

Medical Characteristics of Cumulative Trauma Claims

December 2022

[Enter Report](#)



Table of Contents

Background and Definitions

Report Summary

Medical Service and Other Claim Characteristics

Chart 1: Claim Distribution by Injury Type

Chart 2: Share of Indemnity Claims with Nontrivial Allocated Loss Adjustment Expenses (ALAE)

Chart 3: Medical Severity on Indemnity Claims

Chart 4: Indemnity Claim Closure Rate

Chart 5: Share of Medical Services Paid at 24 Months

Chart 6: Incremental Share of Payments for Medical Liens

Chart 7: Medical Liens Paid per Indemnity Claim

Chart 8: Utilization and Payments for Medical Liens

Chart 9: Incremental Share of Payments for Medical-Legal

Chart 10: Utilization and Payments for Medical-Legal Evaluations at 24 Months

Typical Medical Diagnoses

Chart 11: Top 10 Early Primary Medical Diagnoses

Chart 12: Share of Closed Claims with a Shift in Primary Medical Diagnosis

Chart 13: Top Early and Final Primary Medical Diagnoses for Closed Indemnity CT Claims

Chart 14: Shift in Primary Medical Diagnosis for Closed Indemnity CT Claims

Chart 15: Diagnosis Shift and Paid Medical Severity for Closed Indemnity Claims

3 Chart 16: Top Primary Medical Diagnoses for Indemnity CT Claims Open at 5th Report Level 22

4 Chart 17: Diagnosis Shift and Paid Medical Severity for Indemnity Claims Open at 5th Report Level 23

5 Chart 18: Median Time (Days) from Reported Injury Date to First Medical Treatment 24

6 Chart 19: Share of Indemnity Claims with Medical Liens as First Service 25

7 Chart 20: Share of Indemnity Claims with Medical-Legal as First Service 26

Post-Termination Cumulative Trauma Claims 27

Background and Analysis Approach 28

Chart 21: Claim Distribution by Injury Type 29

Chart 22: Leading Industry Sectors 30

Chart 23: Regional Distribution 31

Chart 24: Share of Late Reported Claims 32

Chart 25: Ratio of ALAE to Losses on Indemnity Claims 33

16 Chart 26: Indemnity Claim Closure Rate 34

Chart 27: Medical Severity on Indemnity Claims 35

Chart 28: Share of Medical Services Paid at 24 Months 36

Chart 29: Share of Payments for Interpreter Services 37

Chart 30: Top Medical Diagnoses for Post-Termination CT Claims 38

Appendix 39

Conditions and Limitations 44

Notice and Copyright 45



Background and Definitions

Cumulative trauma claims, or CT claims, are typically filed for work-related injuries resulting from repetitive mentally or physically traumatic activities over multiple years. In the California workers' compensation system, CT claims have always been a key cost driver mostly because of the complexity of having injury exposure spanning multiple years, litigation and frictional costs from liens and medical-legal services that are incurred on CT claims. Prior WCIRB research has suggested that as much as 40% of all CT claims are filed on a post-employment or post-termination basis. Post-termination CT claims are filed after the termination of employment, and they tend to be more litigious and involve more frictional costs than regular CT claims. This study analyzes both CT and post-termination CT claims, focusing on the characteristics of medical treatment, primary medical diagnoses and underlying drivers for frictional costs.

For purposes of this study, CT claims are defined as claims with Cause of Injury or Nature of Injury code categorized as a cumulative injury or an occupational disease, or claims involving carpal tunnel syndrome as the primary medical diagnosis. The claim population in the analysis is derived from linking WCIRB unit statistical data and WCIRB medical transaction data for accident years 2013 through 2019.



Report Summary

1

Indemnity claims are the key driver of CT claim costs (**Chart 1**). Average medical severity on CT indemnity claims starts off lower than non-CT indemnity claims, but eventually grows larger as the claims mature (**Chart 3**).

2

CT indemnity claims have a higher payment share for medical-legal and medical liens services than non-CT claims, mostly driven by significantly higher levels of utilization (**Charts 5, 8 and 10**).

3

CT claims are more likely to involve soft tissue injuries and mental/psychiatric conditions (**Chart 11**). About a third of closed CT claims had a medical diagnosis shift, mostly to soft tissue injuries, by the end of their claim life (**Charts 12 and 14**).

4

It takes significantly longer for CT indemnity claims to receive the first medical treatment, mostly due to late reporting and a relatively high share of CT claims starting with liens or medical-legal services as the initial service. (**Charts 18, 19 and 20**).

5

Post-termination CT claims filed following large layoffs tend to concentrate in the manufacturing and service sectors (**Chart 22**) and in the LA region (**Chart 23**). Not surprisingly, these claims also are more likely to be reported late (**Chart 24**).

6

Compared to regular CT claims, post-termination CT claims incur lower medical severity through 66 months of development (**Chart 27**) but have a higher share of payments for medical liens, medical-legal and interpreter services (**Charts 28 and 29**).



01

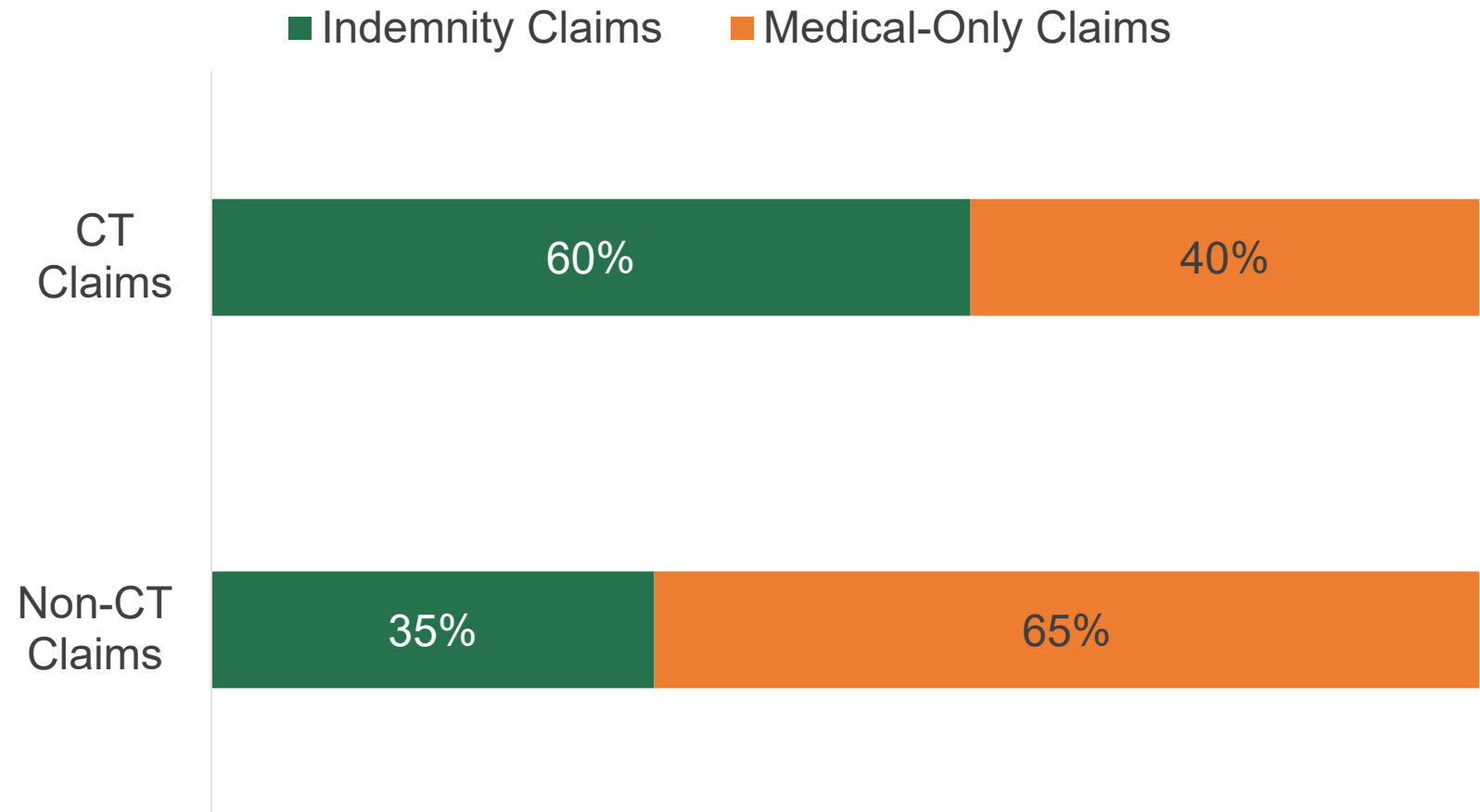
Medical Service and Other Claim Characteristics



Chart 1

- Overall, CT claims account for about 8% of all claims and 13% of indemnity claims.
- CT claims are more likely to involve indemnity benefits than non-CT claims.

Claim Distribution by Injury Type



[More Info](#)



Chart 2

- More than three quarters of indemnity CT claims involve nontrivial ALAE (>\$1,000), while only about one-half of non-CT claims do.
- Claims with nontrivial ALAE typically include certain levels of defense attorney expenses, which is likely an indicator of litigation.

Share of Indemnity Claims with Nontrivial Allocated Loss Adjustment Expenses

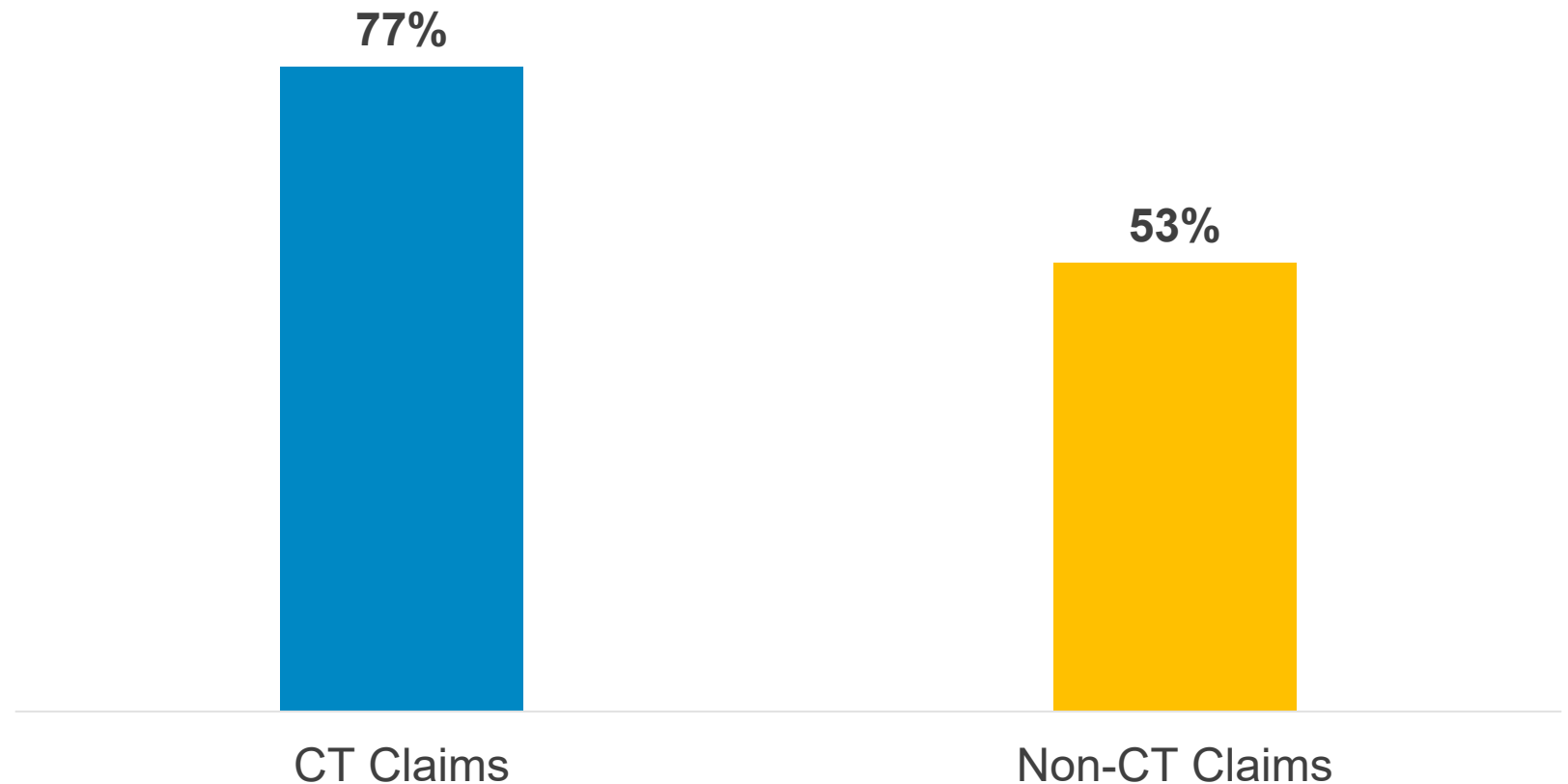
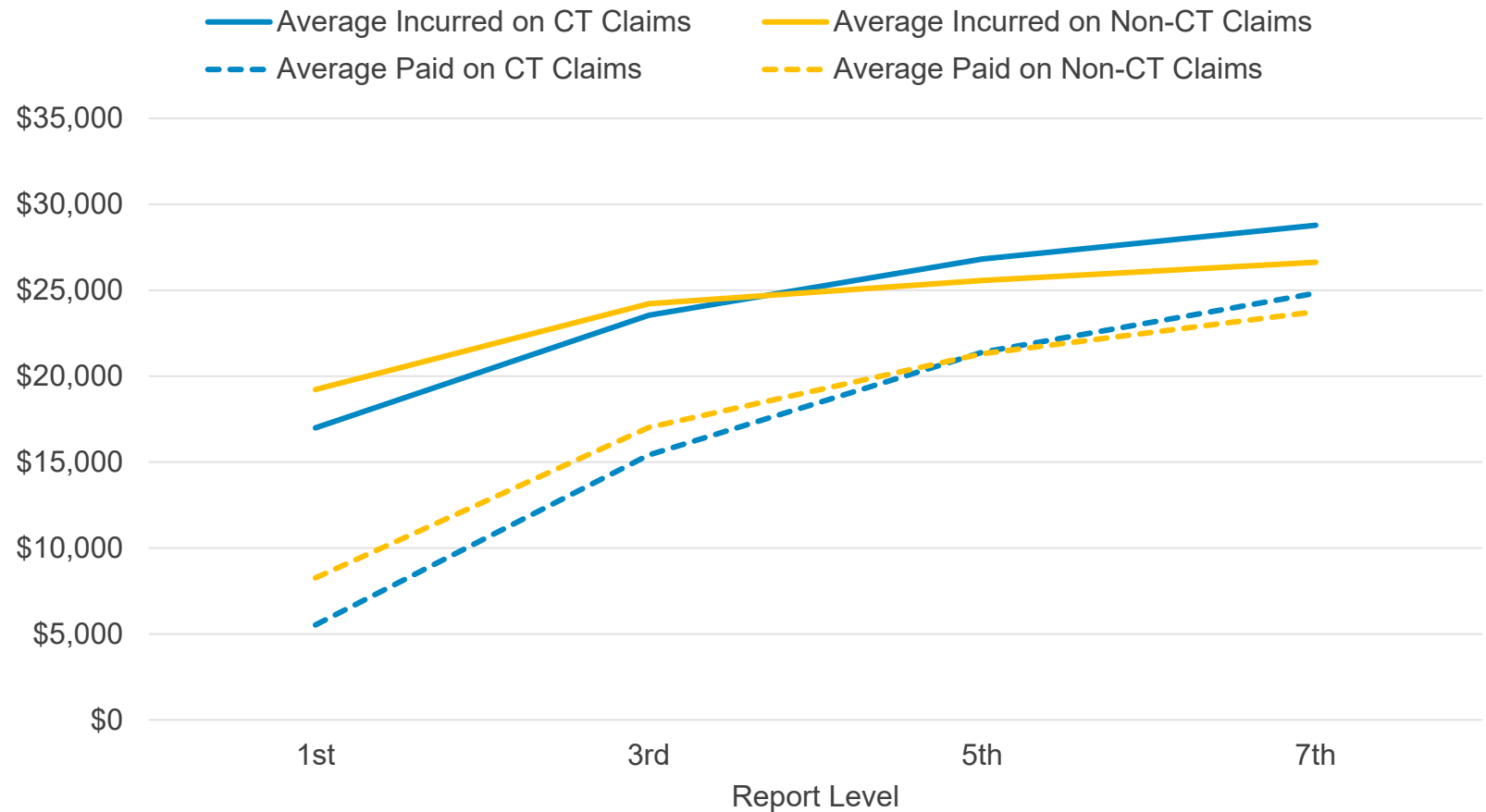




Chart 3

- During early maturities or report levels, non-CT claims have on average higher incurred and paid medical than CT claims.
- CT claims develop higher medical severity starting at 5th report level (66 months from policy inception) and continue to grow faster than non-CT claims at later report levels.

