



# **The Malpractice Experience of Orthopedic Surgeons 2011 to 2021: Patient Selection and Communication May Mitigate Risk of Claims**

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## **INTRODUCTION**

Even as orthopedic surgery is transformed through advanced diagnostic imaging tools and other innovations, surgeons who continue to devote their attention to familiar clinical concerns like patient selection and the thorough communication of known risks will be rewarded with risk mitigation.

At The Doctors Company, guided by our mission to advance, protect, and reward the practice of good medicine, we analyze the claims experience of our members, translating those findings into patient safety initiatives. This study focuses on orthopedic surgeons and includes closed medical malpractice claims and suits from the loss years of 2011 to 2021 in which orthopedic surgeons were the major responsible service.

## **FINDINGS**

The study included 1559 claims. Most of the orthopedic claims we analyzed involved adult patients (67 percent; n=1050), with slightly more females represented than males (51 percent; n=802 compared to 48 percent; n=752). Seventy-eight percent (n=1213) of the claims had an injury severity of medium (nondisabling). Nerve injury and infection were the top two major injuries. (See Table 1 for more details.)

Table 1. Findings from orthopedic claims, loss years 2011 to 2021

	<b>Ambulatory (% ambulatory total)</b>	<b>Inpatient (% inpatient total)</b>	<b>Total (% of overall total)</b>
<b>Age Group</b>			
Older Adults (65 years+)	139 (17%)	205 (28%)	<b>344 (22%)</b>
Adults (18–64 years)	574 (71%)	476 (64%)	<b>1050 (67%)</b>
Children (-17 years)	37 (5%)	14 (1%)	<b>51 (3%)</b>
Unknown	64 (7%)	50 (7%)	<b>114 (7%)</b>
	814	745	<b>1559</b>
<b>Gender</b>			
Female	417 (51%)	385 (52%)	<b>802 (51%)</b>
Male	394 (48%)	358 (48%)	<b>752 (48%)</b>
Unknown	3 (<1%)	2 (<1%)	<b>5 (1%)</b>
	814	745	<b>1559</b>
<b>Top Locations</b>			
Operating Room		595 (38%)	<b>595 (38%)</b>
Physician Office/Clinic	413 (26%)		<b>413 (26%)</b>
Ambulatory/Day Surgery*	362 (23%)		<b>362 (23%)</b>
Patient Room		162 (10%)	<b>162 (10%)</b>
<i>* Ambulatory/Day Surgery includes all areas</i>			
<b>Severity*</b>			
High	83 (10%)	156 (21%)	<b>239 (15%)</b>
Medium	647 (79%)	566 (76%)	<b>1213 (78%)</b>
Low	84 (10%)	23 (3%)	<b>107 (7%)</b>
	814	745	<b>1559</b>
<i>*High severity: disabling injury or death. Medium severity: nondisabling injury. Low severity: minor physical or emotional injury.</i>			
<b>Top Major Injuries</b>			
Nerve Damage	75 (9%)	93 (12%)	<b>168 (11%)</b>
Infection	80 (10%)	51 (7%)	<b>131 (8%)</b>
Malunion/Nonunion	62 (8%)	50 (7%)	<b>112 (7%)</b>
Pain	59 (7%)	49 (7%)	<b>108 (7%)</b>
Aggravated/Worsened	44 (5%)	49 (7%)	<b>93 (6%)</b>
Fracture Open/Closed	44 (5%)	31 (4%)	<b>75 (5%)</b>
Compression	15 (2%)	48 (6%)	<b>63 (4%)</b>
<b>Top Allegation (Case Type)</b>			
Improper Performance of Surgery	236 (29%)	444 (60%)	<b>680 (39%)</b>
Improper Management of Surgical Patient	287 (35%)	191 (26%)	<b>478 (31%)</b>
Diagnosis Related (Delay, Wrong, Failure)	71 (9%)	33 (4%)	<b>104 (7%)</b>

## **A Closer Look at Allegations**

The major allegation or case type signifies the essence of the claim, though it may or may not reflect what the claimant initially alleged.

**44% (n=680) Improper performance of surgery** emphasizes the technical aspects of the procedure occurring in the operating suite or in the ambulatory/day surgery unit. The most common surgeries involved in this study were total hip replacements, total knee replacements, and spinal fusions. Twenty-three percent of the studied claims of this case type resulted in a settlement.

**31% (n=478) Improper management of a surgical patient** incorporates the management of the patient along the surgical continuum of care (preoperative, intraoperative, and postoperative phases). The location of the incident/s that originated the claim can vary, and possibilities include the provider's office, the preoperative setting, the operating suite or the ambulatory/day surgery unit, the PACU, inpatient settings, or even the patient's home. Scenarios include postoperative complications poorly managed in the provider's office or the patient's room; a wrong-site surgery due to the lack of time-out procedures or site marking; or other activities happening in the operating room that are not related to technical aspects of care. Twenty-eight percent of the studied claims of this case type resulted in a settlement.

