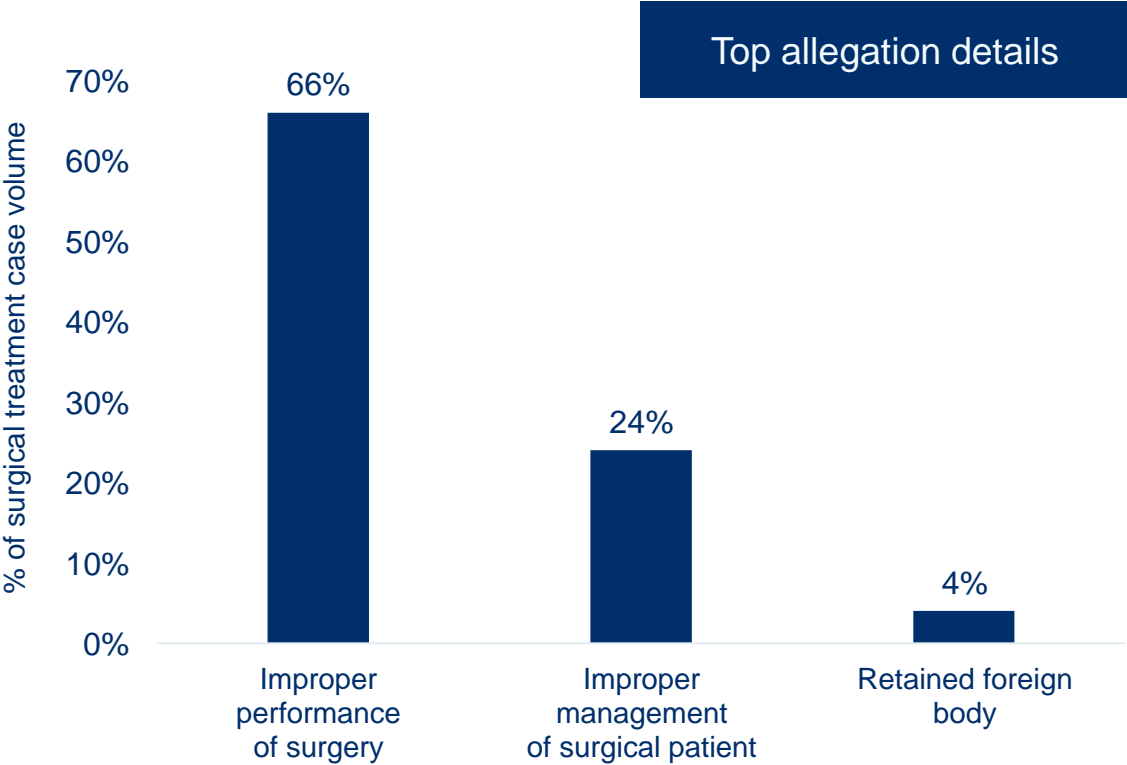
Clinical judgment
- Selection of most appropriate surgical/invasive procedure
- Failure to appreciate/reconcile relevant signs/symptoms/test results
- Inadequate patient monitoring
- Choice of practice setting (ambulatory vs inpatient)
- Inadequate history/physical
- Delay in ordering diagnostic testing
- Failure/delay in obtaining consult/referral
- Inadequate assessment resulting in premature discharge from care
- Narrow diagnostic focus – failure to establish differential diagnosis

