Data Insight:
Lessons Learned From Wrong Site Procedures
Introduction

This publication contains an analysis of the aggregated data from MedPro Group’s cases closing between 2009-2018 with an indicator of a wrong site procedure.

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, or ancillary providers.

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.
Highlights: wrong site procedure cases....

- Include procedures involving laterality, levels, or multiple structures.
- Generally occur as a result of failed communications prior to the procedure or the result of a misinterpretation of a diagnostic study.
  - They can also occur with a few simple procedures, such as IVs being inserted into body parts which are clearly identified as inappropriate for that procedure.
- Account for one out of every 42 indemnity-paid cases, and are 70% more likely to close with an indemnity payment than the average of all cases*.
  - They represent 1.5% of all cases; despite awareness and patient safety efforts, this wrong site procedure case volume has remained consistent over time.
  - They affect many providers, although half of all cases involve orthopedics and dentistry.
  - They impact female patients in nearly two-thirds of the cases.
  - Patients >/= 30 years’ of age are noted in 88% of these cases, similar to all cases.
- Generally result in a lower clinical severity (patient harm) than the average of all cases.

Data source: MedPro Group closed cases, with a wrong site procedure indicated; 2009-2018; *all cases, with & without wrong site procedures indicated & indemnity-paid/not paid
Allegations

Allegations stemming from wrong site procedures are coded according to the nature & complexity of the procedure.

Surgical procedures typically require general anesthesia, while medical procedures are usually more minor and require lesser types of anesthesia, including non-complicated regional blocks.

A few allegations are related to failed diagnoses due to a wrong biopsy location, or anesthesia-related wrong site regional blocks.

Data source: MedPro Group closed cases, with a wrong site procedure indicated, 2009-2018; *Other = allegation categories without significant case volume
Wrong site procedure cases impact various specialties/services

- Physician/Surgeon: 64%
- Dentist/Oral Surgeon: 30%
- Nursing: 5%
- Other*: 1%

Data source: MedPro Group closed cases, with a wrong site procedure indicated, 2009-2018; *Other = non-MD/DDS/nursing specialties without significant case volume
Orthopedic surgeons account for 34% of the physician/surgeon cases and 22% of ALL wrong site procedure cases.
Top primary responsible service/specialty frequencies

Multiple responsible services can be assigned to each case; however, only one “primary” service is assigned.

How many cases involve a wrong site procedure?
- Orthopedics: 1 of every 33 cases
- Dentist/Oral Surgeon: 1 of every 30 cases
- Nursing: 1 of every 13 cases
- Other physician specialties*: 1 of every 13 cases

For how much of the total wrong site case volume does each service account?
- Orthopedics: 22%
- Dentist/Oral Surgeon: 30%
- Nursing: 5**
- Other physician specialties*: 14%

Almost all involve prepping for procedures

Data source: MedPro Group closed cases, with a wrong site procedure indicated, 2009-2018; *other physician specialties = those without individually significant total case volume; **nursing noted as contributorily responsible in another 15% of wrong site cases
Dental cases occur exclusively in the office setting. Locations vary across other services/specialties.

Data source: MedPro Group closed cases, with a wrong site procedure indicated, 2009-2018
Clinical severity*

Although the majority of patient injuries are permanent, most cases do not result in major/grave injuries or death, and are therefore coded as medium severity.

Typically, the higher the clinical severity, the higher the indemnity payments and the more frequently an indemnity payment occurs.

Thus, as would be expected, the average dollars paid in wrong site cases are less than the average for all** cases; however, these cases are 70% more likely to close with an indemnity payment.

