

Temporary Disability Duration in Workers Compensation— A First Look

KEY INSIGHTS

- Average duration of temporary disability benefits increases with age, although the rate of increase slows down after 40.
- The Construction and Utilities sector has the longest average duration of all the economic sectors.
- Among the most common injuries seen in workers compensation, shoulder claims have the longest average duration.

INTRODUCTION

The majority of lost-time claims receive temporary disability benefits at some point. Given their ubiquity, it's important to develop a thorough understanding of these benefits. This brief is the first in a series on workers compensation temporary disability benefits.

This brief presents the following as they relate to temporary disability duration:

- An examination of key claimant and injury characteristics in data reported to NCCI, including age, economic sector, body system, and medical condition.
- A series of empirical distributions that aid in identifying differences across the claim characteristics and provides industry benchmarks.

WHAT'S NEW

From 2010 to 2013, NCCI published a series of briefs on temporary total disability benefit duration. This 2023 update looks at all temporary disability (TD) benefits which includes both temporary total disability (TTD) and temporary partial disability (TPD) benefits.

This brief utilizes data as reported in NCCI's Indemnity Data Call (IDC), which has more detailed benefit payment information than previously available data sources, but is currently limited in claim maturity. As such, this study evaluates TD duration as of 12 months. For context, at the 12-month maturity, 96.7% of all TD claims have gone more than seven days without receiving a benefit payment, indicating that a significant share of TD claimants have returned to work or are receiving permanent disability benefits within 12 months of the accident date.

Previous duration studies distinguished between "pure TTD"¹ claims and "healing period"² claims, while this study aggregates both claim types. As additional data is reported, and claims can be evaluated at later maturities, this framework will be updated to differentiate between these two types of claims.

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Additional data will also make it possible to monitor trends by accident year. Note that the study period coincides with the COVID-19 pandemic (refer to Appendix A for more information). As this analysis is extended into subsequent years, it will become increasingly evident how the pandemic influenced the results presented in this brief.

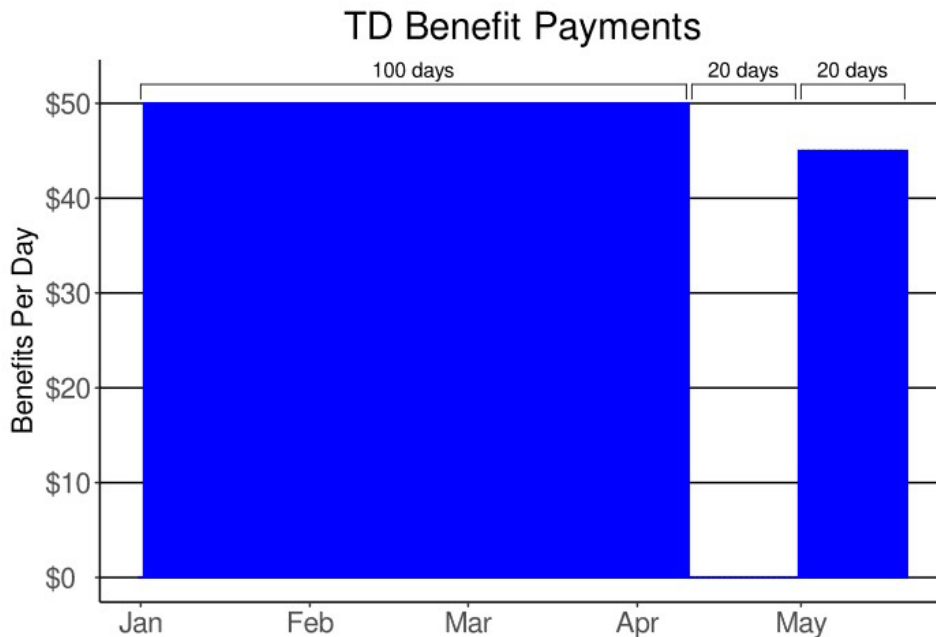
CLAIM EXAMPLE

The level of claim detail captured by data reported in the IDC is illustrated below. Duration is defined as the number of days TD benefits were paid, excluding any payment gaps. In the example shown in Exhibit 1, this injured worker had a compensable accident on January 1. As of the 12-month maturity, the claimant received 120 days’ worth of TD benefits over the following two periods:

- \$50 per day between January 2 and April 10 for a total of 100 days
- \$45 per day between May 1 and May 20 for a total of 20 days

This claim was active for a total of 140 days despite only receiving 120 days of TD benefit payments, the difference being the gap in benefit payments from April 11 to April 30.

Exhibit 1: Illustration of Benefit Duration

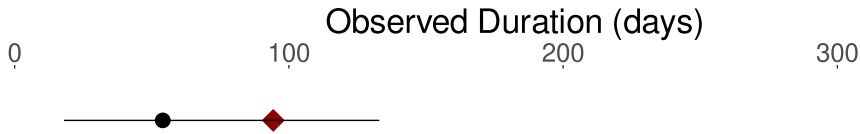


OVERALL TD DURATION DISTRIBUTION

Exhibit 2 below displays the distribution for all TD benefit durations at the 12-month maturity. Refer to Appendix A for more information on the claims included in this study.

- The average duration is 94 days, indicated by the red diamond.
- The median duration is 54 days, indicated by the black dot. That means half the claims have durations of 54 days or less. As the available data matures, the average duration could rise for later maturities, while the median duration is likely to remain more stable. The average is greater than the median when there are long-duration claims that pull the average upward, creating a right-skewed distribution.
- The 25th and 75th percentiles are 18 and 133 days, respectively, indicated by the line endpoints. The 25th percentile indicates that 1 out of 4 claims have durations of 18 days or less. Similarly, the 75th percentile indicates that 3 out of 4 claims have durations of 133 days or less.