Technical skill
- Poor technique
- Recognition and management of known complications
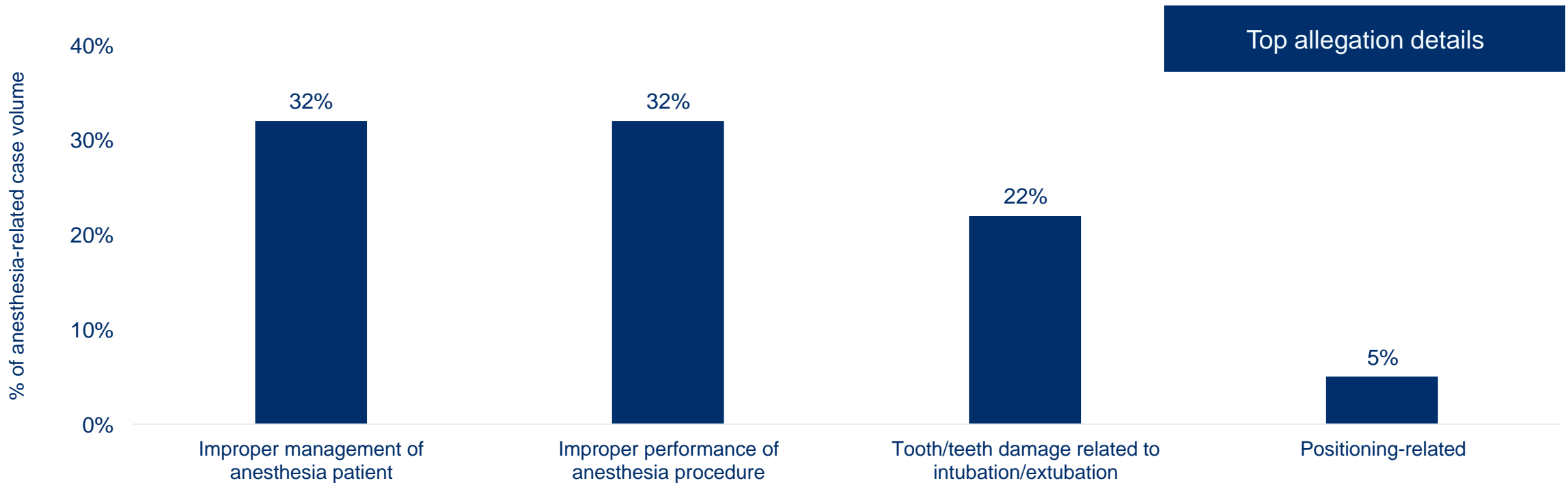- Misidentification of anatomical structures
- Improperly utilized equipment

Communication
- Suboptimal communication among providers about patient condition
- Inadequate informed consent for procedures

MedPro Group + MLMIC cases opened 2012-2021, ambulatory surgery location cases closed with indemnity paid and reflective of high clinical severity outcomes (N=396)

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Focus on Surgical Treatment Allegations

Top allegation details

% of surgical treatment case volume

- Improper performance of surgery: 66%
- Improper management of surgical patient: 24%
- Retained foreign body: 4%

Top procedures involved

% of surgical performance-related case volume

- Ophthalmology procedures: 14%
- Cosmetic surgery procedures: 12%
- Orthopedic procedures: 7%