Data source: MedPro Group closed cases, with a wrong site procedure indicated, 2009-2018; *NAIC rating scale; **all cases, with & without wrong site procedures indicated
Patient type

Outpatient: 75%
Inpatient: 25%

% each specialty/service case volume:
- Oral Surgery/Dental: 100%
- Physician/Surgeon/Nursing: 60%

Data source: MedPro Group closed cases, with a wrong site procedure indicated, 2009-2018
Patient gender

Data source: MedPro Group closed cases, with a wrong site procedure indicated, 2009-2018
Patient type by service/specialty

**Outpatient**

- Oral Surgery/Dentistry: 42%
- Orthopedics: 16%
- Surgery: 15%
- Medicine: 11%
- Anesthesiology: 4%
- General Surgery: 4%
- Nursing: 4%
- Other: 4%

**Inpatient**

- Orthopedics: 39%
- Neurosurgery: 21%
- OB/GYN: 9%
- General Surgery: 9%
- Nursing: 7%
- Other: 16%

Data source: MedPro Group closed cases, with a wrong site procedure indicated, 2009-2018
The vast majority of dental wrong site procedure allegations involve extractions and root canals.

100% of wrong site dental cases arose in the outpatient office/clinic setting.

Data source: MedPro Group closed cases, with a wrong site procedure indicated, 2009-2018
Most often, wrong site procedures occur when laterality (left & right) or multiple structures (vertebrae or digits) are part of the surgical plan.

- **Spinal**: primarily vertebral and disc-related procedures
- **Knees**: most often arthroscopic surgeries with a few replacements
- **Skin**: usually representative of the misidentification of lesions to be excised.

Data source: MedPro Group closed cases, with a wrong site procedure indicated, 2009-2018; *inclusive of inpatient & outpatient
**Focus on physician/surgeon outpatient procedures**

<table>
<thead>
<tr>
<th>Top responsible specialty/service</th>
<th>% of case volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orthopedic</td>
<td>28%</td>
</tr>
<tr>
<td>Dermatology</td>
<td>16%</td>
</tr>
<tr>
<td>Ophthalmology</td>
<td>7%</td>
</tr>
<tr>
<td>General Surgery</td>
<td>7%</td>
</tr>
<tr>
<td>Pain Medicine</td>
<td>5%</td>
</tr>
<tr>
<td>Hand Surgery</td>
<td>4%</td>
</tr>
<tr>
<td>Otolaryngology</td>
<td>4%</td>
</tr>
<tr>
<td>Plastic</td>
<td>4%</td>
</tr>
</tbody>
</table>

### Most frequent procedure categories

<table>
<thead>
<tr>
<th>Procedure Category</th>
<th>% of case volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin lesion excision</td>
<td>15%</td>
</tr>
<tr>
<td>Knee arthroscopy</td>
<td>8%</td>
</tr>
<tr>
<td>Peripheral injection</td>
<td>6%</td>
</tr>
<tr>
<td>Vertebral fusion/excision</td>
<td>4%</td>
</tr>
</tbody>
</table>

**Data source:** MedPro Group closed cases, with a wrong site procedure indicated, 2009-2018
Contributing factors – what went wrong?

Contributing factors are issues or failures in the process of care that appear to have contributed to the patient outcome and/or to the initiation of the case.

Generally there is not just one error that leads to these cases, but rather a combination of issues.

Data source: MedPro Group closed cases, with a wrong site procedure indicated, 2009-2018; *all cases, with & without wrong site procedures indicated
Contributing factors – the details

Issues more frequently seen in the wrong site procedure cases than in all other cases* include:

- Lack of communication prior to procedure, both with other providers and with the patient
- Failure to follow facility/office policy and procedures, including timeouts, reaffirmations and site markings
- Failure to document clearly and consistently the anticipated, appropriate site of the procedure, AND, in the event of a wrong site procedure, the disclosure to the patient (this issue is noted particularly in spinal surgeries).

Data source: MedPro Group closed cases, with a wrong site procedure indicated, 2009-2018; *all cases, with & without wrong site procedures indicated
Contributing factors – a comparison by service/specialty

Data source: MedPro Group closed cases, with a wrong site procedure indicated, 2009-2018
Key contributing factor points by responsible service/category

Physician/Surgeon

- Not adhering to policy and procedure for the prevention of wrong site procedures, including failure to use timeouts prior to procedure, particularly when the patient is fully prepped prior to surgeon arrival
- Misidentification of procedure site from diagnostic study, and subsequent failure to reconcile the appropriate site with patient signs/symptoms