Exhibit 2: Representation of Distribution Statistics

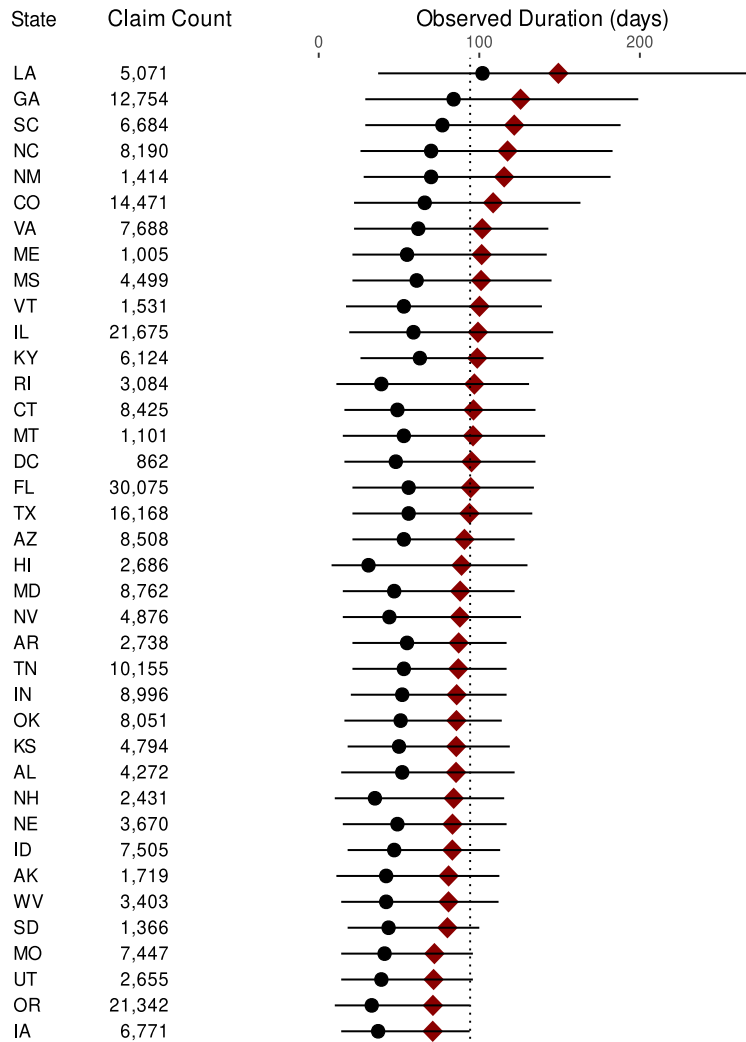


The remainder of this study will present the TD duration distributions and claim counts by various claim characteristics, using the same schema established above.

STATE

The average duration by jurisdiction can be compared to the all-state average of 94 days, as indicated by the dotted vertical line. The average duration varies widely across states, from 71 days in IA to 149 days in LA. Each state’s unique workers compensation statutes, e.g., waiting periods and retroactive periods, play a role in shaping its TD duration distribution. More information on TD benefit provisions by jurisdiction can be found in [NCCI’s Annual Statistical Bulletin, Exhibit 7](#).

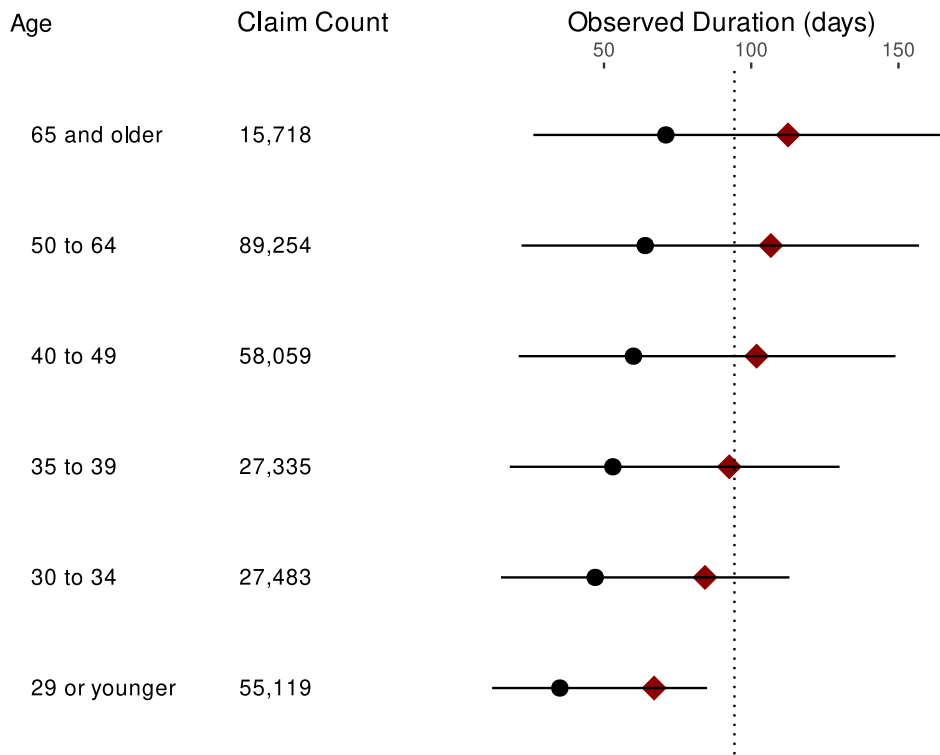
Exhibit 3: Duration by State



AGE GROUP

The average duration increases by age group, from 67 days for injured workers 29 and younger to 113 days for those 65 or older. After age 40, the increase in duration is less significant. Note that the average duration for the “40 to 49” and “65 and older” age groups are only 11 days apart.

