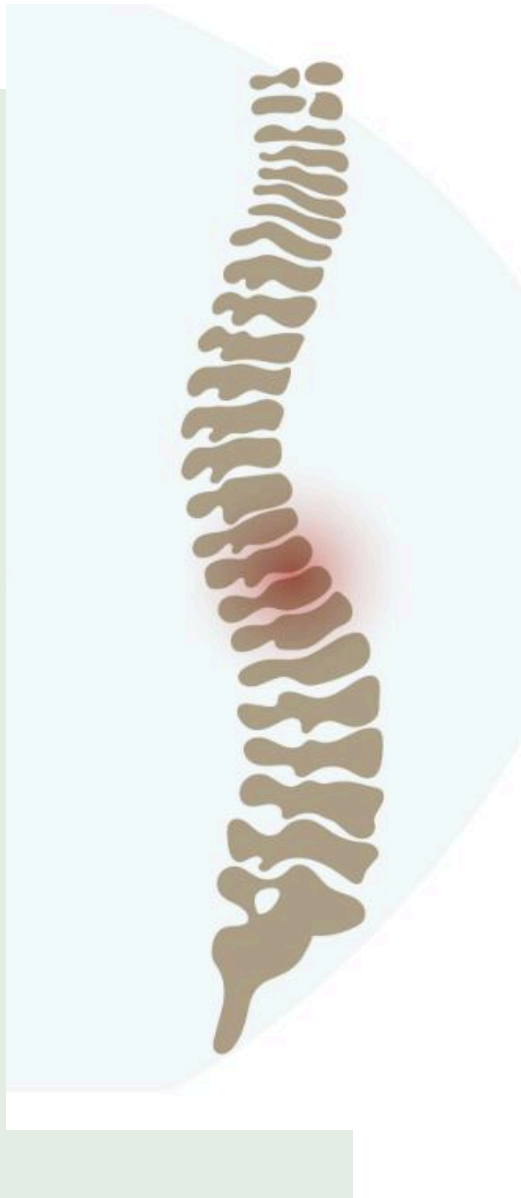


Report on Lower Back Injuries in the New York Workers' Compensation System

Introduction and Background

The purpose of this report is to examine lower back injuries¹ in the **New York Workers' Compensation system**, with a focus on the relationship between surgeries and different claim characteristics such as costs, claim closure, and other medical treatments.

Lower back injuries have been very prevalent in the workers' compensation industry and have a higher-than-average severity. In fact, when compared to other injured parts of body,² lower back claims have been the most frequent and have had the highest total incurred loss amount. At third report, lower back injuries were about 30% more severe than injuries to other body parts during the study period.³ Further lower back claims' status as the cohort of claims with the highest severity persisted across multiple valuations. Exhibit 1 shows the severity of lower back claims compared with the severities of other injured parts of body at third report.⁴



¹ The injured part of body on a workers' compensation claim is reported to the Rating Board on the Unit Statistical Report. For the purposes of this report, a "lower back claim" is defined as any claim with a reported part of body 42 ("Lower Back Area") or 63 ("Lumbar of Sacral Vertebrae"). Claims reported with part of body code 40 ("Multiple Trunk") and 90 ("Multiple Body Parts") may have lower back components but are not included in the definition of lower back claims in this report.