Medical Severity on Indemnity Claims



[More Info](#)



Chart 4

- CT indemnity claims close consistently more slowly than non-CT indemnity claims, with the largest difference at the first report level (18 months from policy inception) when only 1 in 5 CT indemnity claims are closed compared to almost half of non-CT indemnity claims.
- The indemnity claim closure rate is consistently lower for CT claims over all accident years.
- The slower closing rate is partially due to late reporting of CT claims ([Chart 18](#)).

Indemnity Claim Closure Rate Accident Years 2013

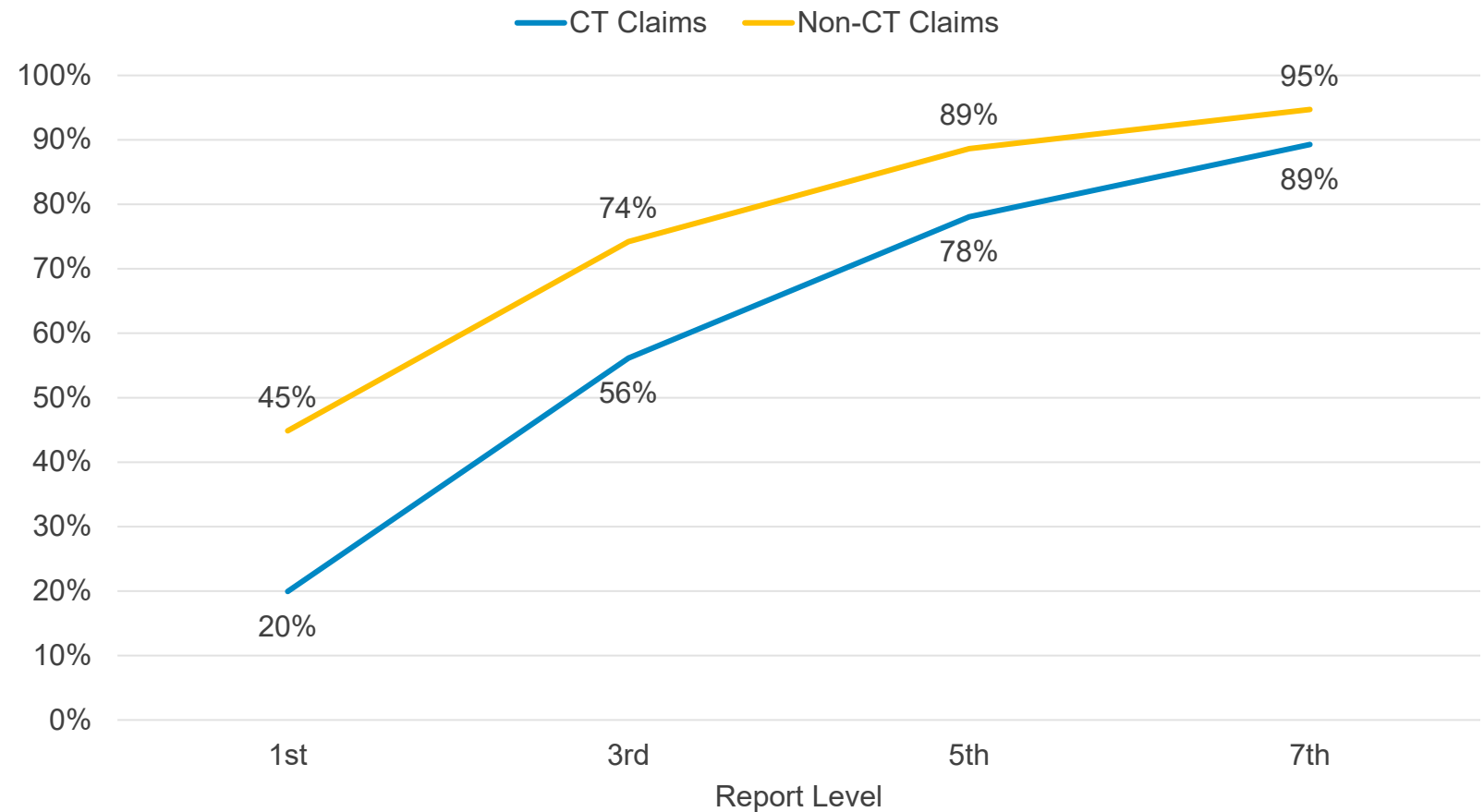
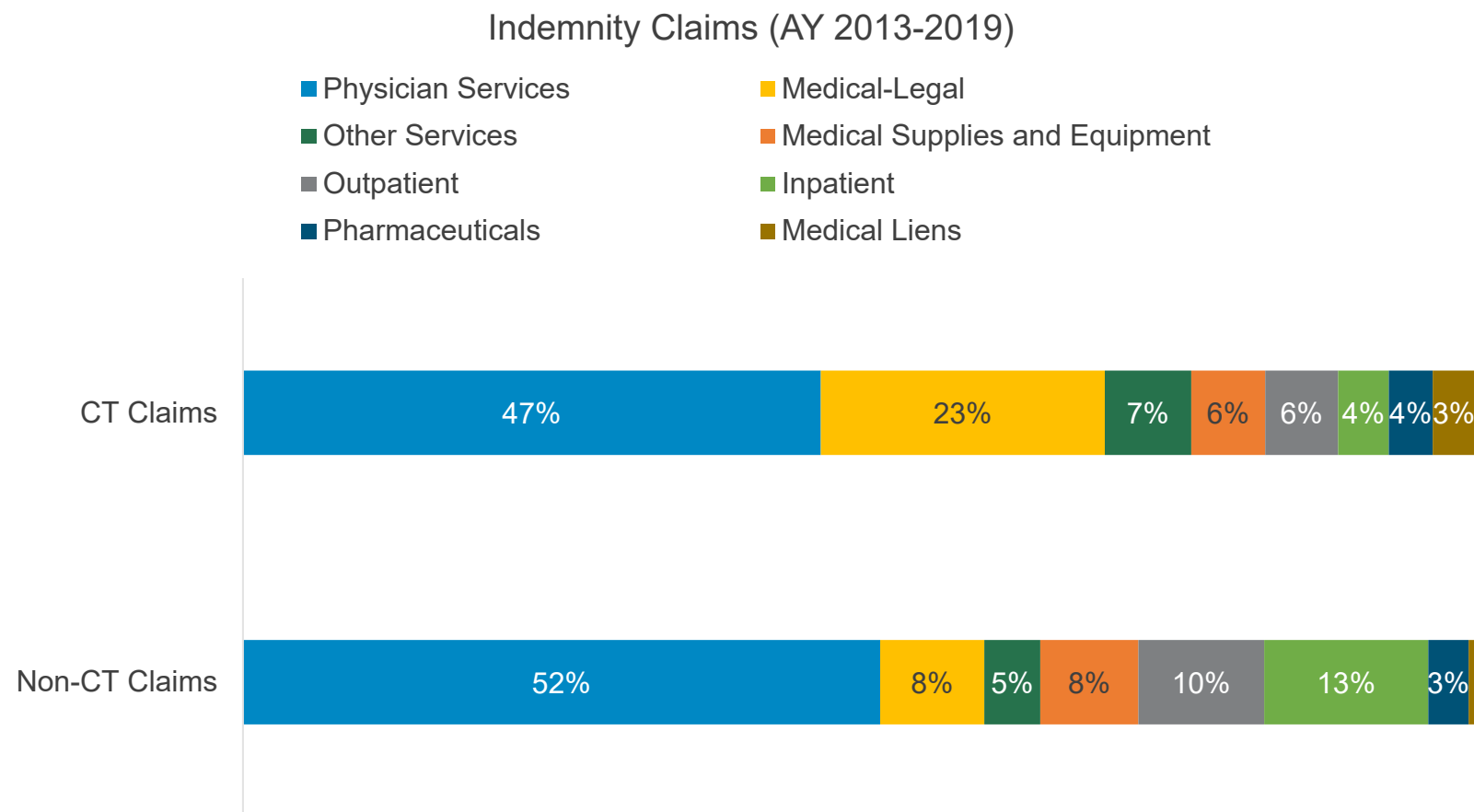




Chart 5

- The share of medical payments for medical liens and medical-legal services on CT claims is on average three times the payment shares of these services on non-CT claims.
- Higher medical-legal payment share on CT claims is potentially related to litigation (**Chart 2**) and disputes over compensability.
- Inpatient and outpatient share of payments is much lower for CT claims, suggesting that CT claims, on average, receive less intensive medical care than non-CT claims at 24 months.

Share of Medical Services Paid at 24 Months



[More Info](#)



Chart 6

- The share of medical payments for medical liens is consistently higher for CT claims than for non-CT claims. The difference is more pronounced between Year 3 and Year 6 after the reported accident date.
- After nine years from the reported accident date, the cumulative share of medical payments for medical liens is more than three times higher on CT claims than on non-CT claims.
- CT claims tend to have a longer payment lag on medical liens than non-CT claims.

Incremental Share of Payments for Medical Liens

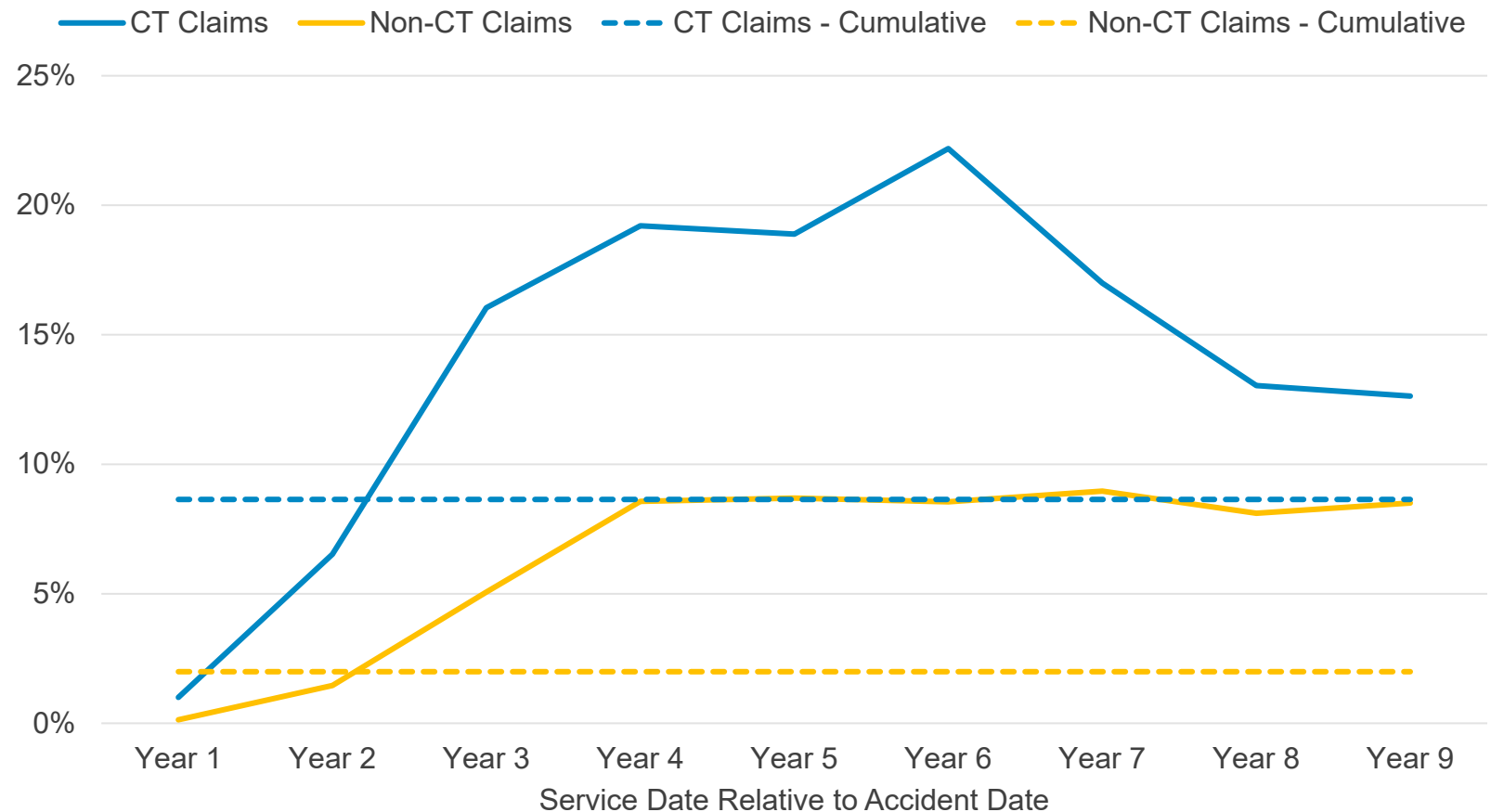
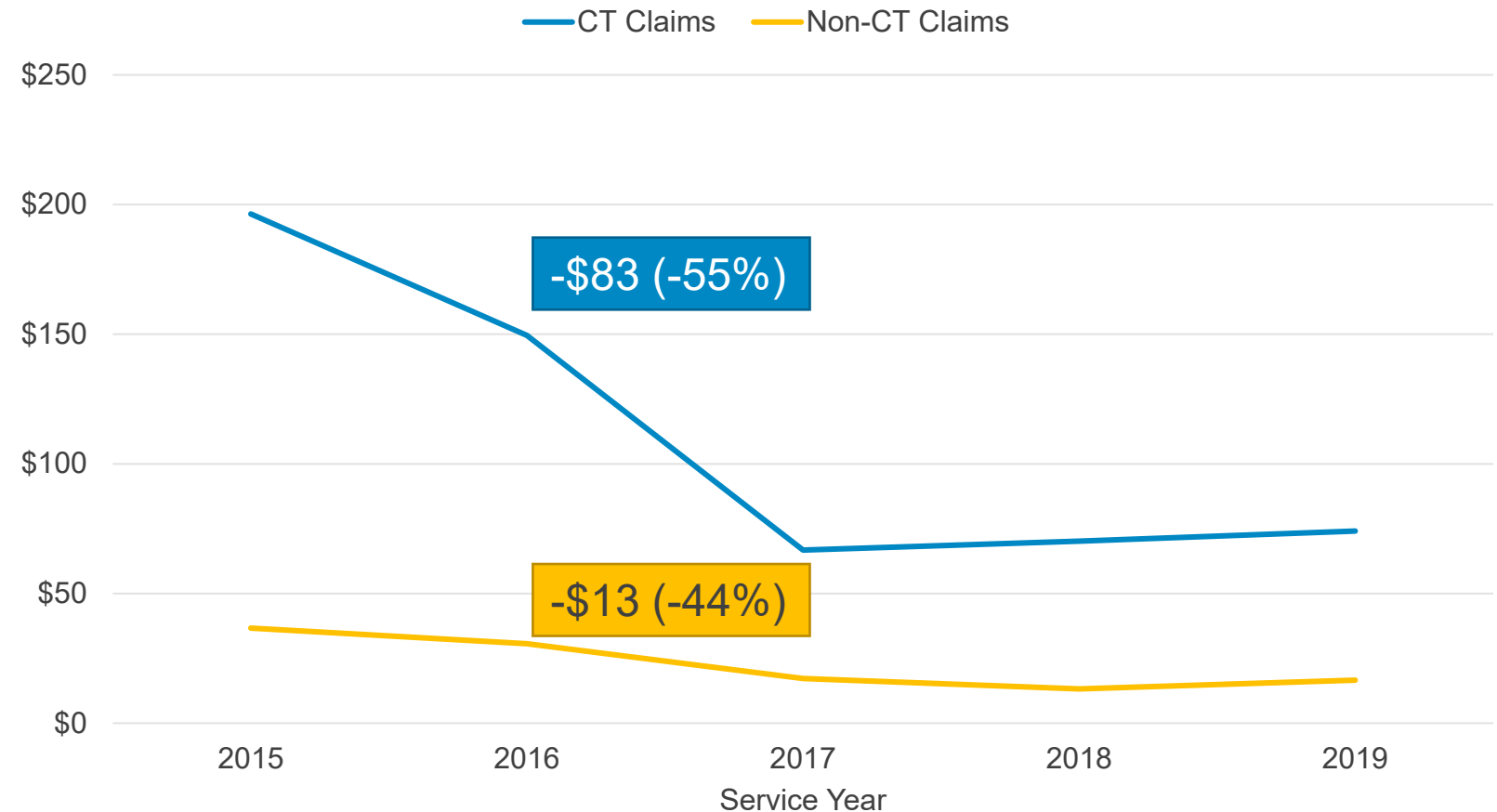


Chart 7

- Average medical lien payments per indemnity claim decreased:
 - by nearly \$50 for CT claims from 2015 to 2016.
 - by more than \$80 for CT claims from 2016 to 2017.
 - by only \$13 for non-CT claims from 2016 to 2017.
- The larger decreases in 2017 may have been driven by the lien reform provisions in Senate Bill No. 1160 and anti-fraud provisions in Assembly Bill No. 1244.
- The lower medical lien severity continued into 2018 and 2019 for both CT and non-CT claims.