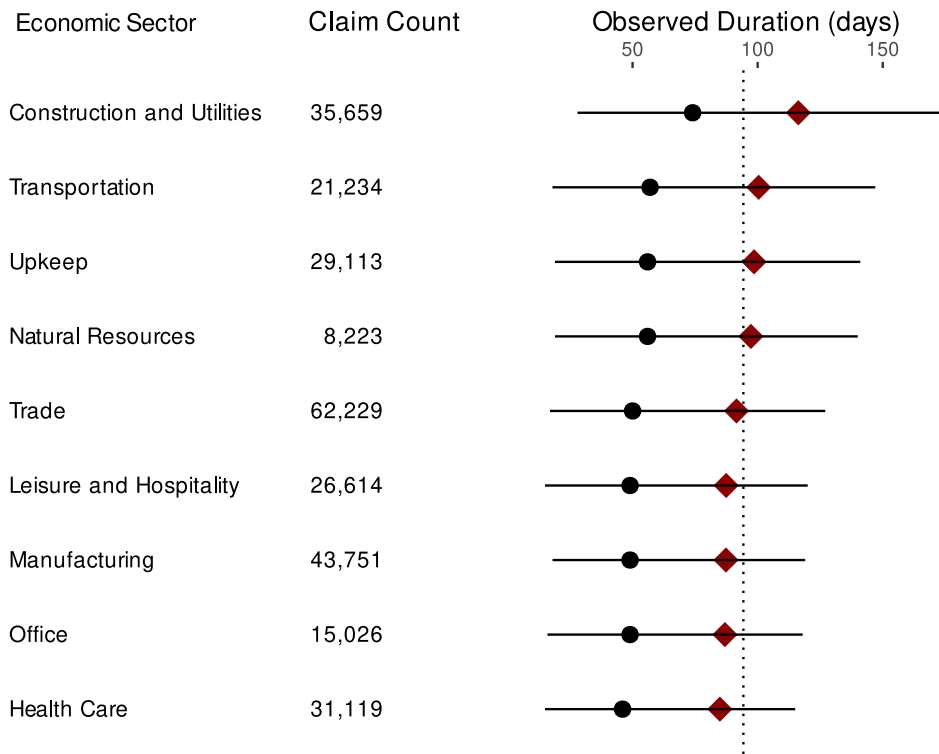
Exhibit 4: Duration by Age Group



ECONOMIC SECTOR

The Construction and Utilities sector has the longest average and median duration of 116 days and 74 days, respectively. The other sectors all have relatively similar distributions, with means ranging from 85 to 100 days and medians ranging from 46 to 57 days.

Exhibit 5: Duration by Economic Sector



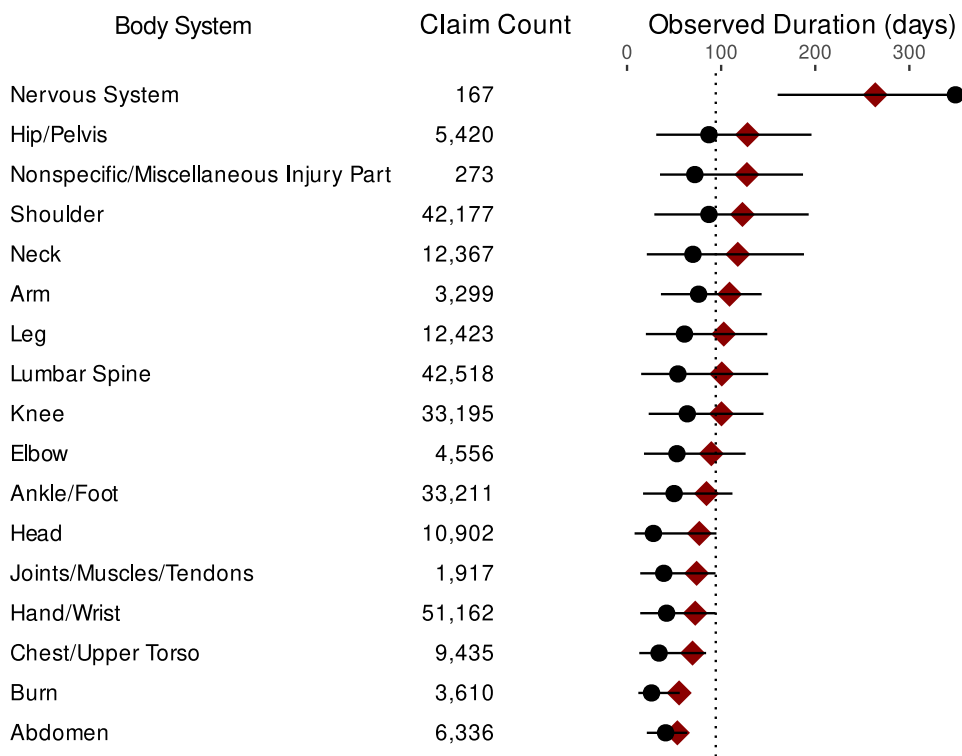
BODY SYSTEM AND MEDICAL CONDITION

This brief categorizes injuries in two ways: by body system and medical condition, both of which are derived from the ICD-10 codes as reported in NCCI’s Medical Data Call. Each body system is associated with a number of medical conditions, which describe the physical injury sustained by the impacted body system (e.g., fracture, sprain, or tear). For example, an injured worker might have shoulder as the body system and rotator cuff tear as the medical condition. Refer to Appendix A for more information on how the body system and medical condition are assigned to each claim.