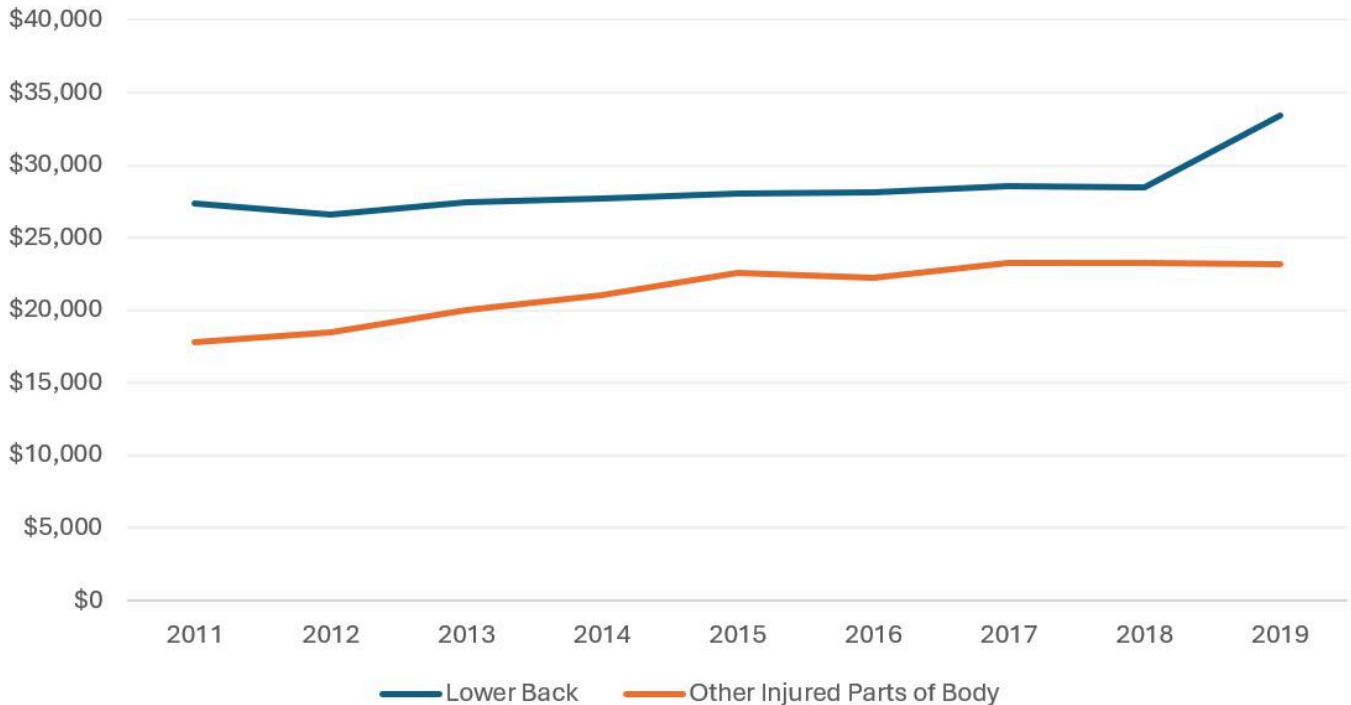
² Only claims that were reported with a single injured body part were included in the comparison.

³ Claims with a date of injury from 2011 through 2019 were included in this report's analysis.

⁴ Unit Statistical Reports are valued 18 months after a policy's effective date (1st report), and subsequent reports (2nd report, 3rd report, etc.) are valued at 12-month increments through 10th report, which is valued at 126 months from the policy effective date. USR claim data is reported until the claim is closed or up to a 10th report level.

Exhibit 1

Average Severity of Lower Back Injuries vs. Other Injured Parts of Body at Third Report