Medical Liens Paid per Indemnity Claim



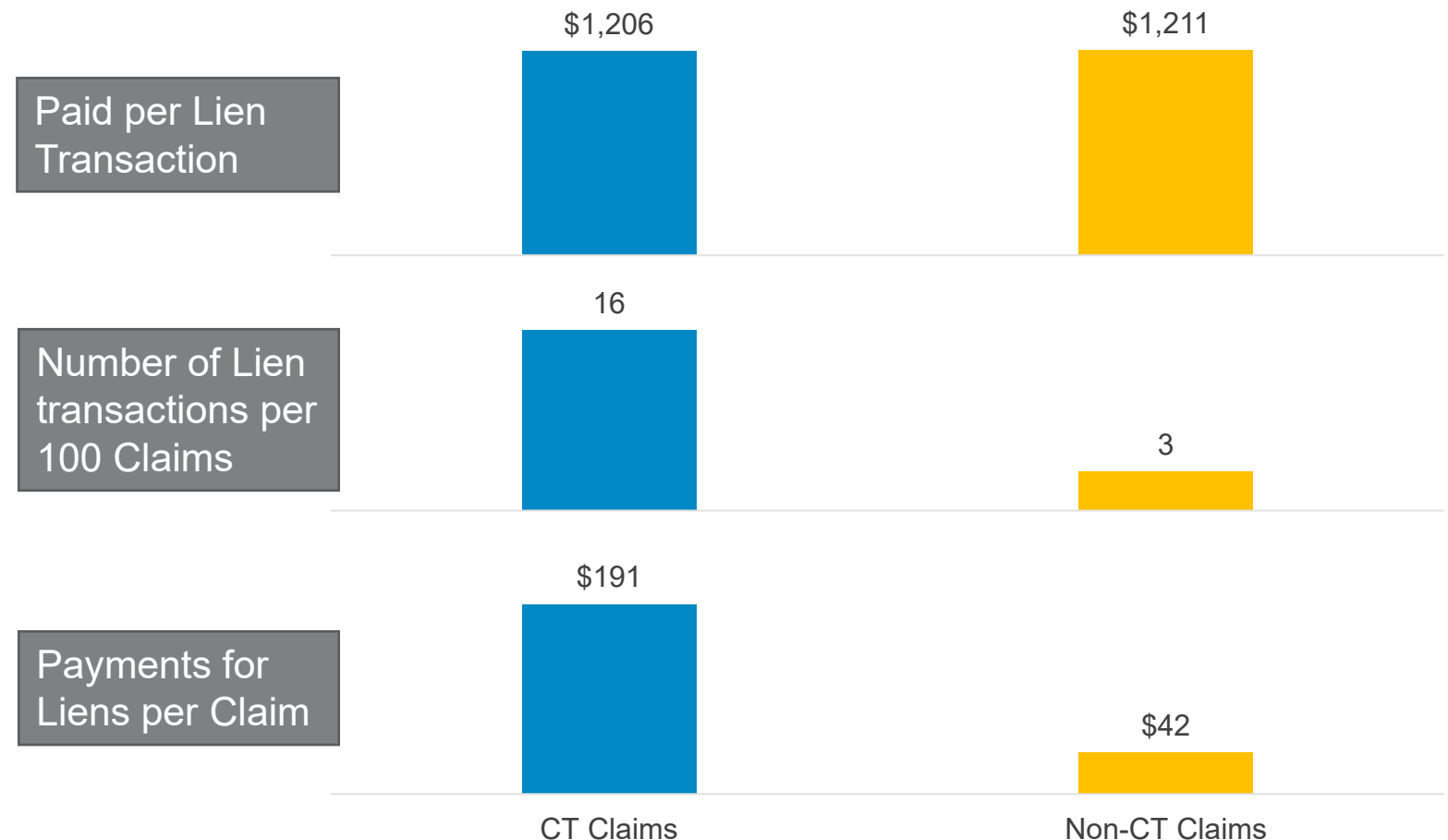
[More Info](#)



Chart 8

- The majority of medical lien payments are settlements for reimbursement disputes. Paid per lien transaction is similar between CT and non-CT claims.
- However, the number of lien transactions per CT claim is more than five times as high as for non-CT claims; this is the largest driver of the higher lien payments per claim on CT claims.
- The average ratio of the paid to demand for medical liens is similar between CT and non-CT claims.

Utilization and Payments for Medical Liens Service Years 2013 - 2021



[More Info](#)

Chart 9

- The share of medical payments for medical-legal services on CT claims is consistently higher than on non-CT claims. The magnitude of the difference is relatively consistent over time.
- The highest share of medical-legal payments on CT claims is for services provided in Year 2 following the reported accident date.
- The higher medical-legal costs are largely due to the much higher rate of litigation on CT claims.

Incremental Share of Payments for Medical-Legal

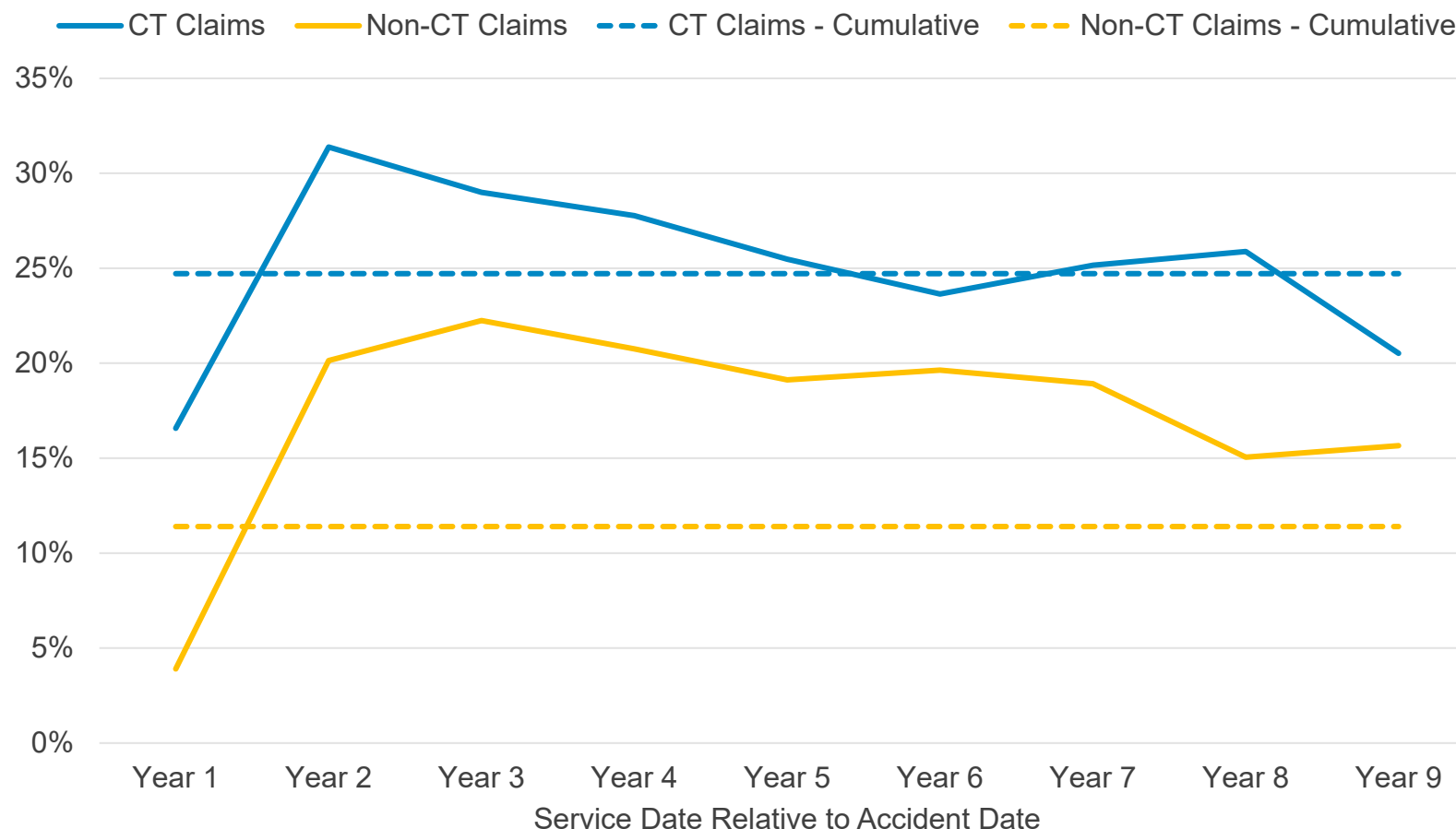
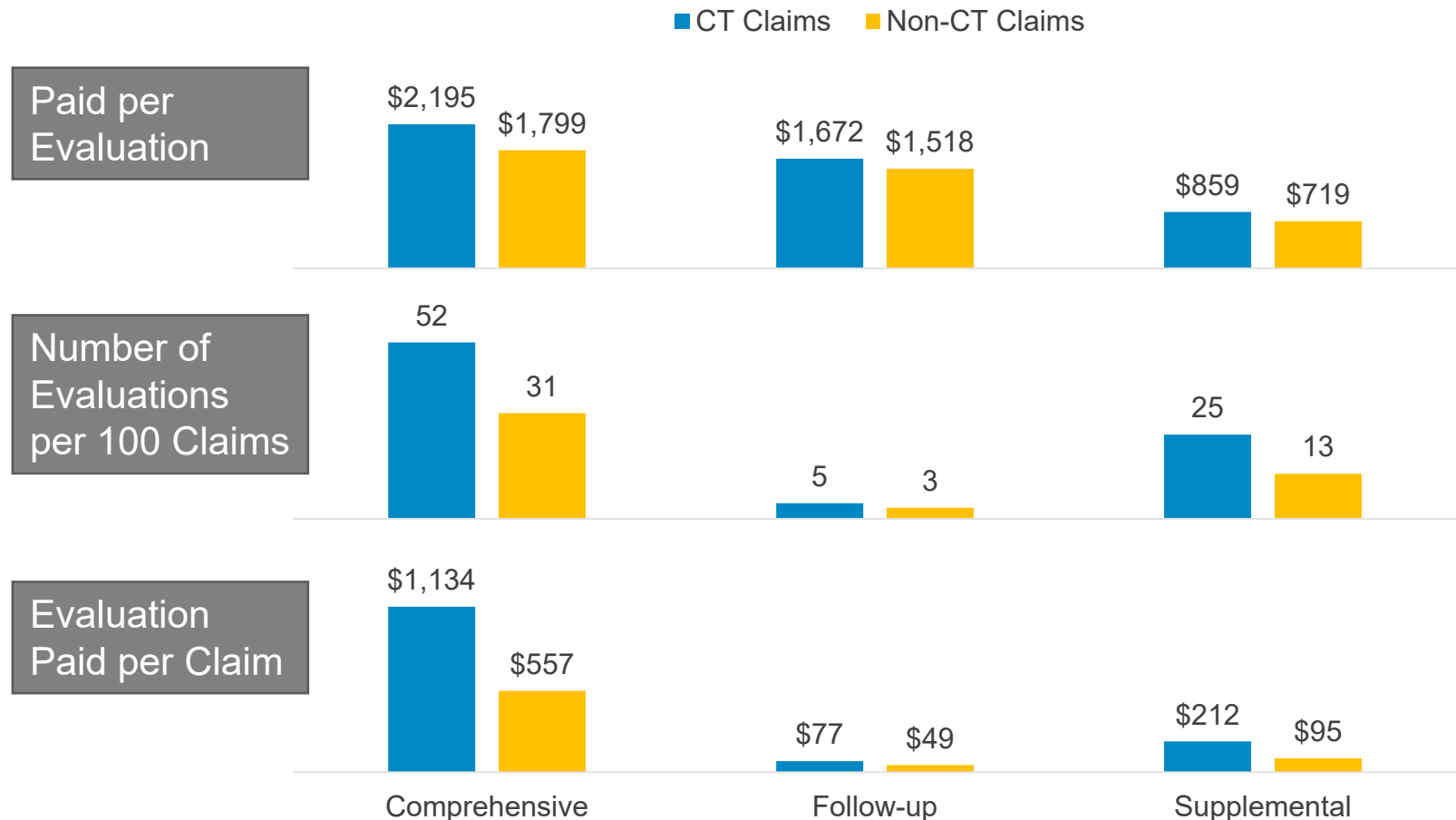


Chart 10

- The average paid per medical-legal evaluation is more than 20% higher on CT claims than on non-CT claims. In addition, there are over 60% more evaluations on CT claims, which leads to a significantly higher overall medical-legal paid per claim.
- Previous studies have shown that CT claims are more likely to involve multiple body parts, which may require more complex medical-legal evaluations.
- CT claims are also more likely to involve mental and behavioral disorders (**Chart 11**), which may require multiple evaluations for both physical and psychological conditions.

Utilization and Payments for Medical-Legal Evaluations at 24 Months



[More Info](#)



02 Typical Medical Diagnoses



Chart 11

- The top early primary medical diagnoses for CT indemnity claims include soft tissue disorders and carpal tunnel syndrome injuries.
- A significantly higher share of CT claims involve mental and behavioral disorders than do non-CT claims.
- On the other hand, non-CT claims involve a higher share of traumatic injuries, such as dislocation and sprain and minor wounds.