**7% (n=104) Diagnosis-related** allegations comprise events like misdiagnoses leading to unnecessary surgeries; missed findings on histories and physicals leading to delayed diagnoses; misreads of diagnostic tests; delays in ordering or completing diagnostic tests; abnormal test results with no follow-up; or incidental findings overlooked. The top diagnostic failures in this study involved fractures, compartment syndrome (typically posttraumatic), and cancer. Forty-one percent of these case types resulted in a settlement.

### **Major Injuries: Differences Between Claims Settled and Dismissed**

The top major injuries included nerve damage, infection, and pain. The clinical summaries revealed general themes for these injuries, with some differences between settled and dismissed claims. (See Table 2.)

Table 2. Differences between settled and dismissed orthopedic claims involving major injuries for loss years 2011 to 2021

<i>Settled Claims and Major Injury</i>	<i>Dismissed Claims and Major Injury</i>
<b><i>Settled Nerve Damage Claims</i></b>	<b><i>Dismissed Nerve Damage Claims</i></b>
*The patient had a high-severity injury.	*The patient had preexisting neuropathy or arthritis.
*The procedures involved poor technique, or there was a delay in diagnosis of cauda equina, or the surgery was not indicated.	*The patient experienced a known complication from the procedure, which usually resolved.
<b><i>Settled Infection Claims</i></b>	<b><i>Dismissed Infection Claims</i></b>
*The infections were deep-seated. The patient frequently required hospitalization and additional surgery.	*The infections were more superficial and incision related, and the patient did not require hospitalization or surgery.
*The diagnosis of the infection was delayed, accompanied by delay/failure to order tests and/or medications.	*The claims involved patient nonadherence with follow-up instructions and/or appointments.
<b><i>Settled Pain Claims</i></b>	<b><i>Dismissed Pain Claims</i></b>
*The pain was severe and disabling, and it often involved the diagnosis of complex regional pain syndrome.	*The pain was nondisabling, and it often resolved after therapy, or the patient had similar pain that was preexisting.

### Factors Contributing to Patient Injury

Each claim can have multiple contributing factors, and these reveal vital information for risk mitigation. Some contributing factors involve actual medical error, and some do not. The following are the most frequently seen contributing factors in this analysis.

- **Technical performance (67 percent of studied claims; n=1044).** One technical performance factor is an injury that results from a procedure that was a known, disclosed risk. Sixty percent (n=930) of the claims included this technical issue of a known complication. Additional technical performance factors include poor technique (8 percent; n=125) and incorrect body site (3 percent; n=40).
- **Patient factors (38 percent of studied claims; n=600).** These factors pertain to patient nonadherence to care and are relevant when the patient’s nonadherence influences the outcome. Often patient factors include communication between the provider and the patient, implying patients may not have clearly understood their care plan. The top patient factors were seeking other providers due to dissatisfaction with care (22 percent; n=339), nonadherence with

treatment regimen (11 percent; n=175), and nonadherence with follow-up calls/appointments (6 percent; n=93).

- **Patient assessment issues (22 percent of studied claims; n=347).** The top factors associated with patient assessment issues were failure to appreciate and reconcile signs/symptoms and test results (9 percent; n=137), failure or delay in ordering a diagnostic test (8 percent; n=129), and misinterpretation of a diagnostic test (5 percent; n=80).
- **Communication between the provider and the patient/family (19 percent of studied claims; n=305).** The top communication issue arising between the provider and the patient/family was poor rapport with the patient, including a perceived unsympathetic response to the patient (7 percent; n=111) and gaps in communication about expectations (5 percent; n=79).
- **Selection and management of therapy (18 percent of studied claims; n=276).** The top factor was the selection and/or management of surgical/invasive procedures (14 percent; n=219).