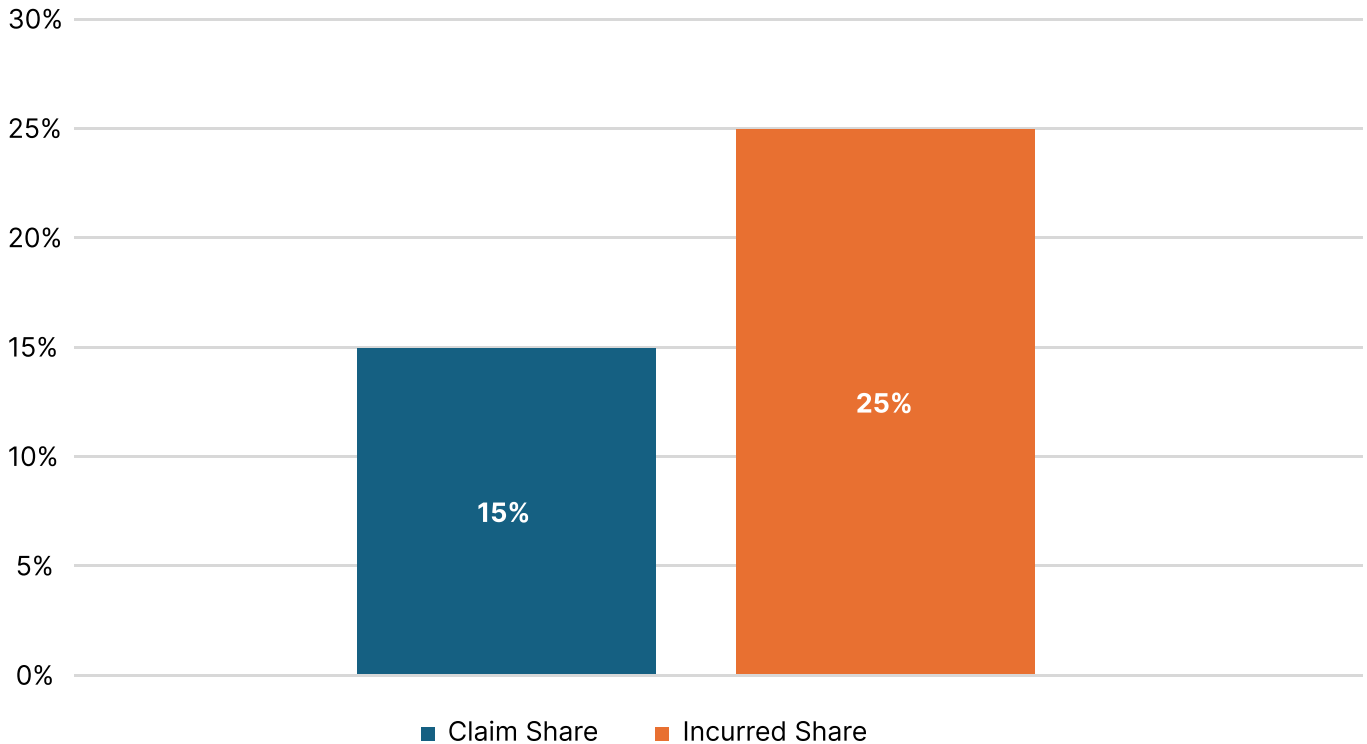


Source: Rating Board Unit Statistical Report

While lower back injuries represented 15% of all claims filed during the study period, they accounted for 25% of the overall incurred loss, underscoring their disproportionate impact on the workers' compensation system. Exhibit 2 illustrates the average share of lower back claims in terms of claim count and incurred loss for accidents occurring between 2011 and 2019.

Exhibit 2

Lower Back Claims as a Percentage of Claim Count and Incurred Loss at Third Report



Source: Rating Board Unit Statistical Report

Lower back claims exhibited a wider range of potential outcomes compared to injuries of other body parts. The nature and timing of medical treatments received by injured workers is correlated to claim outcome characteristics. This report examined the impact of lower back surgery as well as non-surgical treatments.⁵