Nervous system claims, which include injuries such as quadriplegia, are relatively rare, accounting for 0.06% of all TD benefit claims, but are very severe when they do occur (average = 264 days, median = 349 days). The other body systems have averages ranging from 53 to 128 days and medians ranging from 26 to 87 days. Note that 62.3% of nervous system claims are actively receiving TD benefit payments 365 days after the initial accident (i.e., the upper bound of the study period), indicating that the average will continue to increase as the available data matures.

Among the most common injuries seen in WC, shoulder claims have the longest average duration at 123 days.

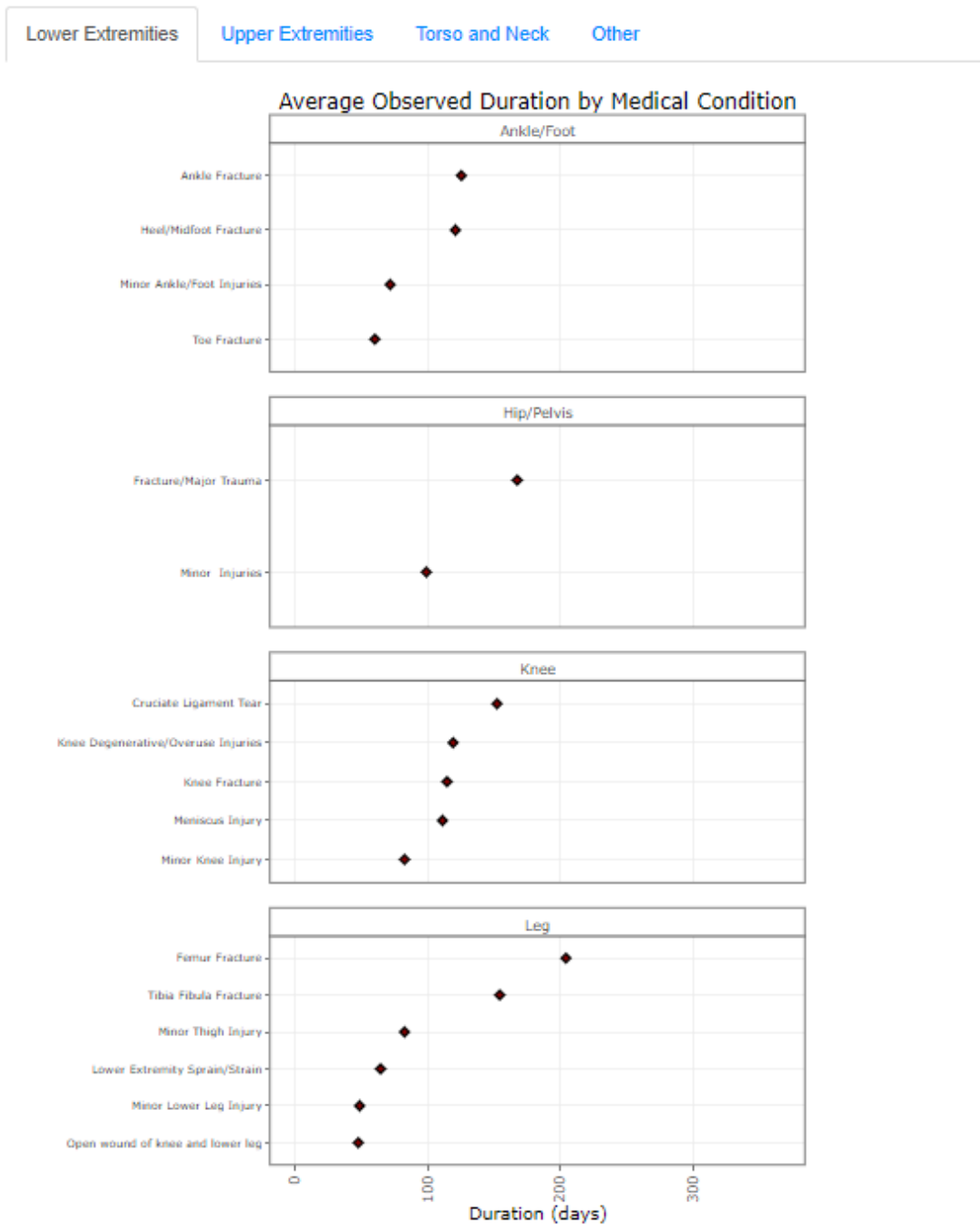
Exhibit 6: Duration by Body System



The illustrations below organize medical conditions by the overarching body system. Within a single body system, the average duration can vary significantly by medical condition. For example, within the leg body system, the averages range from 48 days for open wound of knee and lower leg injuries to 204 days for femur fractures. We can also compare the same medical condition across multiple body systems. For instance, looking at all “minor injuries” across the various body systems, it is evident that minor shoulder injuries are the most severe.