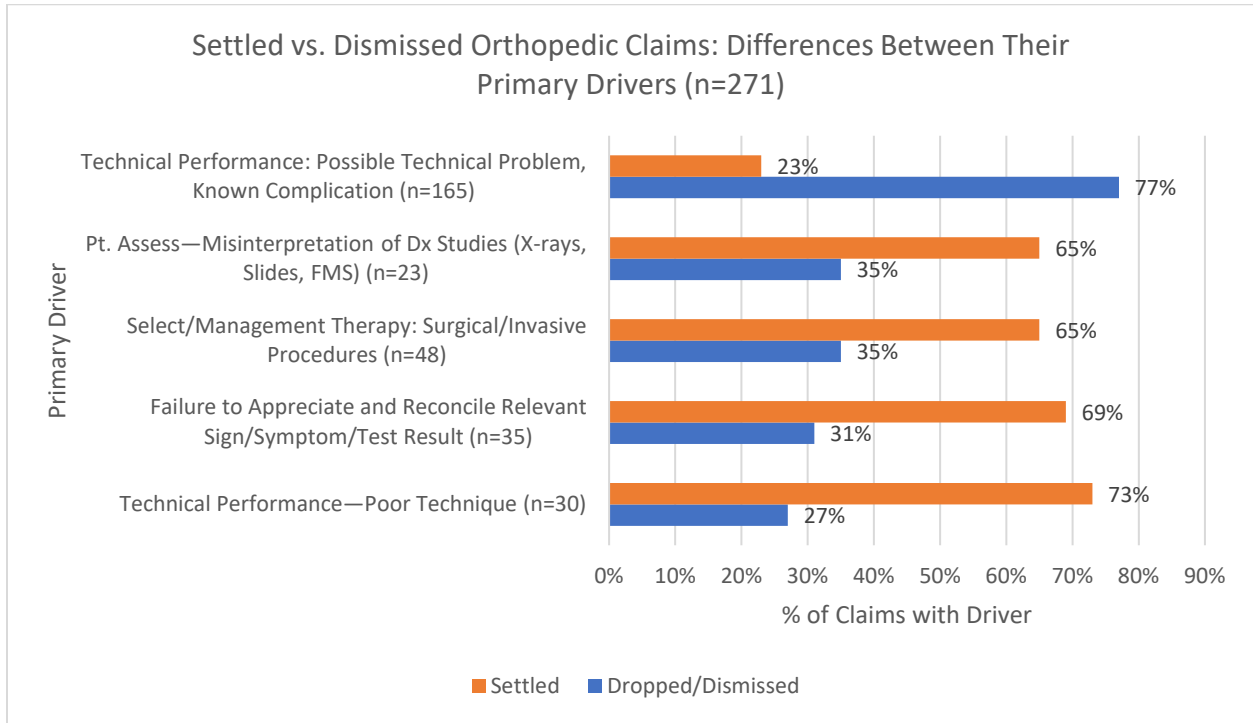
### **A Deeper Dive Into Contributing Factors: Primary Drivers**

The 2022 version of the CRICO taxonomy enabled the analysts to distinguish primary drivers in claims. Primary drivers are those contributing factors pinpointed as main catalysts to the events that caused the major injury or negligence. Each claim or suit with a primary driver identified must have at least one primary driver, but may have more than one. In this study, 271 claims (18 percent of the overall sample) had primary drivers assigned to them.

### **Primary Drivers: Differences Between Claims Settled and Dismissed**

Primary drivers identify factors that are likely the main catalysts for filing the suit or claim. The authors compared settled and dismissed claims. Some differences are evident (see Figure 1).

Figure 1. Primary drivers with settled vs. dismissed claims, loss years 2011 to 2021



The results in Figure 1 imply that a known complication is less likely to be present in a settled claim or suit. On the other hand, once a technical performance factor in the form of poor technique has been identified, the claim or suit is likelier to settle. Total hip replacement was the procedure that had most often been performed when allegations included technical performance issues.

*Clinical Example: An orthopedic surgeon did a total direct anterior hip arthroplasty. During acetabular exposure, the patient had a brisk bleed and a drop in blood pressure that required the anesthesiologist to administer a fluid bolus and a pressor. There was a discrepancy in the documented estimated blood loss, with the surgeon noting 300cc, while the anesthesiologist recorded 1100cc. In the PACU, the patient was hypotensive and had a discolored leg with no pulse. The patient decompensated, and the orthopedic surgeon consulted a vascular surgeon. The patient returned to the operating room. The vascular surgeon found a severe injury with bleeding in multiple arteries and considered it a possible crush injury to arteries from a retractor; the vascular surgeon controlled the arterial injury to the major branch of the profunda with clips. With the femoral flow restored, the patient did not require a fasciotomy. The patient developed infections, needed multiple surgeries, and eventually had an above-the-knee amputation.*

*Physician experts noted this injury was not a known and accepted complication, but rather resulted from the orthopedic surgeon's poor technical skill and judgment issues.*

Within claims that involved the misinterpretation of diagnostic tests (part of patient assessment as a driver), x-rays were the most common diagnostic test involved (n=17; 74 percent), and 48 percent of those claims with x-rays misinterpreted (n=11) had settlements associated with them. Within the clinical summaries, a misinterpretation factor appeared in several claims in which patients returned to the office with ongoing complaints. After the patient was seen by the provider, delays or misinterpretation occurred with their x-rays, or the patient went to a different provider.