Dentist/Oral Surgeon

- Poor communication with referring providers, particularly when exam is inconsistent with referral
- Poor documentation of patient history & physical, treatment plan, and informed consent
- Inadequate informed consent for procedures

Nursing

- Not adhering to policy and procedure for the prevention of wrong site procedures, including failure to adhere to required communications with patient and physician/surgeon (timeouts, confirmation prior to prepping the procedure site)
- Documentation inconsistent with other providers

Data source: MedPro Group closed cases, with a wrong site procedure indicated, 2009-2018
Cases with these factors - more expensive and/or more frequent indemnity payments

<table>
<thead>
<tr>
<th>Factor category</th>
<th>Higher indemnity payment</th>
<th>Frequency of indemnity payment</th>
<th>These factors include the following...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical judgment</td>
<td>+14%</td>
<td>+11%</td>
<td>Misinterpretation of test results</td>
</tr>
<tr>
<td>Communication</td>
<td>+13%</td>
<td>+3%</td>
<td>Failed communication among providers including timeouts and stop the line</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Not informing the patient of the wrong site procedure doesn’t result in more frequent payments, but when payments are made, they are on average 102% higher than other cases.</td>
</tr>
<tr>
<td>Administrative</td>
<td>-12%</td>
<td>+15%</td>
<td>Failure to follow policies &amp; protocols in place for safe patient care including the process before prepping, or beginning procedure</td>
</tr>
<tr>
<td>Documentation</td>
<td>+65%</td>
<td>+11%</td>
<td>Inadequate documentation leading to the wrong site procedure and inconsistency in recording the event</td>
</tr>
<tr>
<td>Supervision</td>
<td>+11%</td>
<td>+38%</td>
<td>Inadequate supervision of surgical assistants (physicians, PAs, residents, techs, and students) to ensure procedural requirements, including body site markings</td>
</tr>
</tbody>
</table>

Data source: MedPro Group closed cases, with wrong site procedure indicated, 2009-2018
Male patient fell at work, hitting his back, shoulder, and head.

- Orthopedic physician (Ortho #1) treated patient with rest and medicine.
- Patient developed bilateral low back, knee, leg pain; diagnosed with lumbar radiculopathy and coccydynia. Ortho #1 ordered continued rest.
- Weeks later, following no improvement, an MRI showed disc pathology at L4-5 and an extruded disc at L5-S1. Patient was referred to pain management and treated with lumbar epidural injections.
- Symptoms persisted and Ortho #1 referred to orthopedic spine surgeon (Ortho #2) with pain disproportionate to diagnostic studies. A disc herniation at L4-5 & L5-S1 was diagnosed; Ortho #2 continued the non-surgical treatment.
- Months later the patient’s pain was worsening; he needed a cane to walk; Ortho #2 sent him for a 2nd surgical opinion from neurosurgeon who indicated "no herniation at L4-5" and opined L5-S1 was causing symptoms; a repeat MRI was unchanged.
- Patient opted for surgery with Ortho #2 who intended to perform an L5-S1 hemi-laminectomy with discectomy, under fluoroscopic guidance. Radiologist confirmed L5-S1 surgical marking.
- Ortho #2 operated at L4-5, not L5-S1. Ortho #2 discovered the error post-operatively, but admitted he never told the patient, and instead continued treating him for months, "hoping he would get better."
- Six months later, the patient’s worker’s compensation carrier redirected the patient to a neurosurgeon, who reported the surgical error to the carrier. The neurosurgeon performed a corrective surgery.
- Patient now wears a brace for left foot drop, has persistent neuropathic pain and frequent falls.

Significant indemnity payment
Older female patient referred to periodontist by general dentist for concern along gum line at teeth #18/19.

Biopsy done; pathologist recommended greater depth biopsy of area.

At time of discussion with patient, dental assistant incorrectly noted site as #30/31 in EHR.

Despite that, re-biopsy/excision was performed at correct site, but once again documentation indicated #30/31.

Periodontist signed off on EHR note.