Cases involving the **management of surgical patients**, including pre-, intra-, and post-operatively, are often related to the **surgeon's response to developing complications**. While complications of procedures may have been the result of procedural error, the **failure to timely recognize and/or monitor/manage the issue prevents the opportunity for early mitigation of the risk of serious adverse outcome**.
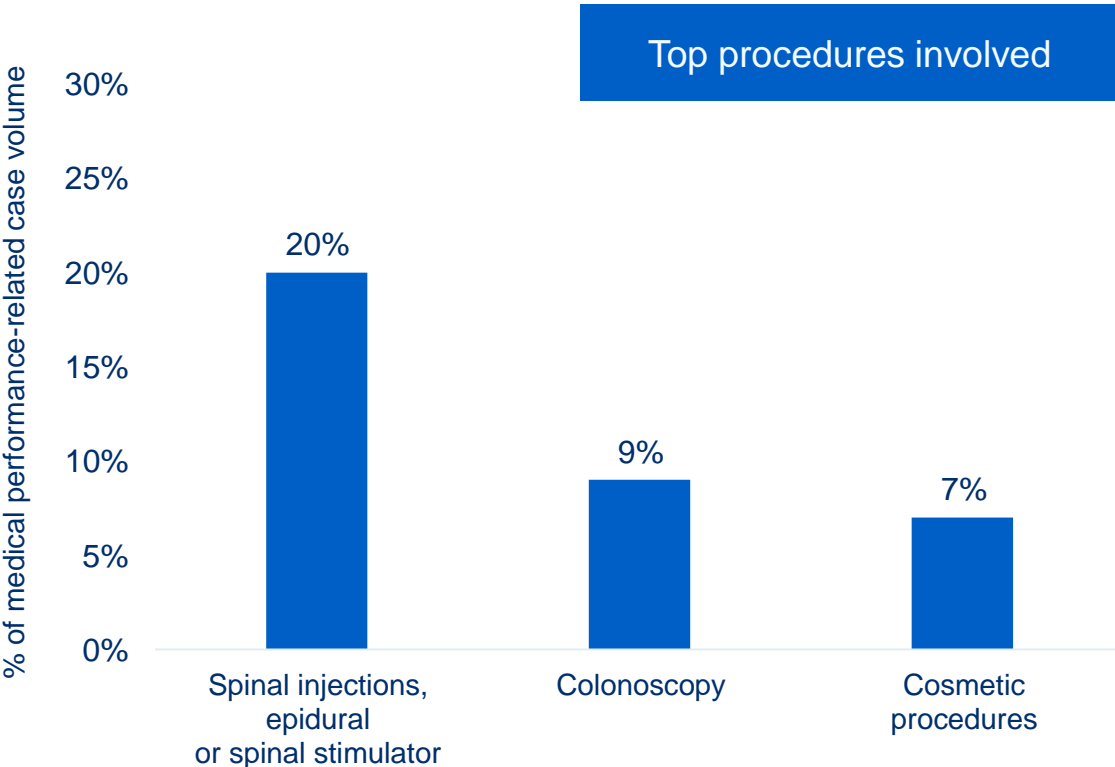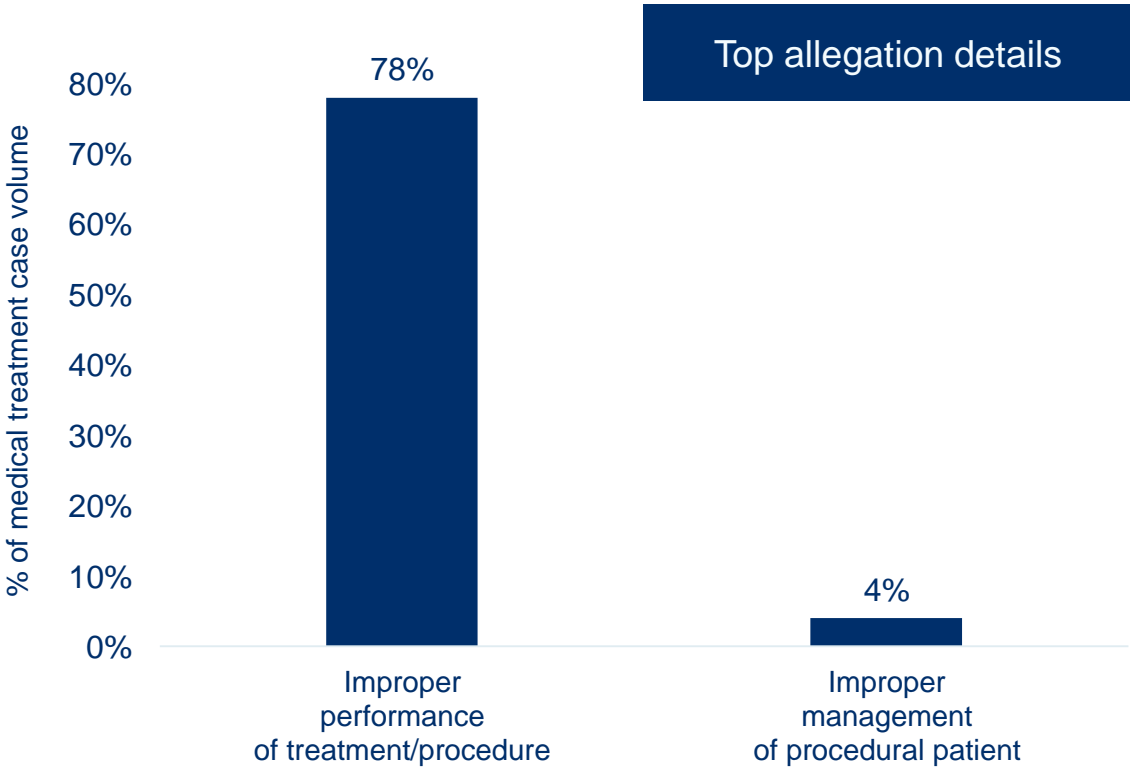
MedPro Group + MLMIC cases opened 2012-2021, ambulatory surgery location, surgical allegations (N=1588)