The Relationship Between Surgery and Claim Closure

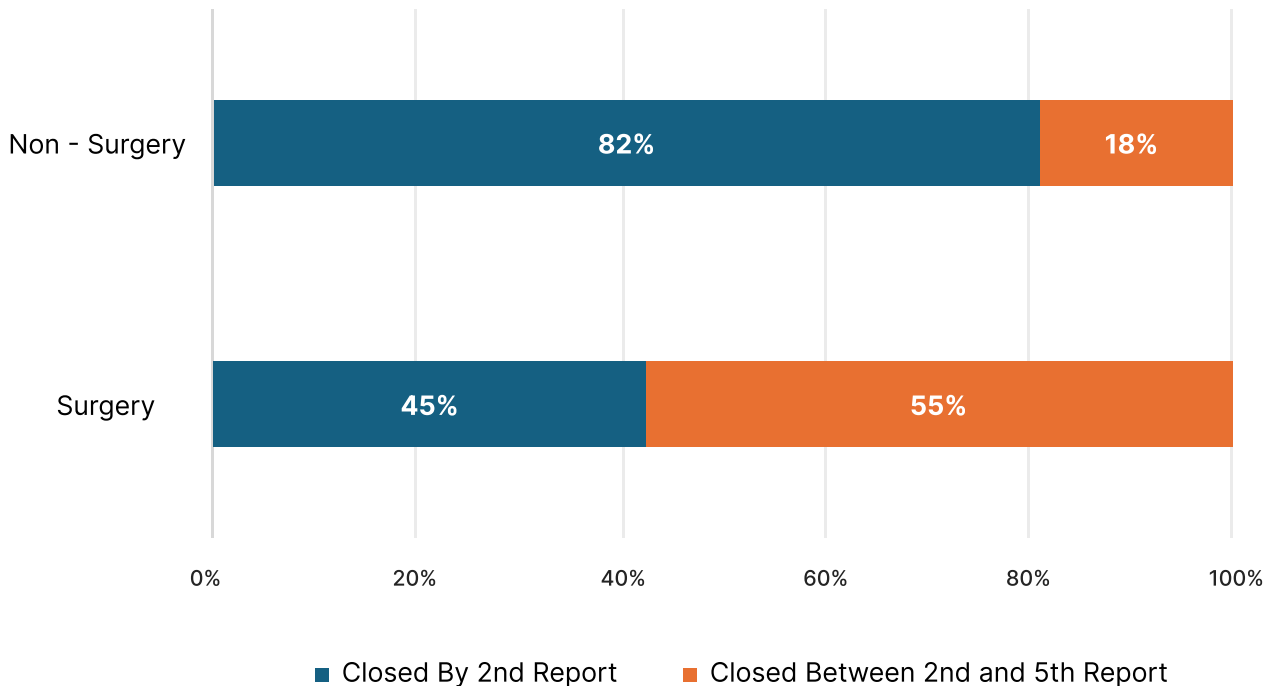
This study examined the relationship between lower back claims, surgical intervention, and claim closure.

Approximately 85% of lost-time lower back claims were resolved without a surgical procedure. Of those, approximately 82% were closed by second report. Among lost-time claims involving surgery, only 45% of claims were closed by second report. The high closure rate of claims that did not involve surgery further contributed to the non-surgery cohort's lower severity. Exhibit 3 categorizes lost-time lower back claims into four groups based on the presence of surgical intervention and the timing of claim closure.

⁵ For the purpose of this analysis, medical procedures were categorized into surgery, injections, or physical therapy based on their Current Procedural Terminology ("CPT") and revenue code within the Rating Board's Medical Data. Injections, often considered minor surgical procedures, were segregated and analyzed separately. CPT codes are developed and maintained by the American Medical Association.