Exhibit 7: Duration by Body System and Medical Condition

LOWER EXTREMITIES



UPPER EXTREMITIES

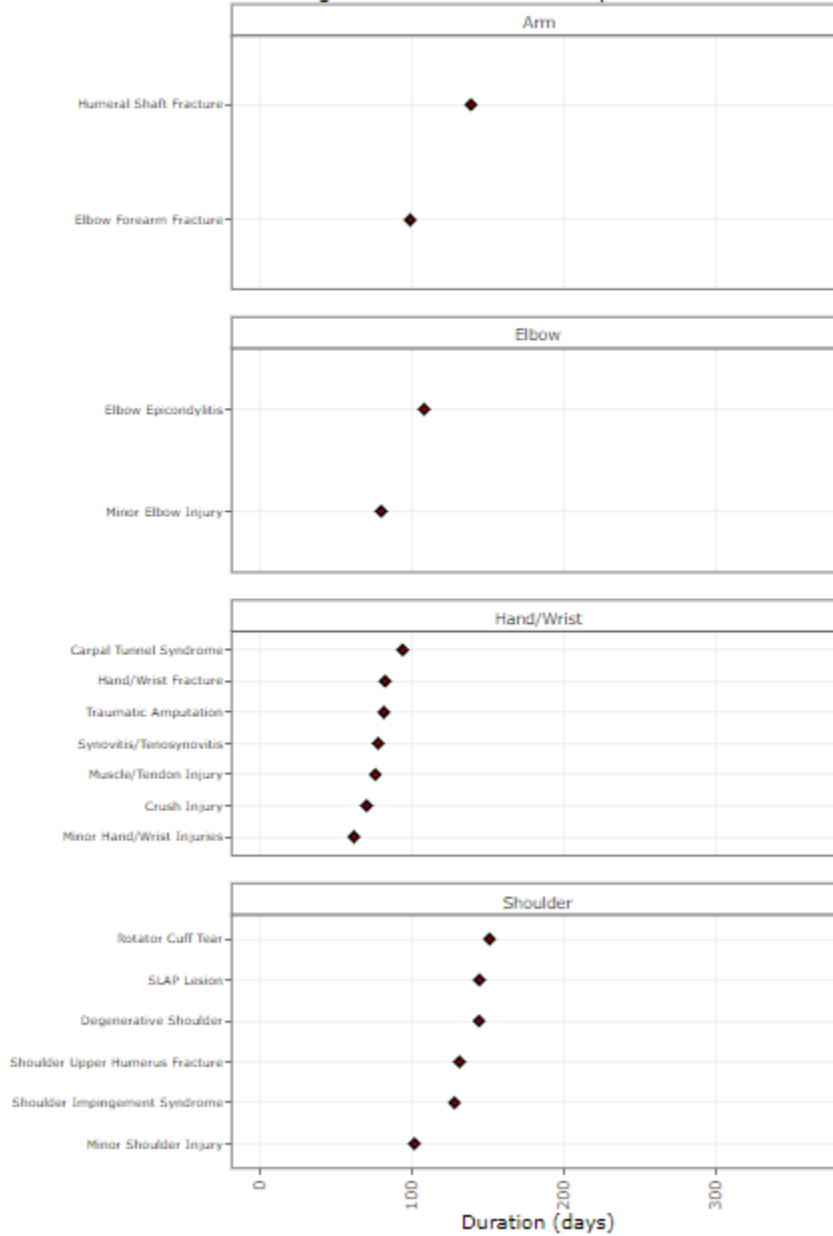
Lower Extremities

Upper Extremities

Torso and Neck

Other

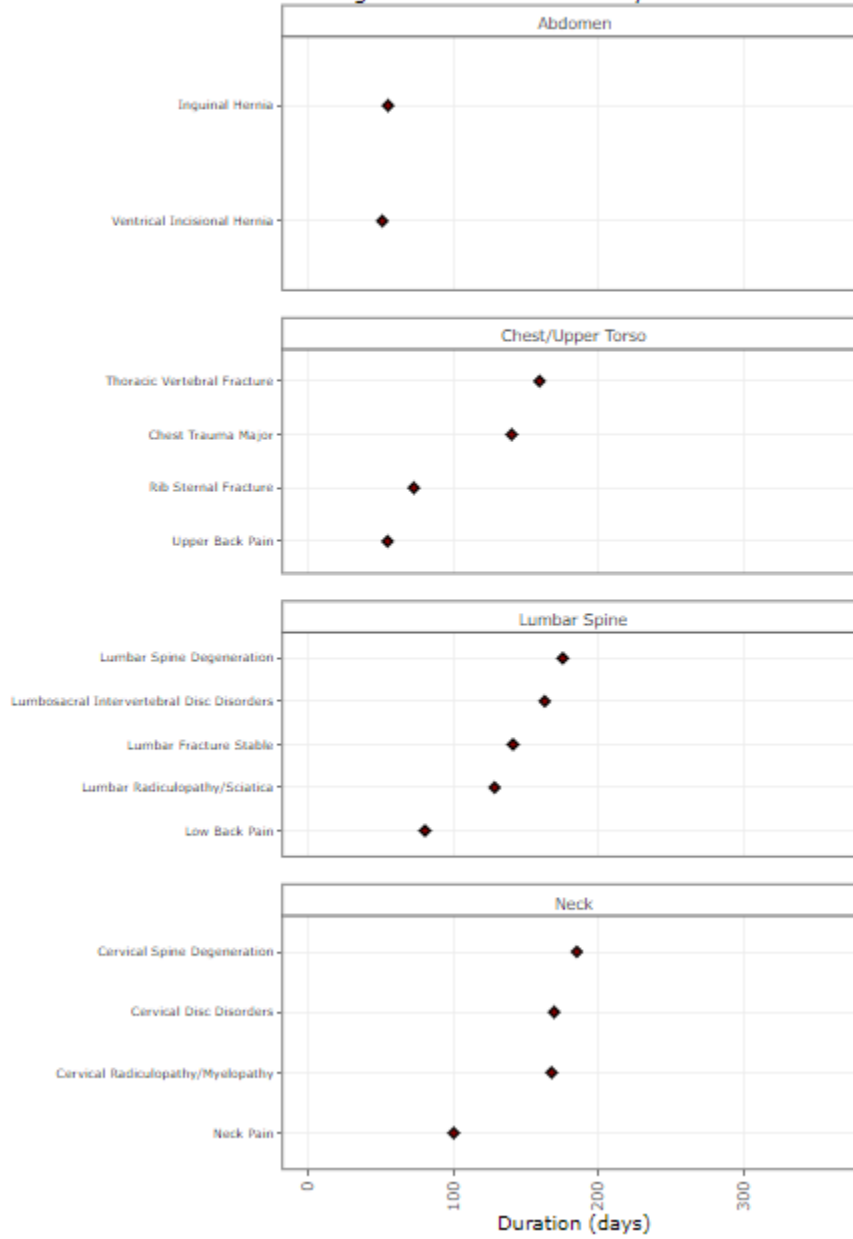
Average Observed Duration by Medical Condition