Focus on Anesthesia-Related Allegations

Top allegation details

Chart — % of anesthesia-related case volume:
- Improper management of anesthesia patient: 32%
- Improper performance of anesthesia procedure: 32%
- Tooth/teeth damage related to intubation/extubation: 22%
- Positioning-related: 5%

Performance-related cases encompass procedural technique issues, including injections, intubation and extubation. Extubation cases (excluding those involving tooth damage) often reflect immediate post-extubation complications, bringing into question whether extubation was appropriate/timely. **Management-related cases encompass recognition of and reaction to vital signs**, awareness while under anesthesia, monitoring while receiving blood products and during the post-operative recovery process. The failure to timely recognize and/or monitor/manage procedural complications prevents the opportunity for early mitigation of the risk of serious adverse outcome. **Positioning-related cases reflect when positioning of the patient is the key issue**, and includes situations where the patient was positioned correctly, but for an extended period of time resulting in injury.

Focus on Medical Treatment Allegations

Top allegation details

% of medical treatment case volume

- Improper performance of treatment/procedure: 78%
- Improper management of procedural patient: 4%

Top procedures involved

% of medical performance-related case volume

- Spinal injections, epidural or spinal stimulator: 20%
- Colonoscopy: 9%
- Cosmetic procedures: 7%

Procedural performance cases can be impacted by delayed recognition of complications, while management cases most often reflect issues with selection of the most appropriate course of treatment for the patient, and appreciating and reconciling symptoms and test results.

Case Examples
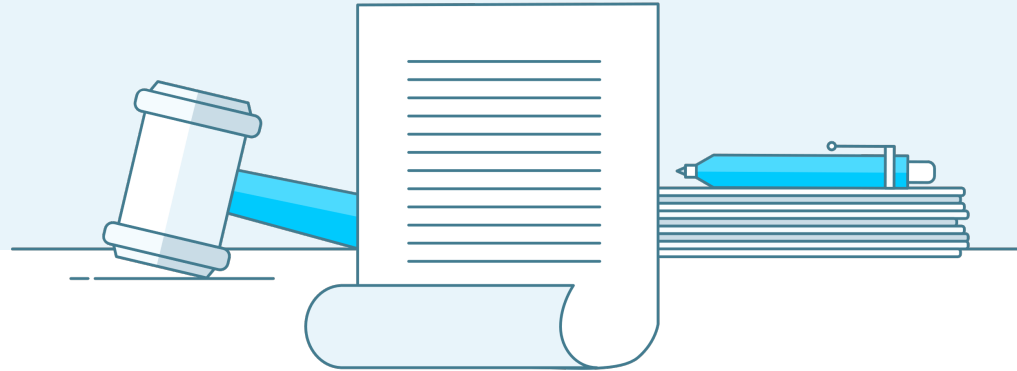
The following stories are reflective of the allegations and contributing risk factors which drive cases arising in an ambulatory surgery location.

We're relaying these true stories as lessons to build understanding of the challenges that you face in day-to-day practice. Learning from these events, we trust that you will take the necessary steps to either reinforce or implement best practices, as outlined in the section focused on risk mitigation strategies.

Case Examples

SETTLED

$300K

CONTRIBUTING FACTORS

Clinical judgment
Inadequate assessment resulting in premature discharge from surgery center (patient was unable to void on her own)

Technical skill
Poor recognition/management of known complication (two day delay in returning patient to surgery)

Poor technique

IMPROPER PERFORMANCE OF BREAST RECONSTRUCTION SURGERY RESULTING IN UNRECOGNIZED SMALL BOWEL TEARS AND SEPSIS

A patient in her late 60's, with a history of mastectomy, initial breast reconstruction, chemotherapy and radiation treatment, presented to the ambulatory surgery center for the second phase of breast reconstruction. The initial stage of reconstruction had been complicated by asymmetry and a post-operative infection, resulting in removal of the implant and placement of a tissue expander.