Exhibit 3

Lost-Time Claim Distribution by Surgery and Claim Closure



Source: Rating Board Unit Statistical Report and Medical Data

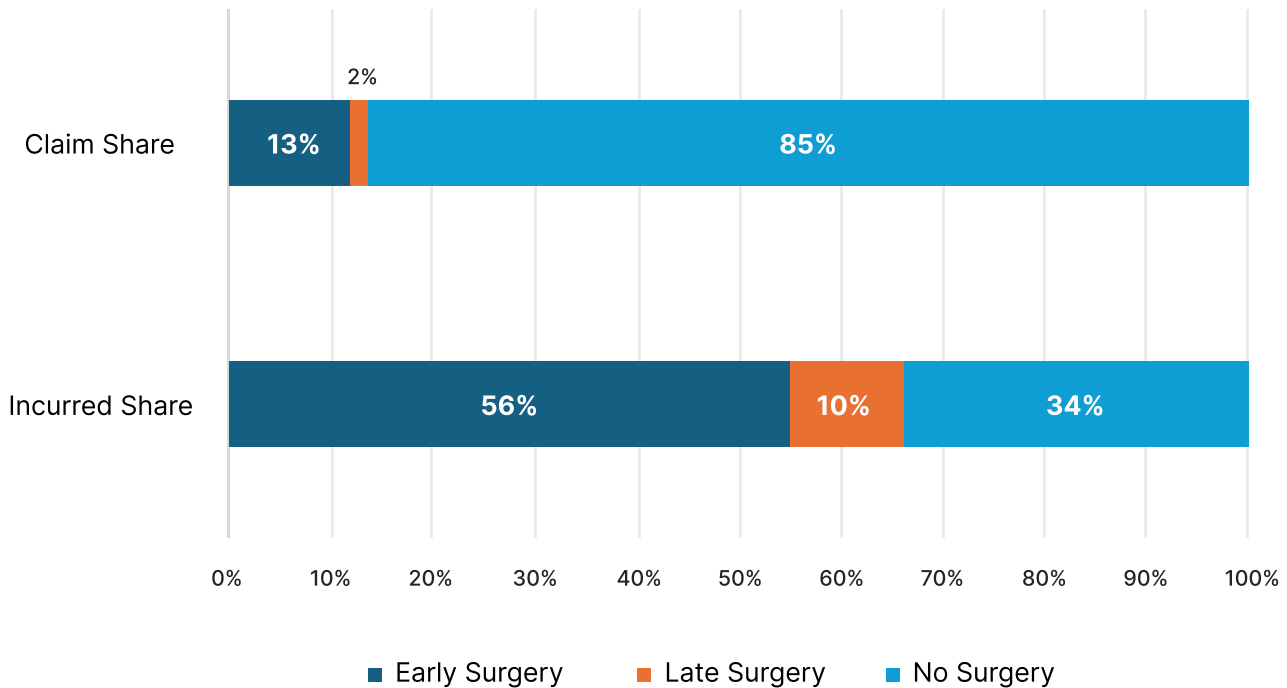
Surgeries and Lower Back Claims

To examine the relationship between lower back claims and surgeries, lower back claims were divided into three groups based on the timing of surgery: (i) claims with no surgical intervention, (ii) claims in which the first surgery occurred within two years of the date of injury (“early surgery claims”), and (iii) claims in which the first surgery took place between two and five years post-injury (“late surgery claims”).

Claims without surgery represented 85% of all claims, while the early surgery and late surgery groups collectively accounted for the remaining 15%. While surgery was performed in a small minority of lower back claims, those claims contributed disproportionately to incurred loss. Early surgery claims accounted for 56% of total incurred loss, and the late surgery claims contributed an additional 10%. Exhibit 4 compares the three groups based on claim share and total incurred loss at fifth report.