Second biopsy was mislabeled with wrong site (#30/31 instead of #18/19). Pathology result revealed squamous cell carcinoma. Patient was referred to oral maxillofacial surgeon along with the pathology report which indicated the wrong site (#30/31 instead of #18/19).

Subsequent letters between the periodontist and the oral surgeon indicated the wrong site, with a plan to extract #30/31 with minor resection.

Surgery was performed on wrong site and the error was noted post-operatively.

Six-figure indemnity payment
Male patient with bilateral knee pain following car accident.

- Pain in right knee worsened, requiring arthroscopic surgery with an orthopedic surgeon.
- The ambulatory surgery center entered “left” knee on schedule; the patient identified the error which was then corrected in the record.
- The surgeon met with the patient, confirmed the scheduled surgery on the right knee and provided informed consent (with documentation) for right knee.
- Relying on a verbal answer from another surgical (OR) staff member as to laterality, the OR staff set up for a “left” knee procedure. The left knee was prepped and subsequently operated on by the orthopedic surgeon.
- Some pathology was found and repaired. The laterality error was discovered while the patient was in recovery.
- While it was documented by nursing staff in the record that a time-out occurred, it was revealed through subsequent testimony that a time-out had not occurred, despite specific policy and procedure that time-outs must be performed prior to every procedure.

Indemnity payment, waiver of fees/costs for first surgery and subsequent necessary “right” knee surgery.
Most wrong site procedure cases result from failure to utilize known guidelines for prevention.

- Establish a safety culture that allows for the below to be utilized regularly, when appropriate.
  - Verify patient and procedure via written materials when booking/scheduling.
  - Clearly and consistently mark the procedure site with an indelible marker by person qualified to do so.
  - Perform a timeout, with all staff participating, to confirm identity, procedure, consent, and position prior to all procedures.
  - Authorize and invoke “stop the line” by anyone who identifies the risk for a wrong site procedure.

Poor communications limit ability to intercede to prevent wrong site procedures.

- With other providers:
  - Limit all distractions prior to timeout process.
  - Ensure hand-off communication is effective and unrushed.
- With patients:
  - Ensure comprehensive informed consent discussions, easily understood by the patient.
  - Gain the patient’s acknowledgement of the exact procedure and location.

Claims that include documentation issues result in both higher, and more frequent, indemnity payments.

- Ensure consistent documentation among providers, with explanations where there is any inconsistency.
- Clearly document the disclosure of any error and clinical implications.
  - Failure to timely disclose to the patient a wrong-site procedure puts at risk the patient’s safety and the ability to defend a subsequent malpractice case.
Supervision of advanced practice providers, house staff and nurses is a noted feature of the cases resulting in more frequent indemnity payments.

- Ensure that required supervision is a regular on-going activity.
- Establish that all staff who will be working on your behalf fully understand facility/office processes, policies and procedures to ensure the prevention of wrong site procedures.

Failure to reconcile all patient symptoms and signs with test results can result in misidentification of the procedure location.

- Complex patient care requires effective care coordination, especially communicating verbally whenever possible to ensure critical information is not missed.
- If verbal communication is not feasible, then ensure complete documentation in the medical record and referral form where it will be obvious to others.

In wrong site cases, often the primary failure is a breakdown in the process of care intended to inform the patient of critical test results.

- Policies/procedures (P&Ps) are an important part of safe care, but only if followed.
- Failure to follow your own P&Ps is very difficult to defend.
- Ensure all caregivers are aware of the P&Ps
MedPro advantage: online resources

Tools & resources

Educational opportunities

Consulting information

Videos

eRisk Hub
Cybersecurity Resource

Education
Materials and resources to educate followers about prevalent and emerging healthcare risks

Awareness
Information about current trends related to patient safety and risk management

Promotion
Promotion of new resources and educational opportunities

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MedPro Group has entered into a partnership with CRICO Strategies, a division of the Risk Management Foundation of the Harvard Medical Institutions. Using CRICO’s sophisticated coding taxonomy to code claims data, MedPro Group is better able to identify clinical areas of risk vulnerability. All data in this report represent a snapshot of MedPro Group’s experience with specialty-specific claims, including an analysis of risk factors that drive these claims.

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