Top 10 Early Primary Medical Diagnoses

Early Primary Diagnosis for CT Claims	CT Indemnity Claim Share	Non-CT Indemnity Claim Share
Soft tissue disorders	27%	20%
Dislocation and sprain	19%	29%
Carpal Tunnel Syndrome (CTS)	13%	N/A
Multiple injuries incl. CTS	13%	N/A
Mental & behavioral disorders	8%	1%
Multiple injuries – soft tissue and dislocation/sprain	4%	8%
Other multiple injuries	2%	7%
Low back pain	2%	3%
Disease of the nervous system	2%	1%
Minor wounds	1%	11%

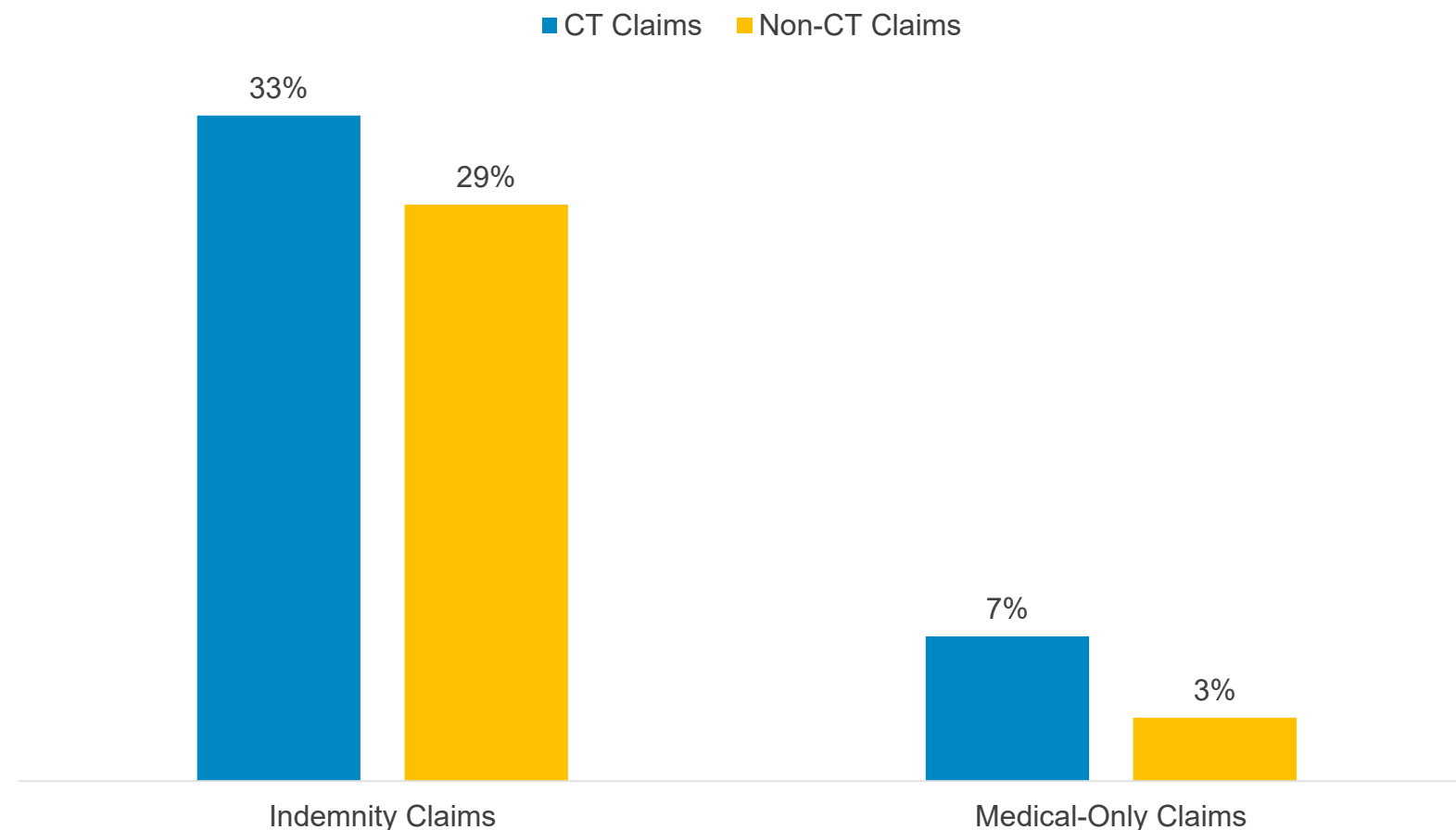
[More Info](#)



Chart 12

- About a third of closed indemnity CT claims have a shift in their primary medical diagnosis by the end of their claim life, a slightly higher share than non-CT indemnity claims.
- A small share of overall medical-only claims have a shift in the primary diagnosis, which is more likely on CT claims than on non-CT claims.

Share of Closed Claims with a Shift in Primary Medical Diagnosis



[More Info](#)



Chart 13

- Overall, the top primary diagnoses for closed indemnity CT claims remain the same, with some increases in the share of soft tissue injuries and decreases in dislocation and sprain as well as in multiple injuries including carpal tunnel syndrome.
- The drop in the share of CT claims involving multiple injuries including carpal tunnel syndrome is primarily due to medical treatment on the claims shifting to one of the single injuries initially being treated on the claim (**Chart 14**).

Top Early and Final Primary Medical Diagnoses Closed Indemnity CT Claims

Top Medical Diagnosis	Early Medical Diagnosis Claim Share	Final Medical Diagnosis Claim Share
Soft tissue disorders	25%	31%
Dislocation and sprain	20%	16%
Carpal Tunnel Syndrome (CTS)	13%	14%
Multiple injuries incl. CTS	13%	8%
Mental & behavioral disorders	9%	9%

Chart 14

- A large share of closed CT claims with a change in diagnosis shifts to a primary diagnosis of soft tissue disorders.
- CT claims of multiple injuries involving both soft tissue and carpal tunnel syndrome typically shift to single injuries involving either soft tissue disorder or carpal tunnel syndrome.
- Mental and behavioral disorder CT claims generally keep the same primary diagnosis throughout the claim life.

Shift in Primary Medical Diagnosis Closed Indemnity CT Claims

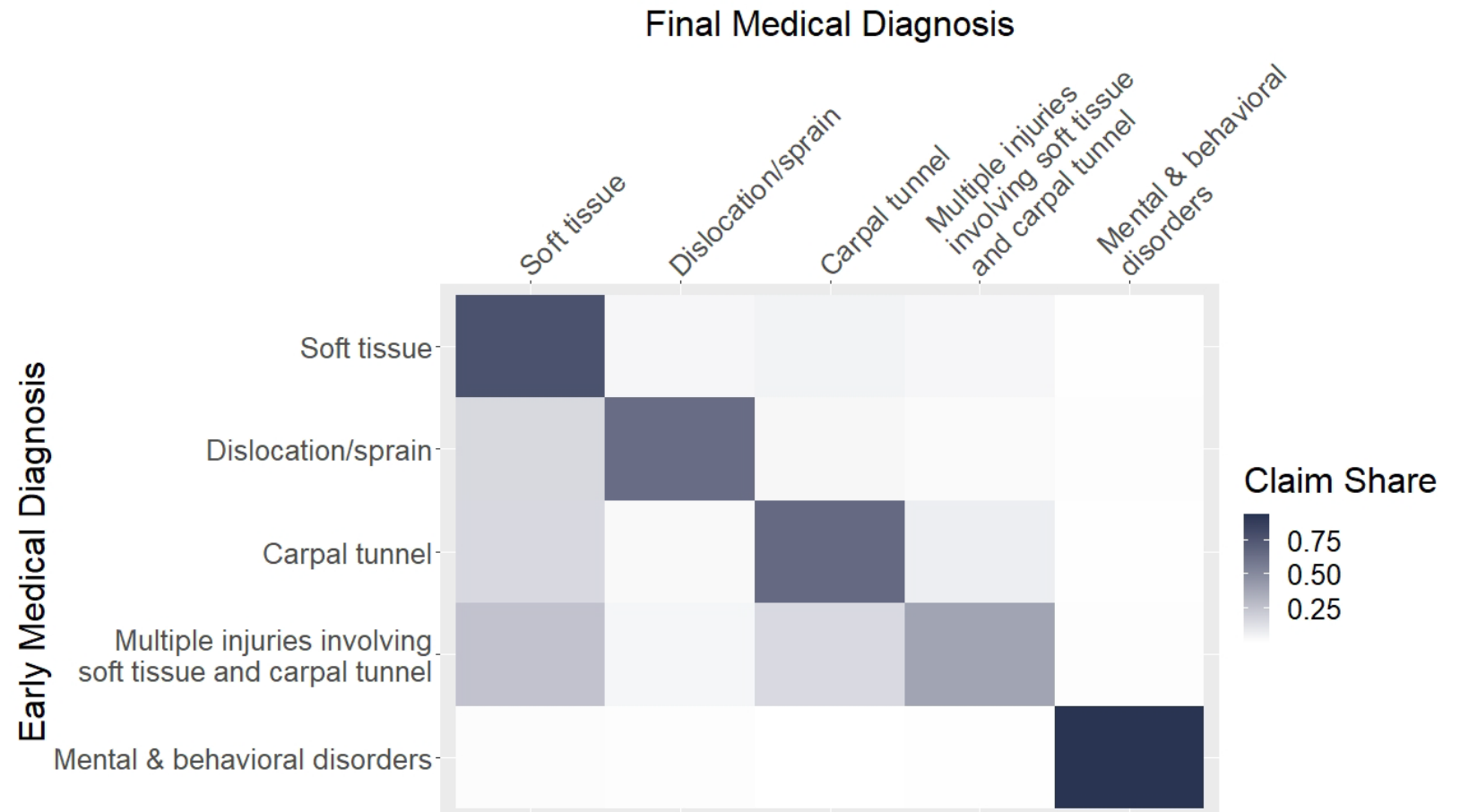
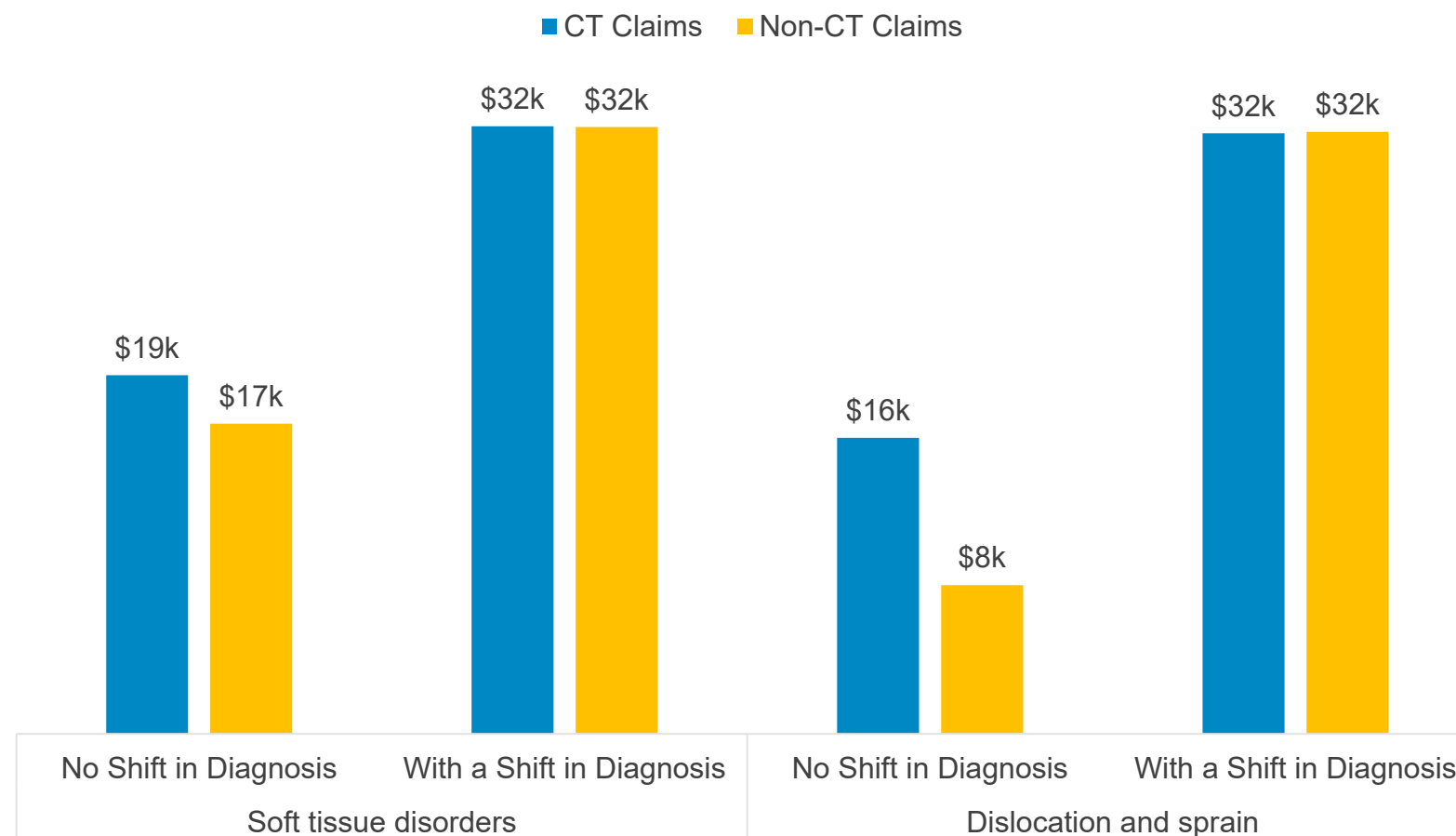


Chart 15

- For closed claims involving soft tissue disorders as the early primary diagnosis, those with a diagnosis shift at the end of claim life incurred about 85% higher ultimate medical cost as those without a diagnosis shift. The average incurred medical is similar between CT and non-CT claims.
- For dislocation and sprain claims, the average incurred medical on CT claims is twice as high on claims with a diagnosis shift, while the incurred medical is four times as high on non-CT claims with a diagnosis shift.
- The higher medical severity on claims with a diagnosis shift is primarily driven by a longer claim duration.

Diagnosis Shift and Paid Medical Severity for Closed Indemnity Claims



[More Info](#)



Chart 16

- About two-thirds of open indemnity CT claims have a shift in primary medical diagnosis at 5th report level (66 months from policy inception), compared to three-quarters of non-CT claims open at that time.
- The top medical diagnoses for CT claims open at 5th report level remained the same as the top early diagnoses. However, the share of soft tissue injuries and mental & behavioral disorder open claims increased significantly by 5th report level.