Exhibit 4

Claim Share and Total Incurred Share by Surgery Claim Group at Fifth Report



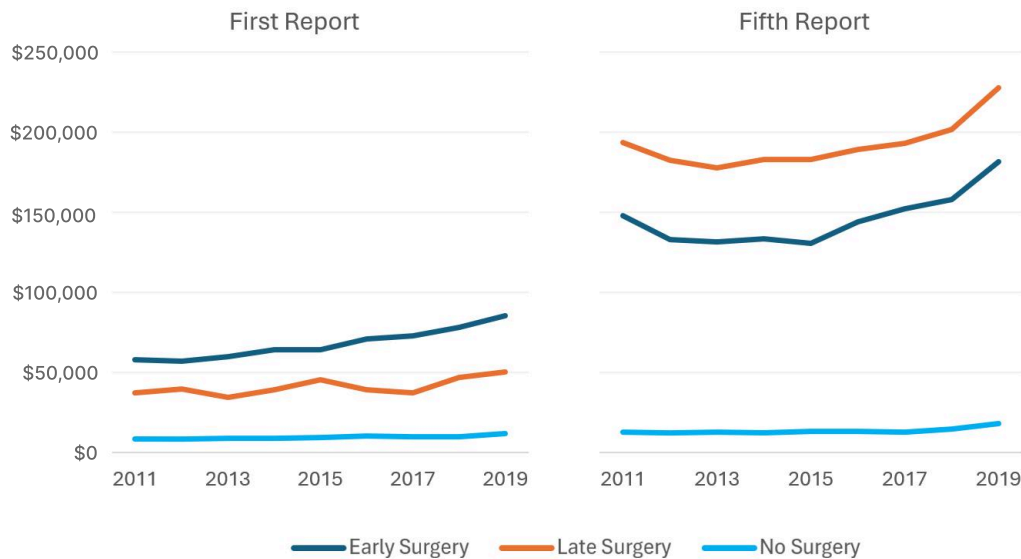
Source: Rating Board Unit Statistical Report and Medical Data

These results are consistent with claim severity for the three claim groups. Non-surgery lower back claims exhibited little development after first report, largely due to the high proportion of those claims that close by second report, as described above. Accordingly, these claims maintained their ranking of least severe at fifth report.

The timing of surgical intervention had an impact on claim severity. While early surgery claims had the highest severity at first report, by fifth report, the severity of late surgery claims exceeded the severity of early surgery claims. This dynamic suggests that late surgery claims were not initially expected to be as severe as early surgery claims, and often followed treatment patterns similar to non-surgery claims during the first two years post-injury. However, as the need for surgery emerged over time, these claims experienced significant upward development, resulting in higher severity by fifth report. Exhibit 5 illustrates the severity trends of the three claim groups at first report and fifth report.

Exhibit 5

Severities by Surgery Claim Group



Source: Rating Board Unit Statistical Report and Medical Data

Distribution of Medical Spend by Medical Treatment Category

In addition to investigating the timing of surgical procedures on lower back claims, the cost associated with three non-surgical treatments were examined for each claim group: (i) prescription drugs, (ii) injections, and (iii) physical therapy.⁶

While the distribution of medical spend among the three non-surgical treatment types did not differ significantly between early surgery and late surgery claims, the prescription drug share of medical spend did change over the study period. Prescription drug spend represented a significantly higher share of medical payments for both surgery claim groups in the 2011–2015 period than it did in the 2016–2019 period. This difference is consistent with the general reduction in drug costs over the study period and is attributable to the reduced utilization of opioids.⁷ Medical spend for injections and physical therapy remained relatively stable throughout the study period.