The patient consented to the second phase of reconstruction, to be performed by a plastic surgeon, involving **removal of the tissue expander, placement of a silicone implant, and fat grafting from abdominal liposuction**. Surgery appeared to have gone well, and the patient was discharged to home (albeit without having been able to void on her own, requiring catheterization prior to discharge). Several hours later, **she presented to the Emergency Department, complaining of increased abdominal pain and nausea**. She was admitted for IV hydration and pain control. A **CT of the abdomen showed free air**.

Two days later, the plastic surgeon took the patient back to surgery for an exploratory laparotomy. This revealed **two small bowel tears which were repaired. The patient's post-operative course was complicated by sepsis**, an enteric fistula, and atrial fibrillation with congestive heart failure. She **developed necrotic breast and abdominal wall tissue and required 20 additional surgeries for treatment of a fistula, and a wound vac replacement**.

Expert review noted that the patient's bowel injury, was likely caused by the aspiration suction cannula used by the surgeon during the liposuction phase.

Case Examples

SETTLED

$3.5M

CONTRIBUTING FACTORS

Clinical judgment

Inadequate patient assessment – history & physical

Failure to appreciate/reconcile relevant signs/symptoms/test results

Selection of most appropriate procedure (moderate sedation in a prone patient with history of OSA vs spinal sedation)

Communication

Inadequate informed consent

Documentation

No documentation of informed consent discussion

Technical skill

Improper intubation (criticized for using LMA instead of ETT

IMPROPER MANAGEMENT OF ANESTHESIA PATIENT WITH HISTORY OF OBSTRUCTIVE SLEEP APNEA RESULTING IN DEATH

A male patient in his mid-40's presented to the ambulatory surgery center for **bone marrow harvesting** (voluntary bone marrow donor). The anesthesiologist met with the patient pre-operatively, and discussed the plan for anesthesia involving regional epidural (spinal) sedation.

The patient stated he didn't want spinal anesthesia due to concerns for spinal headache and a fear of needles. The **anesthesiologist agreed to a local anesthesia with moderate IV sedation instead**. he later stated that he **discussed with the patient the risks for cardiac and respiratory depression, but did not document this discussion in the record.**

At 7:30am, the patient was given IV midazolam and fentanyl, and rolled to the prone position. **At 7:47, propofol 50mcg was given, with another 20mcg given at 7:50 and again at 7:55 as well as via IV.** Oxygen was provided via nasal cannula. **Pre-procedure vital signs were within normal limits, with oxygen saturation (O2) at 95%.** The procedure began at 8:03; O2 was at 91%. At 8:08, O2 dropped to 89%. **The anesthesiologist attempted multiple maneuvers to raise the oxygen level without success. At 8:09, O2 was at 71%.**

A laryngeal mask airway (LMA) was placed while the patient was still prone; O2 improved briefly but then decreased to 71% by 8:12. The patient was then placed supine and intubated. **O2 decreased to 31% by 8:15. Propofol was turned off.** The patient then went into cardiac arrest, was resuscitated, and sent to the ICU at 9:39. A CT showed no acute bleed or evidence of infarct, however, the patient had no response to pain and his pupils were non reactive to light. Supportive treatment was provided, but he ultimately did not regain meaningful neurological response, and died two months later.

The patient's family claimed that the anesthesiologist failed to properly assess his history of obstructive sleep apnea (OSA), should have used spinal anesthesia instead, and improperly managed the provision of anesthesia. Experts were not supportive of the anesthesiologist's decision to use a LMA when O2 was at 71%, opined that endotracheal intubation (ETT) was not timely, and that the dosages of propofol were too high for a patient with OSA.