Top Primary Medical Diagnoses for Indemnity CT Claims Open at 5th Report Level

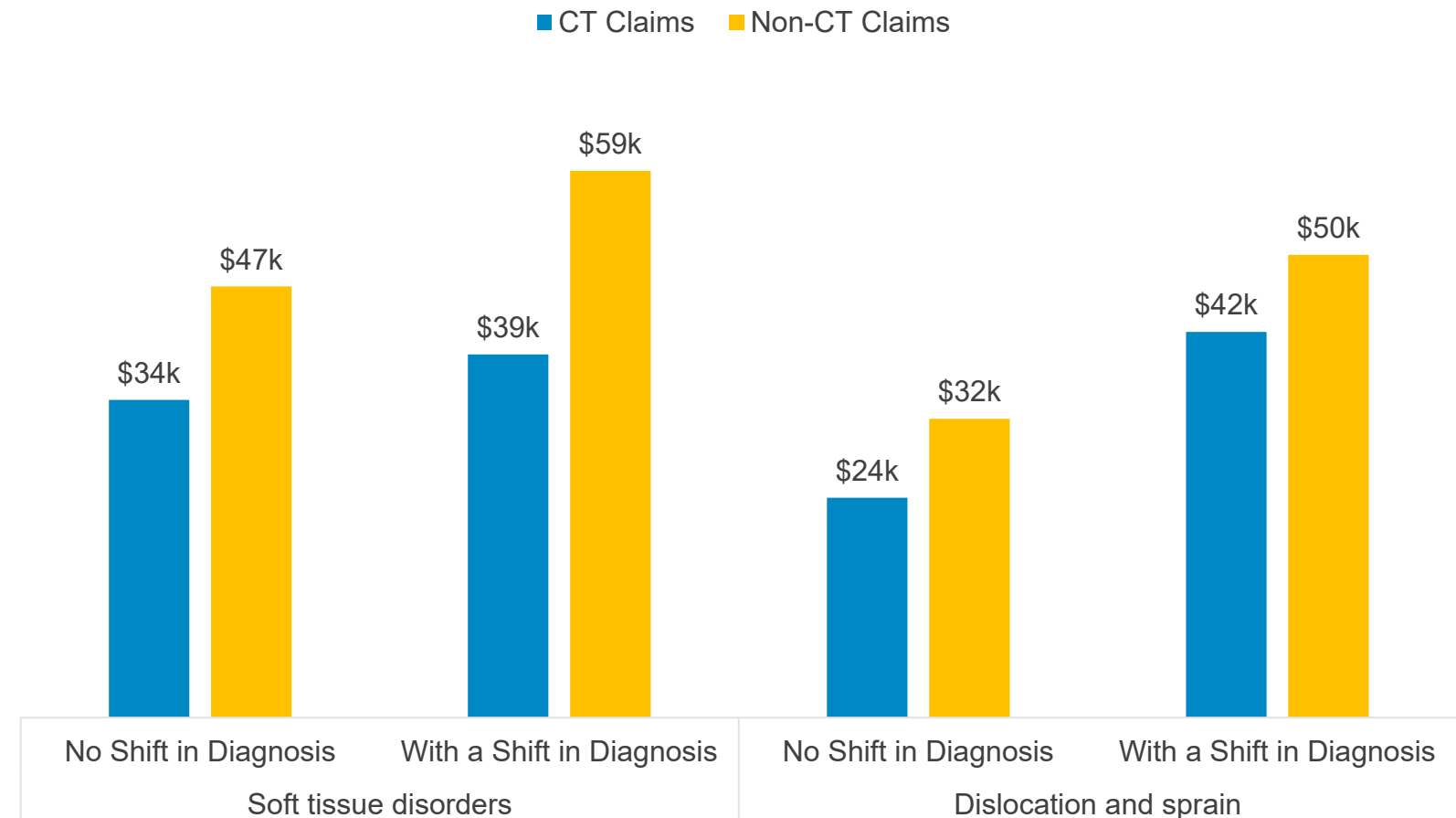
Top Medical Diagnosis	Early Medical Diagnosis Claim Share	Medical Diagnosis Claim Share at 5 th Report Level
Soft tissue disorders	31%	48%
Dislocation and sprain	18%	7%
Carpal Tunnel Syndrome (CTS)	17%	12%
Multiple injuries incl. CTS	13%	9%
Multiple injuries - Soft tissue disorders & dislocation and sprain	4%	4%
Mental & behavioral disorders	3%	5%



Chart 17

- Indemnity non-CT claims that remain open at 5th report level (66 months from policy inception) typically incur higher average medical costs than CT claims, which is often driven by higher inpatient and outpatient care costs reflective of the more severe specific injuries. The cost differential between CT and non-CT claims at 5th report level is different for open versus closed indemnity claims (**Chart 15**).
- For both CT and non-CT open claims, those with a diagnosis shift tend to incur higher average medical costs than those without a diagnosis shift.

Diagnosis Shift and Paid Medical Severity for Indemnity Claims Open at 5th Report Level



[More Info](#)



Chart 18

- CT claims tend to be reported later, resulting in a significantly longer time from the reported injury date to the first medical treatment than for non-CT claims.
- The time lag on CT claims is more than a month for single injuries, while the lag tends to be shorter for multiple injuries given the need for more immediate medical care. However, the significantly longer time is still present on CT claims involving multiple injuries.

Median Time (Days) from Reported Injury Date to First Medical Treatment

Top Medical Diagnosis	CT Indemnity Claims	Non-CT Indemnity Claims	Difference between CT and non-CT Claims
Soft tissue disorders	57	5	52
Dislocation and sprain	48	2	46
Carpal Tunnel Syndrome (CTS)	27	N/A	N/A
Mental & behavioral disorders	62	19	43
Multiple injuries incl. CTS	8	N/A	N/A
Multiple injuries - Soft tissue disorders & dislocation and sprain	25	2	23

Chart 19

- Among indemnity claims, 14% of CT claims have medical liens as first medical service compared to only 2% on non-CT claims. The higher share of medical liens as first medical service on CT claims is consistent for the leading medical diagnoses.
- The pattern of liens as first service on CT claims is potentially driven by payments for medical treatments provided before the claims were accepted given CT claims have a relatively high denial rate.

Share of Indemnity Claims with Medical Liens as First Service

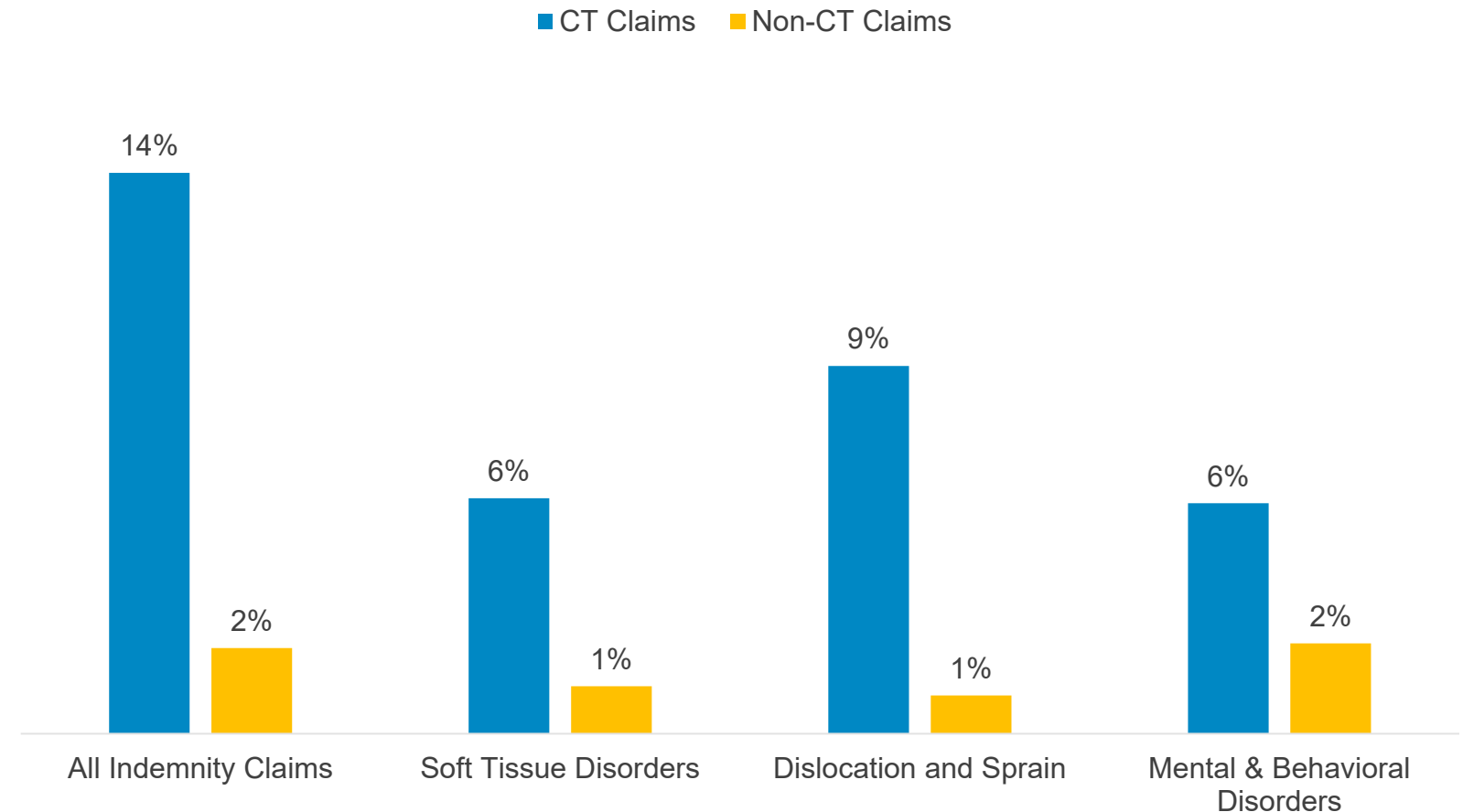
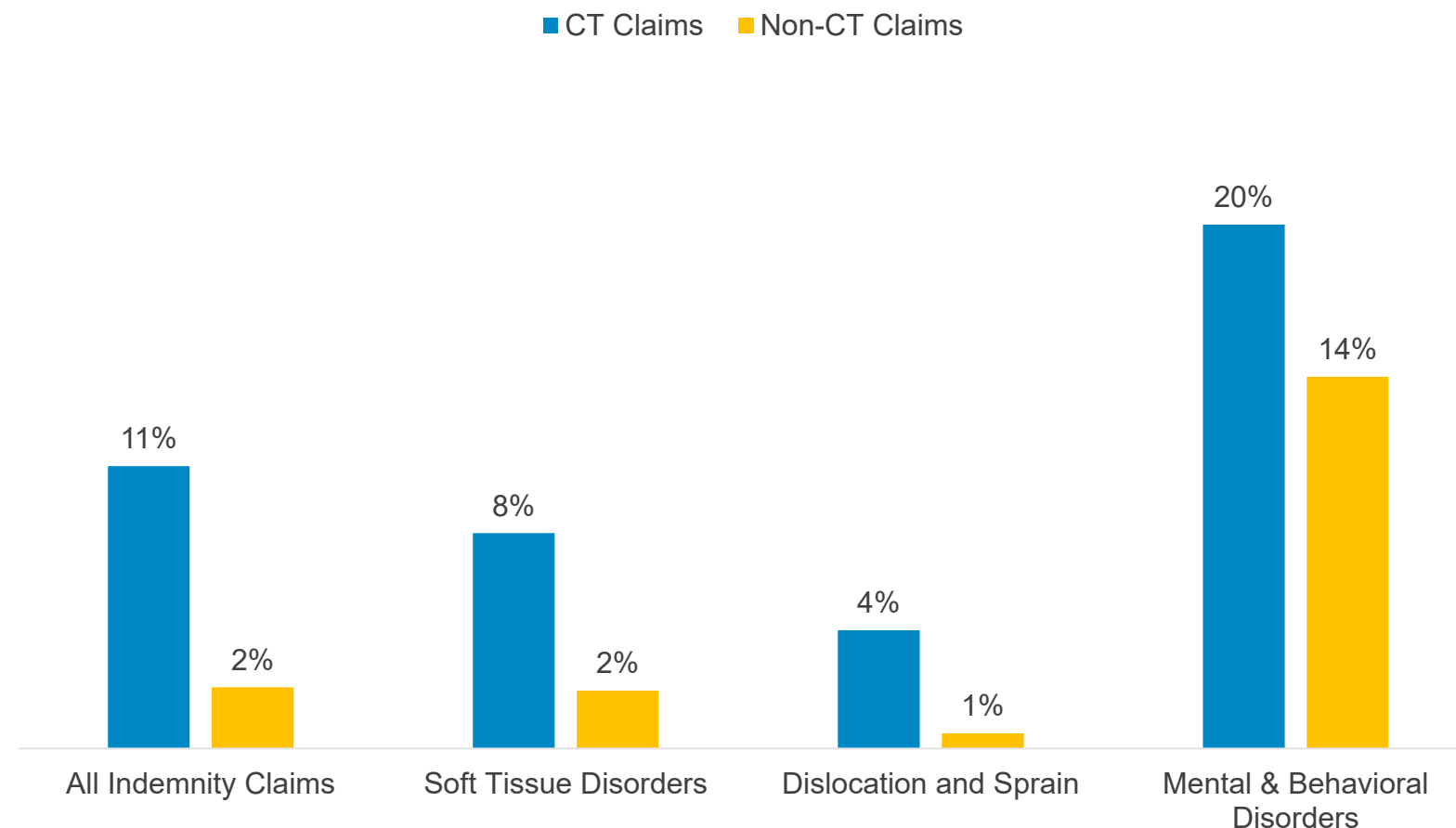





Chart 20

- Similar to medical liens ([Chart 19](#)), medical-legal services are more likely to be the first service on CT indemnity claims than on non-CT claims. The higher share is consistent among the leading medical diagnoses.
- Compared to other medical diagnoses, claims involving mental and behavioral disorders tend to use medical-legal as the first service for both CT and non-CT claims, potentially due to more disputes over compensability issues before medical treatment.

Share of Indemnity Claims with Medical-Legal as First Service



[More Info](#)

A background image showing a physical therapist in blue scrubs examining a patient's back. The therapist's hands are on the patient's shoulder and upper back. The patient is wearing a blue shirt.

03 Post-Termination Cumulative Trauma Claims



Background and Analysis Approach

Post-employment or post-termination CT claims are typically filed after employment is terminated. In the California workers' compensation system, filing of post-termination claims was restricted by 1993 reform legislation. As a result, post-termination claims were relatively rare in California until recent years. Beginning in 2011, several judicial decisions led to an expanded interpretation of the legal limitation on filing post-termination claims. These decisions enabled more workers to file CT claims after their employment was terminated. Subsequently, CT claims filed after the termination of employment have become significantly more common, particularly in the Los Angeles Basin.

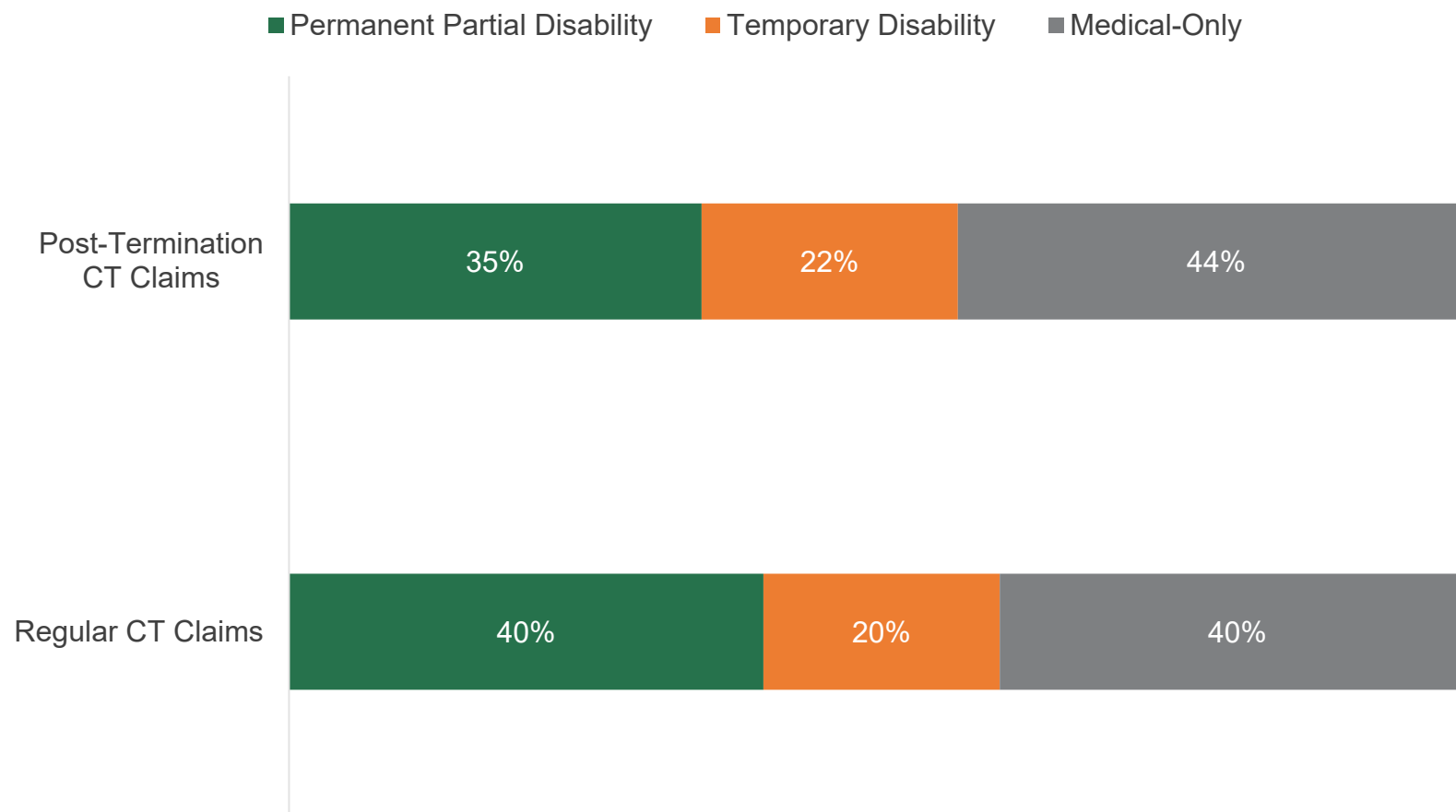
This section focuses on the characteristics of one type of post-termination CT claims – those filed after the employer shuts down or has a large layoff. For this analysis, five or more CT claims that are filed from the same employer on the same reported injury date between 2013 and 2019 are considered post-termination CT claims in our study sample. This sample of post-termination CT claims includes about 4,000 claims, which are the basis of our analysis.