TORSO AND NECK

Lower Extremities Upper Extremities **Torso and Neck** Other

Average Observed Duration by Medical Condition



OTHER

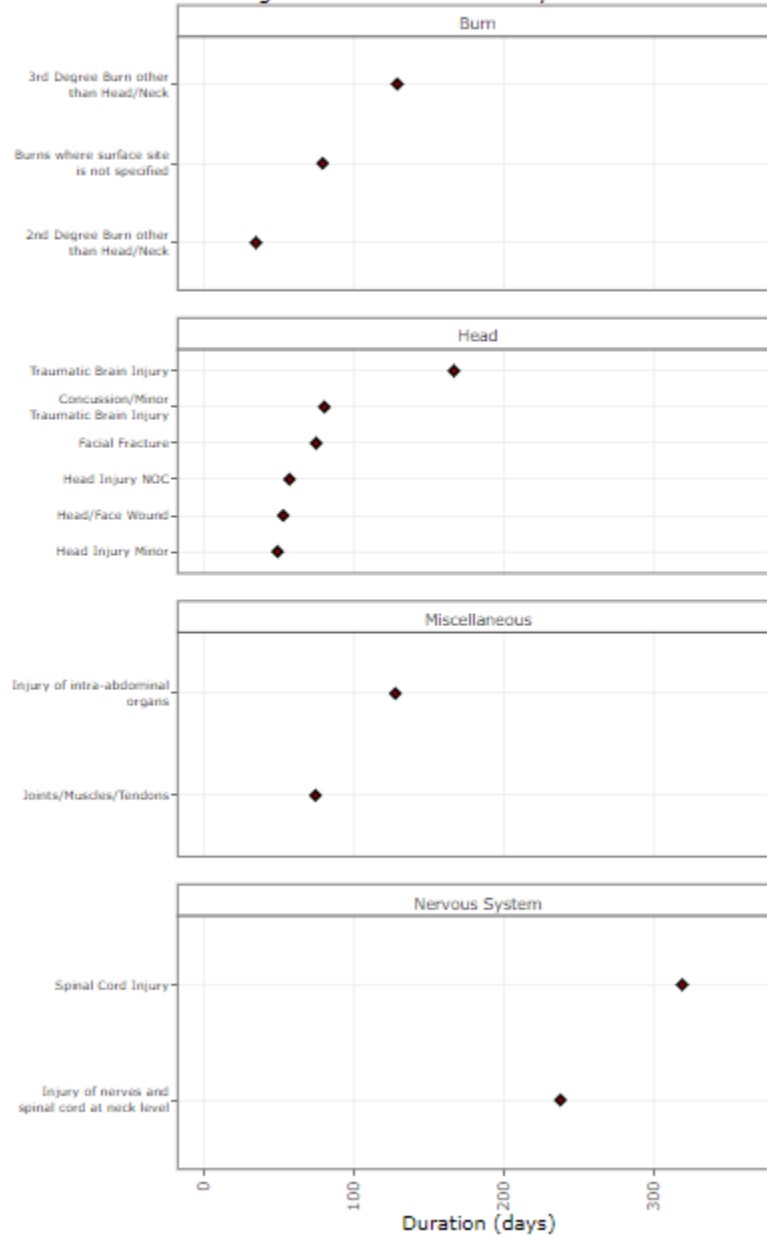
Lower Extremities

Upper Extremities

Torso and Neck

Other

Average Observed Duration by Medical Condition



CONCLUSIONS

We saw clear differences in average duration by state, age, body system, and medical condition. However, it's important to keep in mind that descriptive statistics, like the ones presented in this brief, have limitations—particularly when it comes to drawing conclusions while evaluating one characteristic in isolation. For example, advanced age might impede the recovery for back injuries more than for finger fractures. This is where it becomes important to account for the interaction between age and medical condition.

A statistical modeling approach can account for such interactions and estimate the effects of an injured worker's characteristics on TD benefit duration. Stay tuned for the next installment of this series which will incorporate statistical modeling techniques.