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Case Examples

SETTLED

$600K

CONTRIBUTING FACTORS

Administrative

Need for policy/protocol (none required pre-operative imaging)

Clinical judgment

Failure to order diagnostic test (pre-operative imaging)

Selection of most appropriate medication (particulate steroid vs non-particulate)

Technical skill

Poor procedural technique

IMPROPER PERFORMANCE OF SPINAL INJECTION RESULTING IN RIGHT-SIDED PARALYSIS

A active male patient in his mid-80's presented to an orthopedic surgeon for onset of right-sided neck pain. A **conservative course of treatment,** including high-dose nonsteroidal anti-inflammatory medication and physical therapy**, was initiated.** The plan was to refer the patient for cervical epidural steroid injections if conservative therapy failed.

Nine months later, the patient returned, **complaining of no relief and in fact, a marked increase in symptoms**. Rather than a referral to a pain medicine specialist, the patient **consented for the spinal injection to be performed by the orthopedic surgeon at an ambulatory surgery center**; the consent process did include coverage of procedural risks, including paralysis. **No pre-operative imaging was obtained**. Following the procedure, the patient was able to transfer himself to a wheelchair to be transported to recovery room. Shortly afterwards however, **while still in the recovery room, the patient developed weakness in his right arm and leg.** He was given a 10mg dose of a corticosteroid and sent to the emergency department via EMS, accompanied by the orthopedic surgeon.

MRIs of the cervical spine and brain showed no acute findings. The patient was admitted, and **ultimately underwent a discectomy. Repeat MRIs post-operatively revealed new findings concerning for an infarction in branches of the anterior spinal artery.** The patient was discharged to inpatient rehab, but did not regain right-sided function, and could not walk without assistive devices.

Although the patient's outcome was a known risk of the procedure, it was a rare risk. **Expert reviews were critical of the surgeon's failure to order imaging prior to injection** (even though post-procedure imaging revealed nothing specific which would have precluded the injection), **the technique used to perform the injection, and use of a "particulate" steroid which likely caused the infarct.**

Risk Mitigation Strategies

- **Ongoing evaluation of procedural skills and competency with equipment is critically important.**
- **Conduct a thorough assessment of the patient pre-operatively.**
    - Ensure that all testing and specialty evaluations are available for review prior to induction; in an ambulatory setting, these details might not always be as readily available as in the inpatient setting.
    - Maintain a consistent post-procedure assessment process.
    - Update and review medical and family history at every visit to ensure the best decision-making.
- **Communicate with each other.**
    - Actively collaborate with other members of the patient's surgical care team – including all operating and recovery room staff. Coordinate the steps of the patient's care, including post-operatively.
    - Talk also to the patient/family, elicit a comprehensive patient history and conduct a thorough informed anesthesia consent with the patient – separate from the surgical consent
- **Engage patients as active participants in their care.**
    - Consider the patient's health literacy and other comprehension barriers.
    - Recognize that patient satisfaction with treatment outcomes can be influenced by a thorough informed consent and education process.
- **Document.**
    - The operative and anesthesia records are critically important for detailing the pre-operative patient assessment, intra-operative steps, and post-operative sequence of events. Discrepancies or gaps in the details/timing make it much more difficult to build a supportive framework for defense against potential malpractice cases.

MedPro Group & MLMIC Data

MedPro and MLMIC are partnered with Candello, a national medical malpractice data collaborative and division of CRICO, the medical malpractice insurer for the Harvard-affiliated medical institutions.

Derived from the essence of the word candela, a unit of luminous intensity that emits a clear direction, Candello's best-in-class taxonomy, data, and tools provide unique insights into the clinical and financial risks that lead to harm and loss.

Using Candello's sophisticated coding taxonomy to code claims data, MedPro and MLMIC are better able to highlight the critical intersection between quality and patient safety and provide insights into minimizing losses and improving outcomes.

Leveraging our extensive claims data, we help our insureds stay aware of risk trends by specialty and across a variety of practice settings. Data analyses examine allegations and contributing factors, including human factors and healthcare system flaws that result in patient harm. Insight gained from claims data analyses also allows us to develop targeted programs and tools to help our insureds minimize risk.