Chart 21

- Overall, claim distribution by injury type is similar between post-termination CT claims and regular CT claims.
- Over one-third of post-termination CT claims involve permanent disability, and over one-fifth involve only temporary disability.

Claim Distribution by Injury Type Post-Termination CT vs. Regular CT Claims



[More Info](#)



Chart 22

- About one-half of the post-termination CT claims in our sample comes from the manufacturing industry, which is more than twice the share among regular CT claims and more than three times the share among non-CT claims. Other leading industry sectors tend to be service sectors.
- The industry sector pattern for post-termination CT claims potentially reflects the impacts of changes in the California economy on the workforce.

Leading Industry Sectors

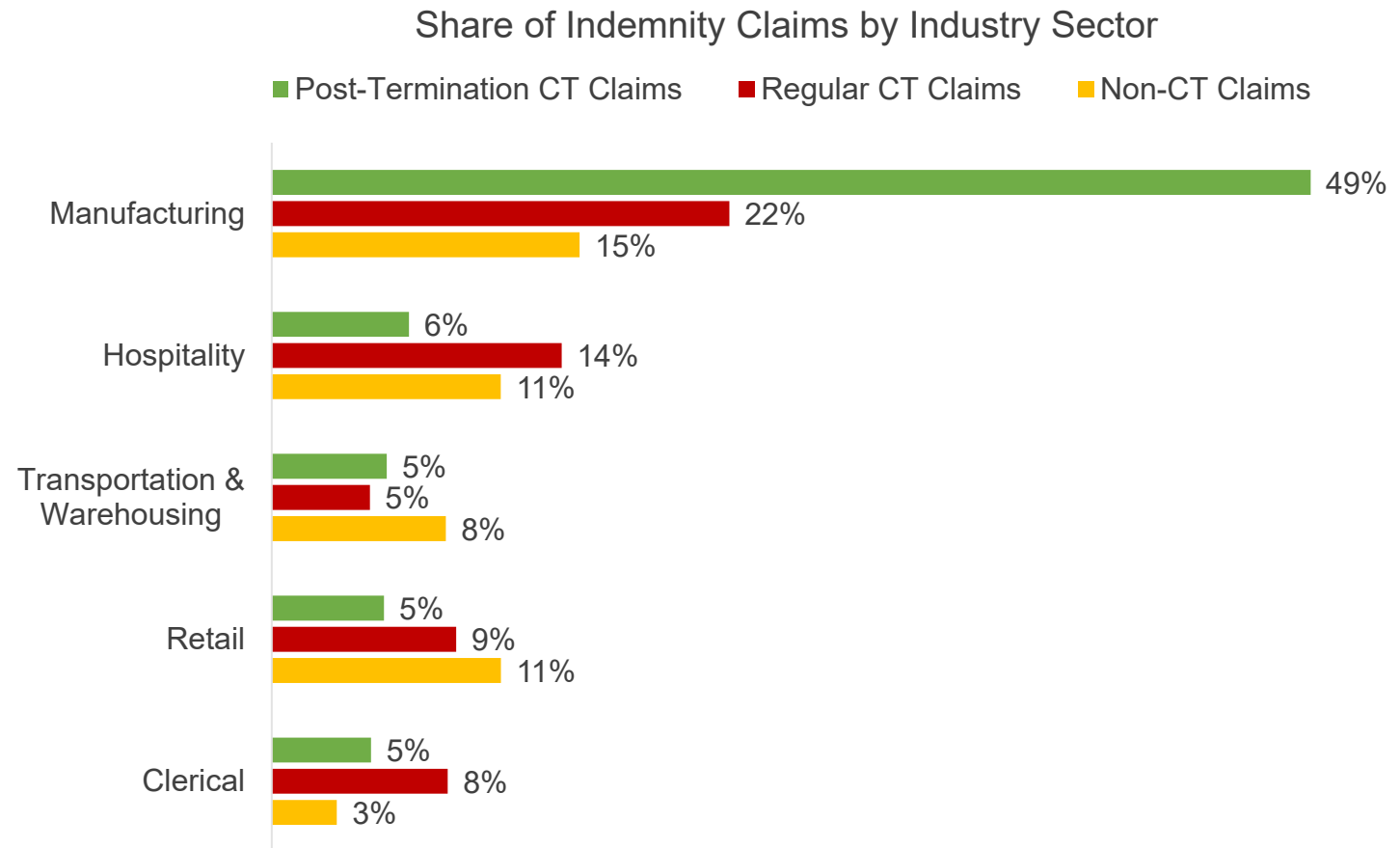




Chart 23

- Consistent with findings of previous studies, more than 90% of post-termination CT claims in our sample are concentrated in the Los Angeles Basin, over one-third more than regular CT claims.
- Only 50% of non-CT claims are from the Los Angeles Basin.

Regional Distribution

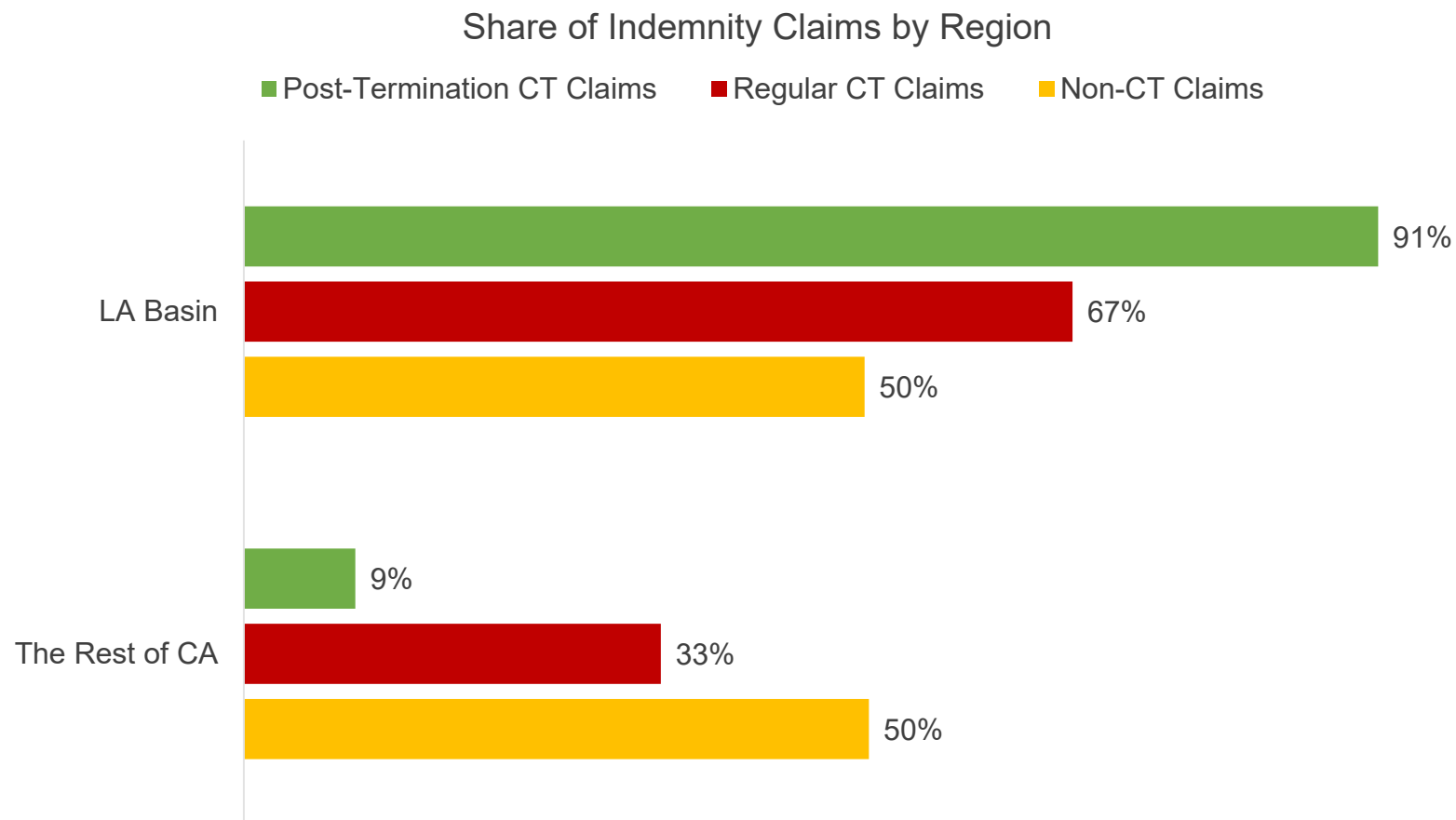




Chart 24

- A quarter of post-termination CT claims are reported after 1st report level (18 months from policy inception), which is more than double the share of regular CT claims that are reported late. The difference is greater on indemnity claims. In contrast, a small share of non-CT claims is reported late.
- The pattern of late reporting may potentially be driven by the fact that post-termination CT claims are filed after the termination of employment and often involve litigation ([Chart 25](#)).

Share of Late Reported Claims

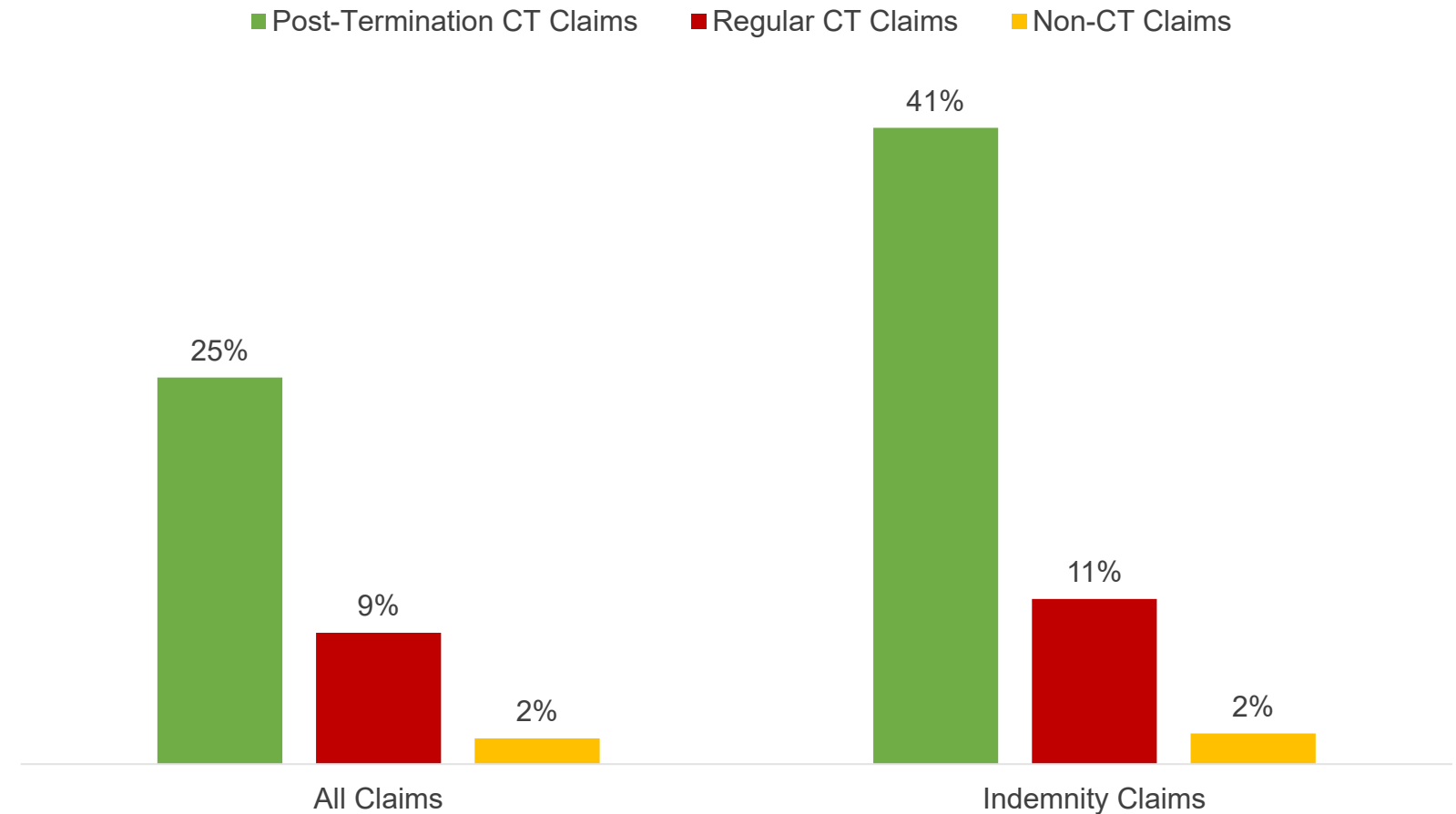


Chart 25

- CT claims have higher ratios of paid ALAE to incurred losses than non-CT claims at each report level. Post-termination CT claims have even higher ratios than regular CT claims, particularly at 3rd report level (42 months from policy inception).
- The pattern suggests that post-termination CT claims are more likely to be litigated and have defense attorney expenses than regular CT and non-CT claims.

Ratio of ALAE to Losses on Indemnity Claims

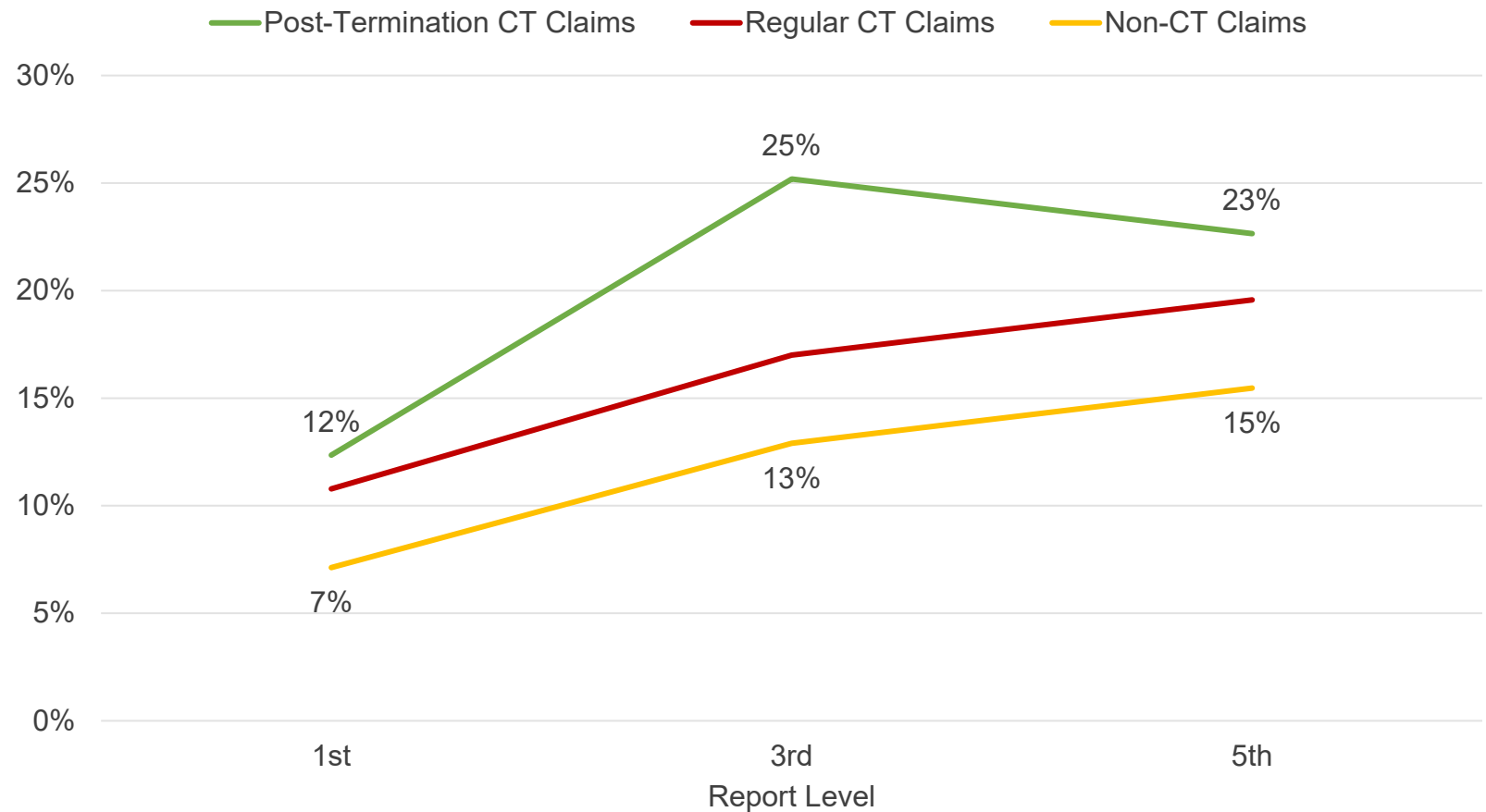




Chart 26

- CT claims overall tend to close more slowly than non-CT claims (**Chart 4**). Post-termination CT claims close more slowly than regular CT claims. By 5th report level (66 months from policy inception), only about 7 out of 10 post-termination CT claims are closed.
- The lower claim closure rate can be attributed to a relatively high level of litigation and disputes on post-termination CT claims (**Charts 25 and 28**).