*Clinical Example: A patient with a wrist injury came to an emergency department (ED), where an x-ray was performed. The radiologist read the x-ray as soft tissue swelling but no fracture or dislocation. The ED provider instructed the patient to follow up with an orthopedic physician. Two days later, the patient came to the orthopedic physician with significant swelling to the wrist on the volar aspect, limited flexion/extension, and limited radial/ulnar deviation. The orthopedic physician reviewed the ED x-ray, diagnosed a wrist sprain, and placed the patient in a splint. The patient had some improvement and started physical therapy. However, the patient had slight improvement over four weeks. The patient, unhappy with the lack of progress, went to another orthopedic surgeon, who did another x-ray and diagnosed a dislocated perilunate. The patient required wrist fusion. The patient has permanent pain and decreased range of motion. The first orthopedic physician, in hindsight, saw the dislocation on the ED x-ray and admitted there was the need for additional images on the initial visit.*

Postoperative patients' claims include failing to appreciate and reconcile signs, symptoms, and test results. Such failures often intersect with communication issues:

*Clinical Example: A patient with a history of kyphoscoliosis and lower extremity weakness consented to posterior spine fusion with multiple Ponte osteotomies. The orthopedic surgeon completed the surgery without any complications. Postoperatively, a nurse reported to an orthopedic resident that the patient could not move or feel their left lower extremity and had decreased urinary output. The resident saw the patient, and then she called the orthopedic surgeon. The surgeon responded that the lack of movement was the baseline for the patient and did not order additional imaging. Over the next several hours, the nurse documented multiple notifications to the orthopedic resident of the patient's inability to feel or move the left lower*

*extremity. When the surgeon arrived for morning rounds, he noted the patient's worsening condition and ordered a stat. CT. The CT indicated bony fragments compressing the thecal sac. The surgeon completed an emergency decompression. The patient remains nonambulatory, although their strength is improving. The physician experts thought the surgeon failed to adequately return to the hospital to assess the patient after the nurse reported a change in condition.*

## **RISK MITIGATION STRATEGIES**

The following strategies and additional resources can help orthopedists avoid some issues uncovered in this study:

- Meeting patient expectations is often challenging. Communicating a treatment plan's risks, benefits, and alternatives (RBAs) helps establish reasonable expectations. Obtaining informed consent is also part of managing the patient's expectations. Ensure the patient is well-informed and understands their decision. Documentation of the RBA discussion and signed consent could help mitigate risks should a claim occur. Available resources include:
  - The Doctors Company, [“Informed Consent: Substance and Signature”](#)
  - The Doctors Company, [Informed Consent Sample Forms](#)
- As demonstrated in this study, nonadherence to treatment plans can be serious. Should a patient choose not to follow instructions, reiterate the probable consequences of their actions and document these discussions. Providing evidence of your concern and the actions taken to help educate the patient may be necessary in the event of a claim. Consider utilizing an “informed refusal” form to document the patient's decision or inaction. A sample is provided below:
  - The Doctors Company, [“Refusal to Consent to Treatment, Medication, or Testing”](#)
- This study shows that effective communication among providers, patients, and families is essential in healthcare. Patients who have poor communication with their healthcare teams are less likely to adhere to recommended treatments or complete diagnostic testing procedures and referrals, and they are more likely to miss follow-up appointments. These types of behaviors place the patient, healthcare professional, and organization at risk. Available resources include:
  - The Doctors Company, [Effective Patient Communication: Strategies for Challenging Situations](#)



- American Medical Association (AMA), [“6 Simple Ways to Master Patient Communication”](#)
- Patient selection was an identified factor contributing to claims. Determining if a patient is an appropriate candidate for a procedure is part of providing good care. Preoperative evaluations provided by consulting physicians are an excellent opportunity to evaluate the level of risk a patient poses. Available resources include:
  - The Doctors Company, [“Why Medical Clearance Is Really a Preoperative Evaluation”](#)
  - Jared Bilski, [“Patient Selection Drives Total Joints,”](#) The Association of periOperative Registered Nurses (AORN) (June 2021)
- As demonstrated in this study, claimants came from all stages of patient care. Establishing an evidence-based toolkit can help mitigate risk by offering guidelines throughout the continuum of care. Consider the following resource:
  - [American Academy of Orthopaedic Surgeons \(AAOS\), AAOS Toolkits](#)

## **LIMITATIONS**

This data used closed malpractice claims from one large national malpractice carrier. This study did not represent complications that arose in patients who did not file a claim or patients who did not experience complications from their procedures. The study included only orthopedic surgeons. This analysis was a general overview of orthopedic claims, whereas orthopedic practice is complex. The study had no inclusion criteria for the orthopedic physicians' training, years in practice, experience, complexity of procedures, acuity of patients, and/or previous malpractice experience. Further studies would be helpful in the differentiation between generalists and subspecialists in malpractice claims.

Communication was an essential factor; however, due to the nature of our data, we could not evaluate the communication protocols used by the individual surgeons. Future studies focusing on what protocols, if any, orthopedic surgeons utilize in their practices may illuminate differences.

## **ACKNOWLEDGMENTS**

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