APPENDIX A

DATA

Based on data reported in NCCI's Unit Statistical Data, Indemnity Data Call (IDC) and Medical Data Call (MDC). Includes claim data from the following jurisdictions: AK, AL, AR, AZ, CO, CT, DC, FL, GA, HI, IA, ID, IL, IN, KS, KY, LA, MD, ME, MO, MS, MT, NC, NE, NH, NM, NV, OK, OR, RI, SC, SD, TN, TX, UT, VA, VT, and WV. Statistics are for data reported as of 12 months from the accident date for claims occurring between 4/1/2020 and 3/31/2022. COVID-19 claims are excluded from this analysis.

A total of 272,968 claims were observed. The data consists of claims where NCCI was able to join the Unit Statistical Data, IDC, and MDC.

BODY SYSTEM AND MEDICAL CONDITION

For the assignment of each claim's medical condition and body system, an algorithm was implemented that prioritizes injury-related diagnoses (e.g., rotator cuff tear) over comorbidity-related diagnoses (e.g., nicotine addiction). "Injury-related" diagnoses are defined as all ICD-10 codes beginning with M, S, T, U, K40, K42, K43, G82, G56.2, G56.3, or G56.0. Oftentimes, an individual claim will have multiple medical conditions which can impact several body systems. To account for this, a single primary medical condition is assigned according to medical payments over the study period. The body system is then derived from the primary medical condition.

ECONOMIC SECTOR

The nine economic sectors presented in this brief are derived by mapping NCCI class codes at the individual claim level into groupings similar to North American Industry Classification System (NAICS) supersectors, with some modifications to make these groupings more relevant to workers compensation data. The groupings are chosen to ensure that each sector is aligned with the established class code descriptions and contains a sufficient amount of data. The nine sectors are as follows:

- The Natural Resources, Construction and Utilities, Manufacturing, Health Care, and Leisure and Hospitality economic sectors are closely analogous to the NAICS sectors or supersectors of the same name, noting that we combine the Construction and Utilities NAICS sectors.
- The Trade economic sector aligns with the Retail and Wholesale Trade NAICS sectors, along with some Other Services businesses that provide in-person services to customers.
- The Transportation economic sector aligns with the Transportation and Warehousing NAICS sector, which includes trucking operations and warehousing and storage for goods.
- The Office economic sector includes office-based businesses in the Information, Financial Activities, and Professional and Business Services NAICS supersectors, as well as the Educational Services sector.
- The Upkeep economic sector aligns with businesses in the Real Estate and Rental and Leasing, Administrative and Support, Waste Management and Remediation Services, and Other Services NAICS sectors that are related to property management, building cleaning and maintenance services, landscaping, and repair and maintenance of machinery and equipment.

DURATION FOOTNOTE

Duration was calculated as the total number of benefit payment days as reported in the IDC for benefit types 5 (Temporary Total) and 11 (Temporary Partial). Lump sum transactions that spanned at least two days were included in this total.

PREVIOUS STUDIES

[Workers Compensation Temporary Total Disability Indemnity Benefit Duration](#)

[Workers Compensation Temporary Total Disability Indemnity Benefit Duration 2010 Update](#)

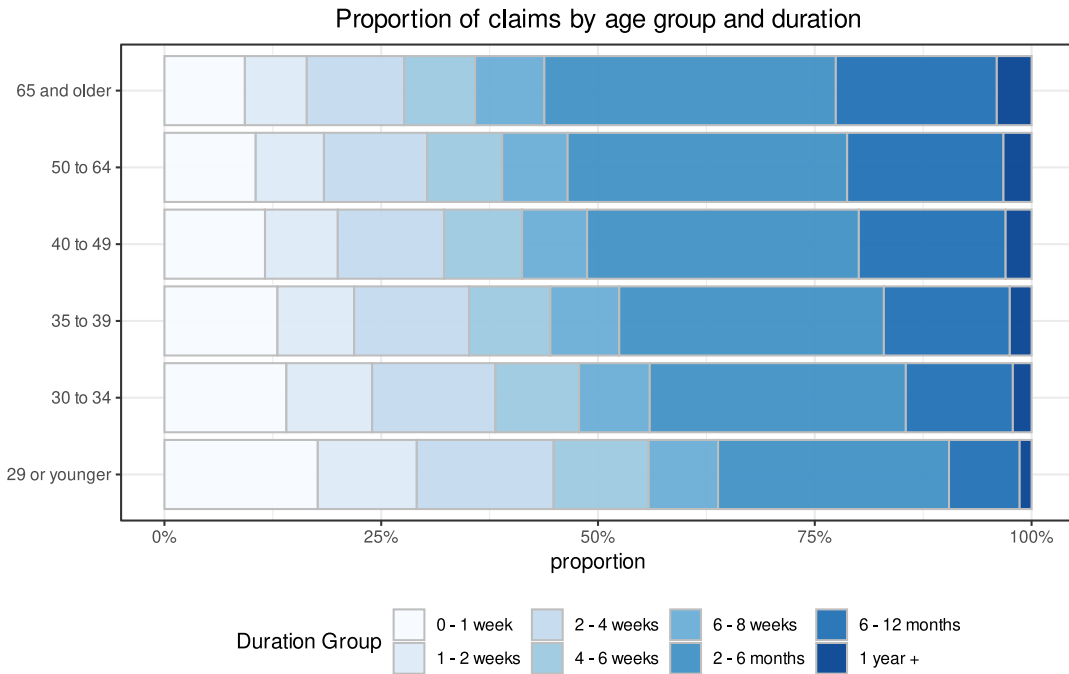
[Workers Compensation Temporary Total Disability Indemnity Benefit Duration 2012 Update](#)