Indemnity Claim Closure Rate Accident Years 2013-2015

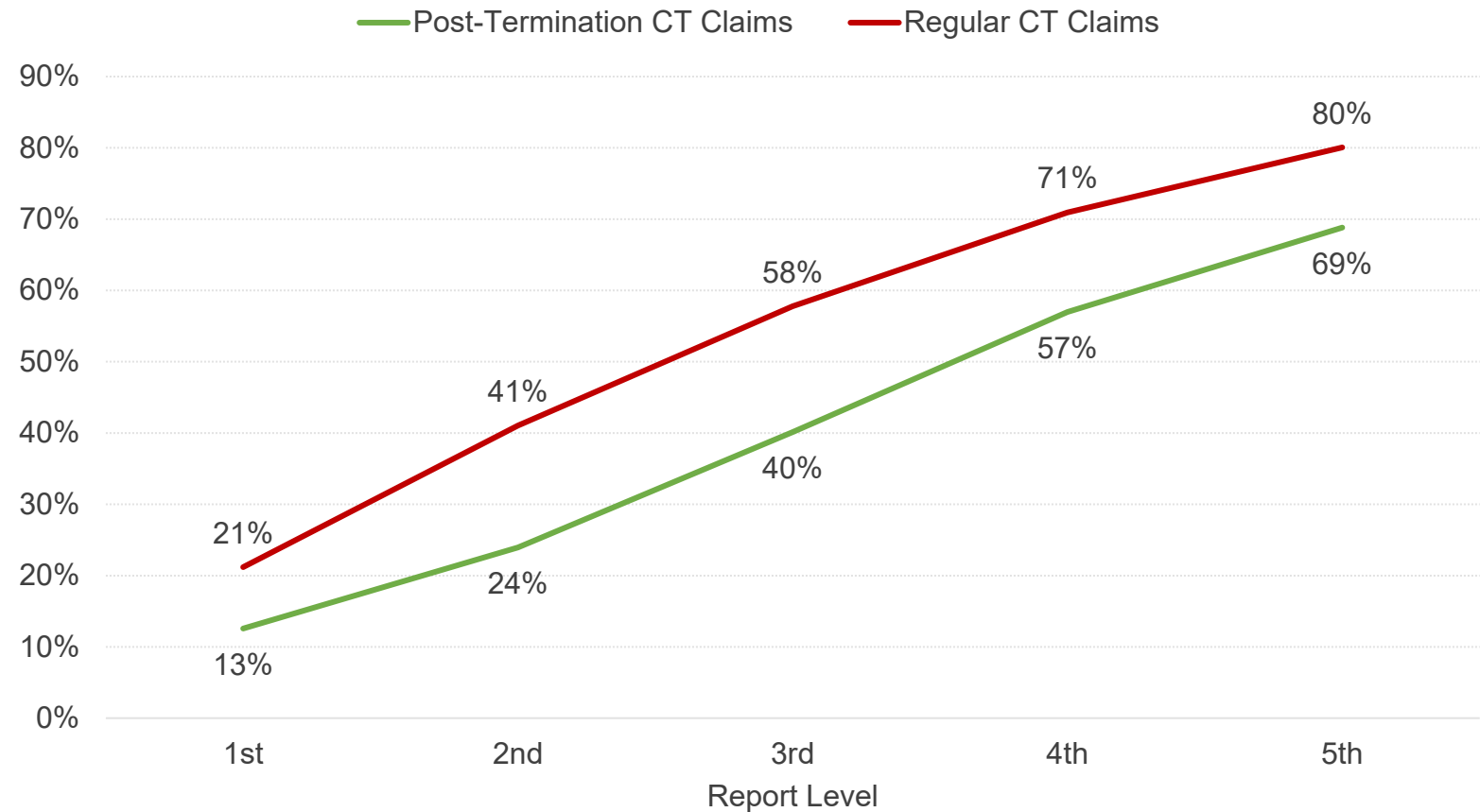
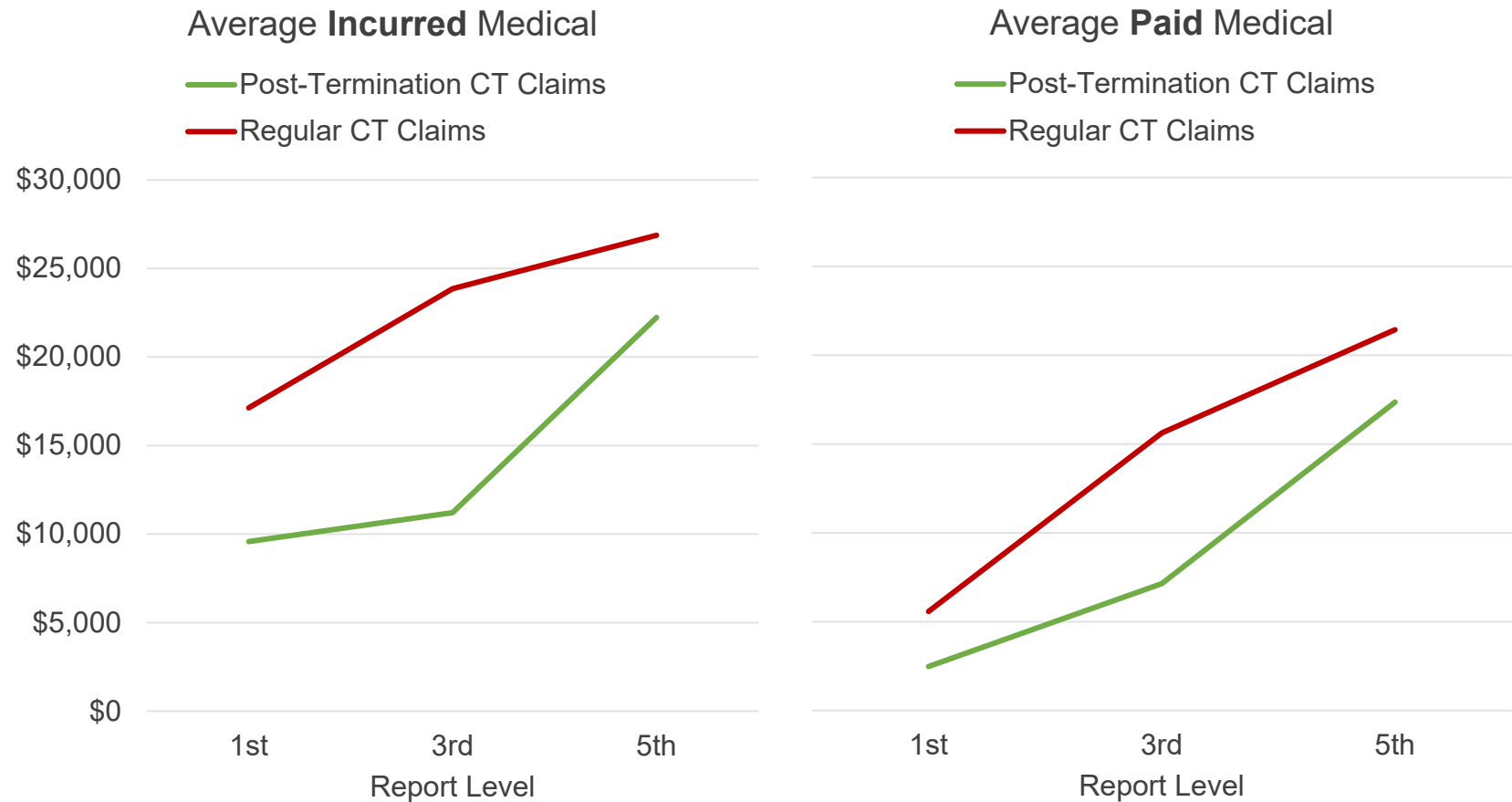




Chart 27

- Post-termination CT claims have both lower incurred and paid medical severity than regular CT claims for the first five report levels.
- However, average severity for post-termination CT claims accelerates from 3rd report level (42 months from policy inception) to 5th report level (66 months from policy inception), while regular CT claims have a slower increase. This is potentially due to late reporting of post-termination CT claims ([Chart 24](#)) that likely leads to more medical payments later in the claim life.

Medical Severity on Indemnity Claims Post-Termination CT vs. Regular CT Claims



[More Info](#)

Chart 28

- CT claims overall have a higher share of medical-legal and medical lien payments than non-CT claims (**Chart 5**). Post-termination CT claims, in particular, have an even higher share of payments for both types of services, suggesting a higher level of disputes than on regular CT claims.
- Post-termination CT claims also have a higher share of payments for medical supplies and equipment, which is primarily driven by the use of interpreter services (**Chart 29**).

Share of Medical Services Paid at 24 Months Post Termination Indemnity CT vs. Regular Indemnity CT Claims

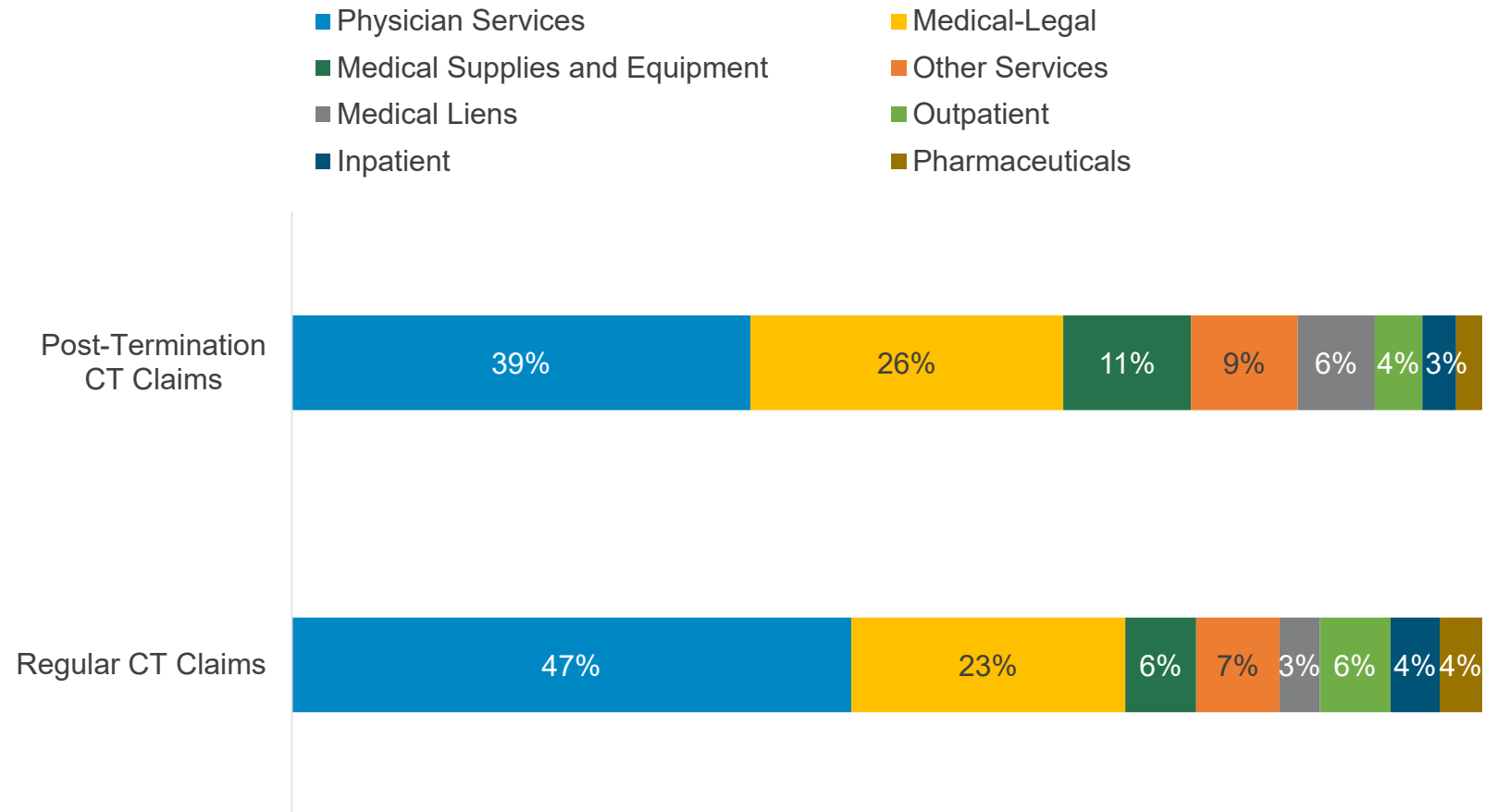




Chart 29

- The share of payments for interpreter services on post-termination CT claims is almost three times higher than that on regular CT claims.
- The higher level of interpreter services is consistent with the dominant region (Los Angeles Basin, [Chart 23](#)) and industry sector (manufacturing, [Chart 22](#)) for post-termination CT claims.