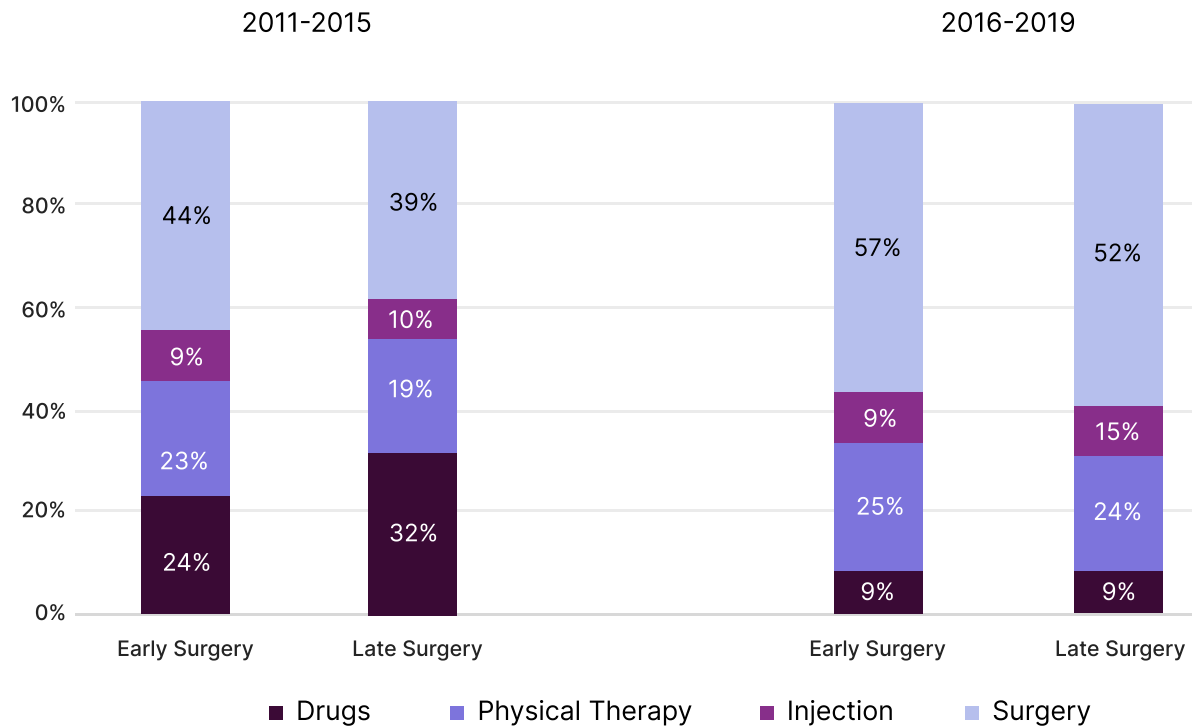
These findings suggest that the disparity in severity between early surgery claims and late surgery claims is not likely attributable to differences in non-surgical treatments, but may be due to additional non-surgical treatments performed prior to late surgery. Exhibit 6 displays the distribution of medical treatment categories in the two surgery claim groups for the two aforementioned time periods.

⁶ Other types of medical treatment, such as radiology services, and evaluation and management services, were excluded from this comparison. The percentages for the examined treatment categories were normalized.

⁷ See New York Compensation Insurance Rating Board, Medical Payments in the New York Workers' Compensation System, <https://www.nycirb.org/nycirb-documents/documents/NYCIRB-2023-Medical-Payments-and-Trend-Study.pdf>. See also New York Compensation Insurance Rating Board, An Examination of Recent Decreases in New York Workers' Compensation Loss Development Factors, <https://www.nycirb.org/nycirb-documents/documents/NYCIRB-2022-Loss-Development-Study.pdf>

Exhibit 6

Medical Paid Distribution for Surgery Claim Groups by Time Period



Source: Rating Board Unit Statistical Report and Medical Data

While the distribution of medical spend by non-surgical treatment category did not significantly differ between the two surgery claim groups, a comparison of medical spend for all three groups—non-surgery, early surgery, and late surgery—revealed a distinction.⁸ Payments for physical therapy services⁹ represented a higher percentage of medical payments for claims without a surgical procedure than for claims with surgery.¹⁰ However, claims that ultimately involved surgery often included a higher volume of varied non-surgical treatments, e.g., pharmaceuticals and injections, that may have served as alternatives prior to surgical intervention. Exhibit 7 shows the medical spend distribution within five years of the date of injury for the drug, injection, and physical therapy treatment categories during the 2011-2015 and 2016-2019 time periods.