[Workers Compensation Temporary Total Disability Indemnity Benefit Duration 2013 Update](#)

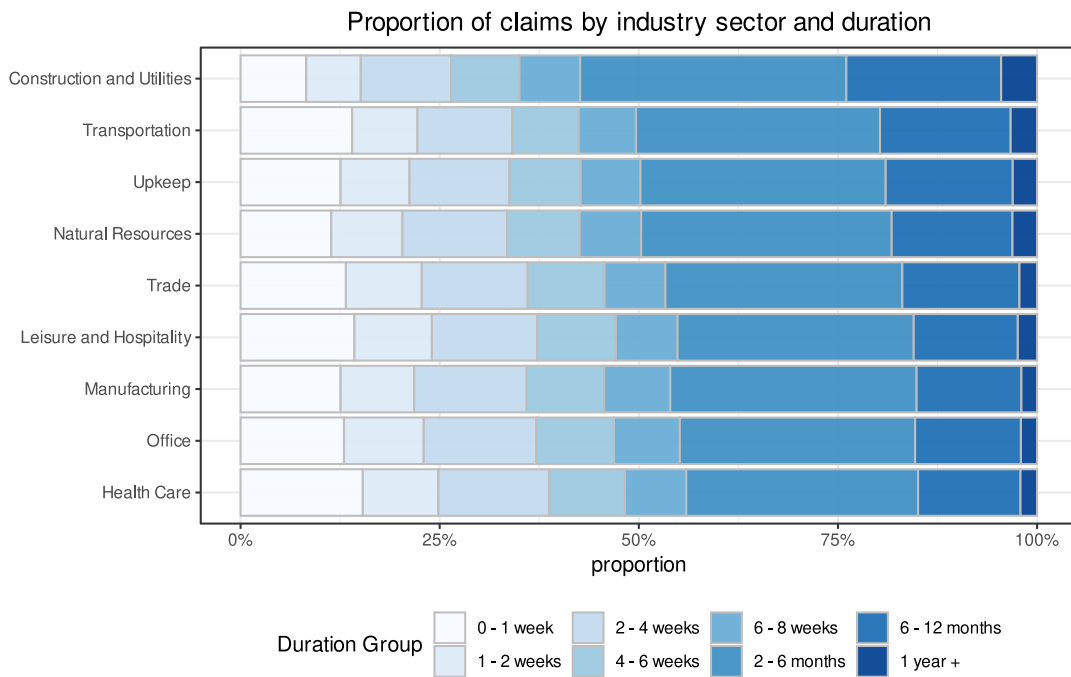
APPENDIX B

The following figures display the share of all TD benefit claims by characteristic (age, economic sector, body system) and duration group (i.e., 0-1 weeks, 1-2 weeks, ..., 1 year +)

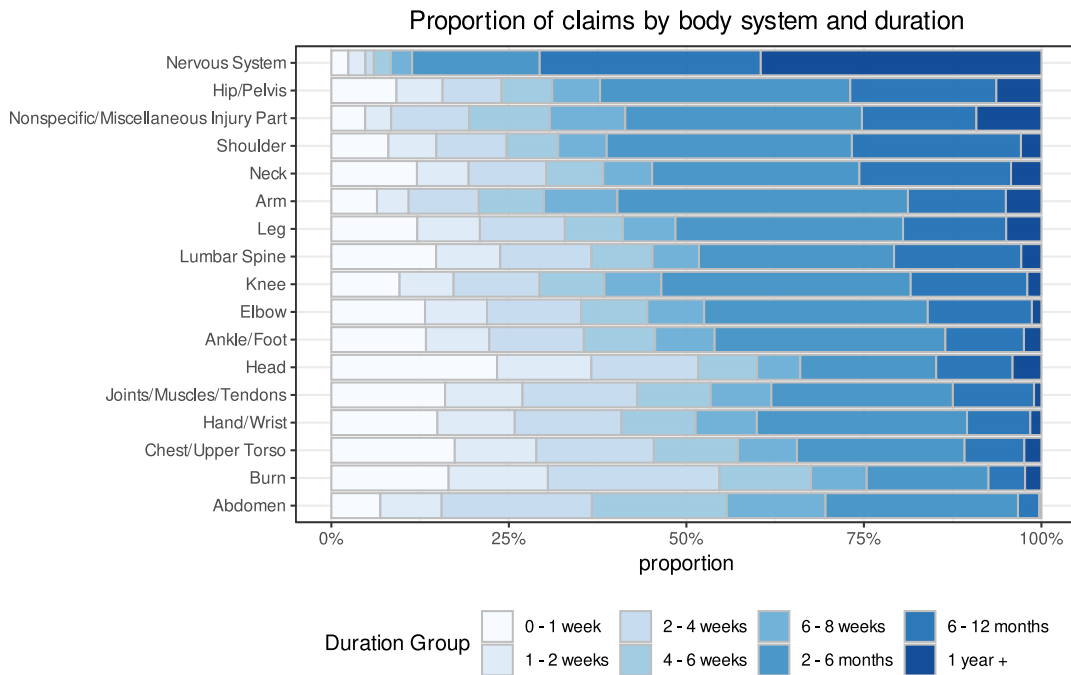
AGE GROUP



ECONOMIC SECTOR



BODY SYSTEM



1. Pure TTD claim—TTD claims for which there has been no paid compensation for permanent impairment.
2. Healing period claim—Healing period claims are claims that initially receive TTD benefits during a recovery period and then subsequently receive paid compensation for permanent impairment.