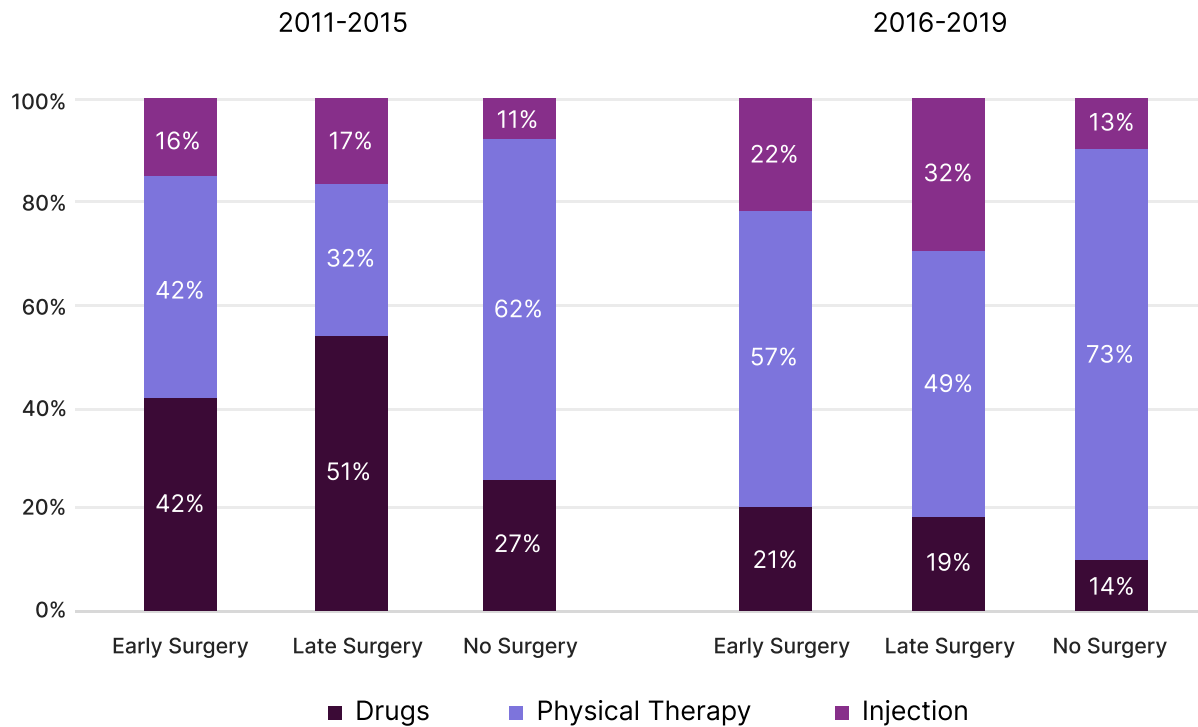
⁸ To facilitate the comparison, the surgery spend was removed from the total, allowing a direct comparison of the distribution of drugs, injections, and physical therapy.

⁹ For this analysis, physical therapy transactions include those involving chiropractic therapy, massage therapy, and acupuncture therapy. These transactions were identified using CPT and revenue codes in the Rating Board's Medical Data.

¹⁰ This finding is consistent with WCRI research, which indicates that physical therapy treatments that stretch past three months of the injury date are more frequently found on claims with no surgeries. See D. Wang, K. L. Mueller, R. D. Lea, (2023), *Factors Associated with Extended Use of Physical Medicine Services for Workers with Lower Back Pain*, <https://www.wcrinet.org/reports/factors-associated-with-extended-use-of-physical-medicine-services-for-workers-with-low-back-pain/>

Exhibit 7

Medical Paid Distribution of Non-Surgical Treatment Category by Time Period



Source: Rating Board Unit Statistical Report and Medical Data

What's Next?

Lower back injuries constitute a significant share of New York's workers' compensation claims, both in volume and cost. Accordingly, understanding how lower back claims evolve and relate to medical treatment utilization is important for stakeholders across the system as insights can inform policy decisions, improve claims management, and enhance outcomes for injured workers. The Rating Board remains committed to ongoing analysis and transparent reporting of key trends within the New York workers' compensation landscape.