Share of Payments for Interpreter Services at 24 Months

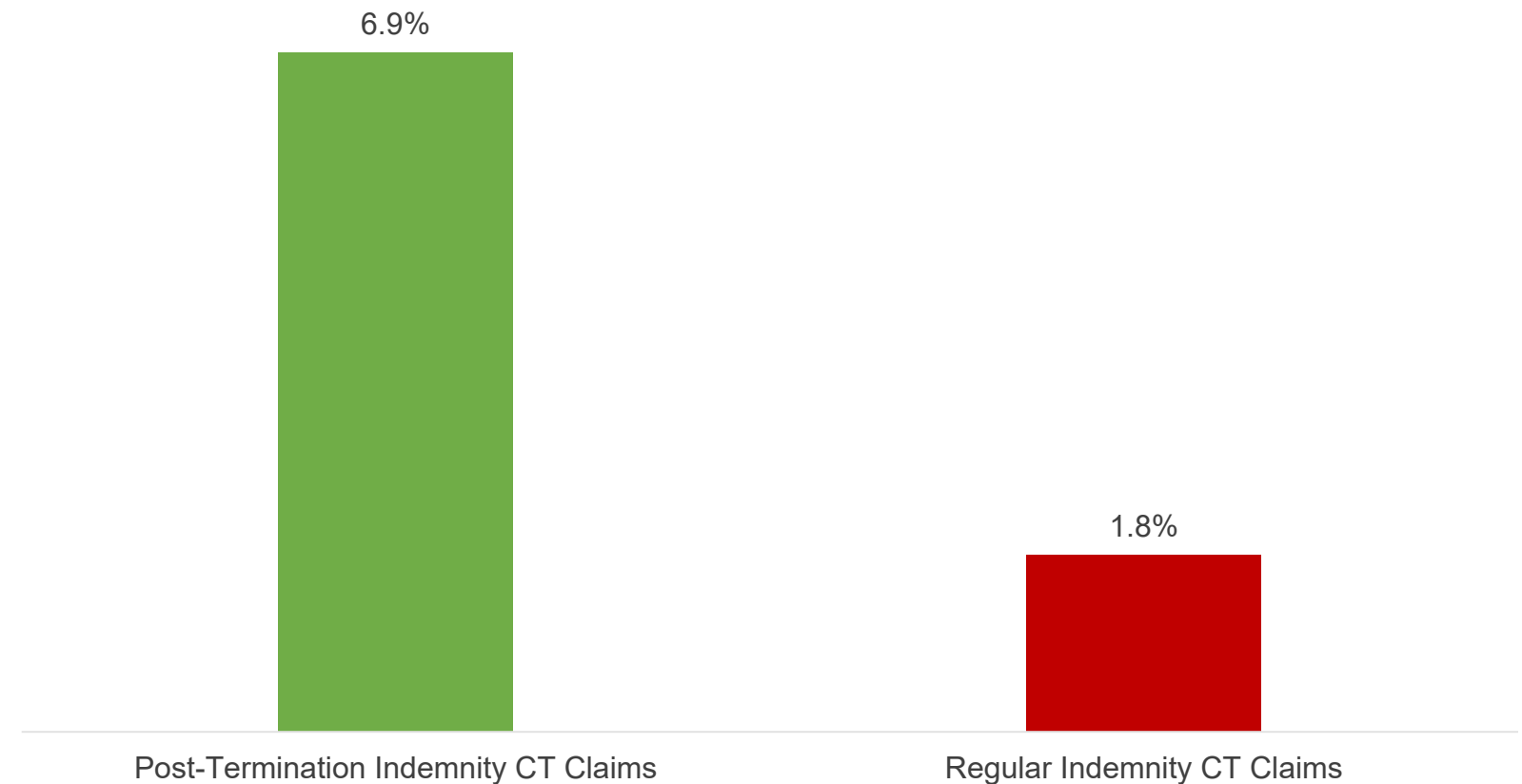




Chart 30

- Over 70% of post-termination CT claims do not have any medical treatment transactions with diagnosis information in the first 90 days to identify the primary medical diagnosis for the work-related injury or disease.
- Among claims with a primary medical diagnosis in the first 90 days, the top diagnoses are generally similar to overall CT claims (**Chart 11**), with a higher share of claims involving dislocation and sprain and mental and behavioral disorders.

Top Medical Diagnoses for Post-Termination CT Claims

Share of claims with no diagnosis information: **72%**

Top Medical Diagnosis	Indemnity Post-Termination CT Claim Share
Soft tissue disorders	27%
Dislocation and sprain	23%
Mental & behavioral disorders	13%
Multiple injuries - Soft tissue disorders & dislocation and sprain	5%
Carpal Tunnel Syndrome (CTS)	5%

More Info



Appendix



More Info

Overall Source Data – Based on WCIRB unit statistical data and medical transaction data for accident years (AY) 2013 through 2019 as of July 7, 2022. Specific data sources for values pulled throughout the report are listed below for each chart.

Key definitions – **CT claims** are defined as a claim with loss type code of 02 or 03, or nature of injury code of 71, 78 or 80 or early medical diagnosis involving carpal tunnel syndrome. **Post-termination CT claims** are defined as five or more CT claims filed from the same employer on the same accident date between 2013 and 2019. Loss type, nature of injury and injury type are evaluated at the latest report level as of July 7, 2022.

Chart 1: Claim Distribution by Injury Type

- **Source Data**—WCIRB unit statistical data.

Chart 2: Share of Indemnity Claims with Nontrivial ALAE

- Nontrivial ALAE is defined as paid ALAE greater than \$1,000 at 2nd report level ([Friction in the California Compensation System Study](#)).
- **Source Data**—WCIRB unit statistical data for indemnity claims only.

Chart 3: Medical Severity on Indemnity Claims

- **Source Data**—WCIRB unit statistical data for indemnity claims only.

Chart 4: Indemnity Claim Closure Rate

- **Source Data**—WCIRB unit statistical data for AY2013 indemnity claims only.

Chart 5: Share of Medical Services Paid at 24 Months

- Values at 24 months represent payments for medical services provided within the first two years of the reported accident date.
- Other services include copy services, dental services and unclassifiable procedures.
- **Source Data**—WCIRB medical transaction data for indemnity claims only.

Chart 6: Incremental Share of Payments on Medical Liens

- Each year represents time from the reported accident date to service date.
- Incremental share is the percentage of payments for medical liens relative to all medical payments per year.
- **Source Data**—WCIRB medical transaction data for indemnity claims only.

Chart 7: Medical Liens Paid per Indemnity Claim

- Values represent payments for medical liens provided within the first two years of the reported accident date.
- **Source Data**—WCIRB medical transaction data for indemnity claims only.



More Info (continued)

Chart 8: Utilization and Payments for Medical Liens – Service Years 2013-2021

- Values represent utilization or payments for medical liens provided up to service year 2021.
- Ratio of paid to demand for medical liens is the ratio of the paid amount to the charged amount on lien transactions only where the charged amount is greater than the paid amount.
- **Source Data**—WCIRB medical transaction data for indemnity claims only.

Chart 9: Incremental Share of Payments for Medical-Legal

- Each year represents time from reported accident date to service date.
- Incremental share is the percentage of payments for medical-legal services relative to all medical payments per year.
- Medical-legal services provided before April 1, 2021 were paid under the 2006 Medical-Legal Fee Schedule and those provided on or after April 1, 2021 were paid under the 2021 Medical-Legal Fee Schedule.
- **Source Data**—WCIRB medical transaction data for indemnity claims only.

Chart 10: Utilization and Payments for Medical-Legal Evaluations at 24 Months

- Values at 24 months represent utilization or payments for medical-legal evaluations provided within the first two years of the reported accident date.
- Medical-legal evaluations provided before April 1, 2021 were paid under the 2006 Medical-Legal Fee Schedule and those provided on or after April 1, 2021 were paid under 2021 Medical-Legal Fee Schedule. Separate add-on costs for record review established by the 2021 fee schedule were included in the medical-legal evaluation payments.
- **Source Data**—WCIRB medical transaction data for indemnity claims only and [The World of Cumulative Trauma Claims Study](#).

Chart 11: Top 10 Early Primary Medical Diagnoses

- Early primary medical diagnosis for each claim was developed based on an algorithm using International Classification of Diseases (ICD) information, medical transactions and payment information during the first 90 days from the first medical services on the claim.
- **Source Data**—WCIRB medical transaction data for indemnity claims only.

Chart 12: Share of Closed Claims with a Shift in Primary Medical Diagnosis

- Early primary medical diagnosis for each claim was developed based on an algorithm using ICD information, medical transactions and payment information during the first 90 days from the first medical services on the claim.
- Final primary medical diagnosis for each claim was developed based on an algorithm using ICD information, medical transactions and payment information during the last 180 days of the claim life.
- Claim closure status was evaluated at latest report level as of July 7, 2022.
- **Source Data**—WCIRB medical transaction data and WCIRB unit statistical data.

Chart 13: Top Early and Final Primary Medical Diagnoses for Closed Indemnity CT Claims

- Definitions for early primary medical diagnosis and final primary medical diagnosis for closed indemnity CT claims are the same as Chart 12.
- Claim closure status was evaluated at the latest report level as of July 7, 2022.
- **Source Data**—WCIRB medical transaction data and WCIRB unit statistical data for indemnity claims only.



More Info (continued)

Chart 14: Shift in Primary Medical Diagnosis for Closed Indemnity CT Claims

- Definitions for early primary medical diagnosis and final primary medical diagnosis for closed indemnity CT claims are the same as Chart 12.
- Claim closure status was evaluated at latest report level as of July 7, 2022.
- **Source Data**—WCIRB medical transaction data and WCIRB unit statistical data for indemnity claims only.

Chart 15: Diagnosis Shift and Paid Medical Severity for Closed Indemnity CT Claims

- Definitions for early primary medical diagnosis and final primary medical diagnosis are the same as Chart 12.
- Claim closure status and paid medical were evaluated at latest report level as of July 7, 2022.
- **Source Data**—WCIRB medical transaction data and unit statistical data for indemnity claims only.

Chart 16: Top Primary Medical Diagnoses for Indemnity CT Claims Open at 5th Report Level

- Early primary medical diagnosis for each claim was developed based on an algorithm using ICD information, medical transactions and payment information during the first 90 days from the first medical services on the claim.
- Primary medical diagnosis at 5th report level for each claim was developed based on an algorithm using ICD information, medical transactions and payment information during the last 180 days of the claim life by the 5th report level.
- Claim closure status was evaluated at 5th report level.
- **Source Data**—WCIRB medical transaction data and WCIRB unit statistical data for indemnity claims only.

Chart 17: Diagnosis Shift and Paid Medical Severity for Indemnity Claims Open at 5th Report Level

- Definitions for early primary medical diagnosis and final primary medical diagnosis for open indemnity claims are the same as Chart 16.
- Claim closure status and paid medical were evaluated at 5th report level.
- **Source Data**—WCIRB medical transaction data and unit statistical data for indemnity claims only.

Chart 18: Median Time (Days) from Reported Injury Date to First Medical Treatment

- Definition for early primary medical diagnosis is the same as Chart 11.
- **Source Data**—WCIRB medical transaction data for indemnity claims only.

Chart 19: Share of Indemnity Claims with Medical Liens as First Service

- Definition for early primary medical diagnosis is the same as Chart 11.
- **Source Data**—WCIRB medical transaction data for indemnity claims only and [The World of Cumulative Trauma Claims Study](#).

Chart 20: Share of Indemnity Claims with Medical-Legal as First Service

- Definition for early primary medical diagnosis is the same as Chart 11.
- **Source Data**—WCIRB medical transaction data for indemnity claims only.



More Info (continued)

Chart 21: Claim Distribution by Injury Type – Post-Termination CT vs. Regular CT Claims

- **Source Data**—WCIRB unit statistical data.

Chart 22: Leading Industry Sectors

- Industry sectors were based on NAICS sectors derived from a crosswalk between the reported classification codes and NAICS sector codes.
- **Source Data**—WCIRB unit statistical data for indemnity claims only.

Chart 23: Regional Distribution

- Region is based on the zip code reported on the California workers' compensation policy
- **Source Data**—WCIRB unit statistical data for indemnity claims only.

Chart 24: Share of Late Reported Claims

- Late reported claims represent claims reported between 19 to 30 months from policy inception.
- **Source Data**—WCIRB unit statistical data for indemnity claims only.

Chart 25: Ratio of ALAE to Losses on Indemnity Claims

- Values represent ratio of paid ALAE to total incurred losses.
- Paid ALAE amounts are capped at \$10 million per claim.
- **Source Data**—WCIRB unit statistical data for indemnity claims only.

Chart 26: Indemnity Claim Closure Rate

- **Source Data**—WCIRB unit statistical data for AY2013-2015 indemnity claims only.

Chart 27: Medical Severity on Indemnity Claims – Post-Termination CT vs. Regular CT Claims

- **Source Data**—WCIRB unit statistical data for indemnity claims only.

Chart 28: Share of Medical Services Paid at 24 Months – Post-Termination CT vs. Regular CT Claims

- Values at 24 months represent payments for medical services provided within the first two years of the reported accident date.
- Other services include copy services, dental services and unclassifiable procedures.
- **Source Data**—WCIRB medical transaction data for indemnity claims only.

Chart 29: Share of Payments for Interpreter Services at 24 Months

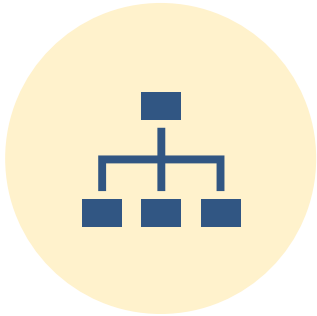
- Values at 24 months represent payments for interpreter services provided within the first two years of the reported accident date.
- Interpreter services are medical transactions reported with a primary procedure code of T1013.
- **Source Data**—WCIRB medical transaction data for indemnity claims only.

Chart 30: Top Medical Diagnoses for Post-Termination CT Claims

- Definition for early primary medical diagnosis is the same as Chart 11.
- **Source Data**—WCIRB medical transaction data for indemnity claims only.



Conditions and Limitations



The information presented reflects a compilation of individual insurer submissions of information to the WCIRB. While the individual insurer data submissions are regularly checked for consistency and comparability with other data submitted by the insurer as well as with data submitted by other insurers, the WCIRB can make no warranty with respect to the information provided by third parties.



Unless otherwise noted, the information in this report is based on the reported experience of insured employers only and may or may not be indicative of the experience of the state as a whole including self-insured employers.



WCIRB estimates were based on information available at the time of this study. If subsequent information becomes available that changes the basis of our assumptions, these estimates would of course be affected.



The amounts and ratios shown represent statewide totals based on the amounts reported by insurers writing workers' compensation insurance in California. The results for any individual insurer can differ significantly from the statewide average. An individual insurer's results are related to its underwriting book of business, claims and reserving practices, as well as the nature of its reinsurance arrangements.



Notice and Copyright

This *WCIRB Medical Characteristics of Cumulative Trauma Claims* (Report) was developed by the Workers' Compensation Insurance Rating Bureau of California (WCIRB) for your convenience as a member of the WCIRB. The Report contains information for a specific period of time and may not reflect long term trends before or after the specific period addressed in the Report. The WCIRB has made reasonable efforts to ensure the accuracy of the Report but cannot guarantee the accuracy of the data or the data source. You must make an independent assessment regarding the use of these Reports based upon your particular facts and circumstances. © 2022 Workers' Compensation Insurance Rating Bureau of California. All rights reserved.

No part of this work may be reproduced or transmitted in any form or by any means, electronic or mechanical, including, without limitation, photocopying and recording, or by any information storage or retrieval system without the prior written permission of the Workers' Compensation Insurance Rating Bureau of California (WCIRB), unless such copying is expressly permitted in this copyright notice or by federal copyright law. No copyright is claimed in the text of statutes and regulations quoted within this work.

Each WCIRB member company, including any registered third party entities, (Company) is authorized to reproduce any part of this work solely for the following purposes in connection with the transaction of workers' compensation insurance: (1) as necessary in connection with Company's required filings with the California Department of Insurance; (2) to incorporate portions of this work, as necessary, into Company manuals distributed at no charge only to Company employees; and (3) to the extent reasonably necessary for the training of Company personnel. Each Company and all agents and brokers licensed to transact workers' compensation insurance in the state of California are authorized to physically reproduce any part of this work for issuance to a prospective or current policyholder upon request at no charge solely for the purpose of transacting workers' compensation insurance and for no other purpose. This reproduction right does not include the right to make any part of this work available on any website or any form of social media.

Workers' Compensation Insurance Rating Bureau of California, WCIRB, WCIRB California, WCIRB Connect, WCIRB Inquiry, WCIRB CompEssentials, X-Mod Direct, eSCAD, Comprehensive Risk Summary, X-Mods and More, Annual Business Comparative and the WCIRB California logo (WCIRB Marks) are registered trademarks or service marks of the WCIRB. WCIRB Marks may not be displayed or used in any manner without the WCIRB's prior written permission. Any permitted copying of this work must maintain any and all trademarks and/or service marks on all copies.

To seek permission to use any of the WCIRB Marks or any copyrighted material, please contact the WCIRB at customerservice@wcirb.com.

Workers' Compensation Insurance Rating Bureau of California

1901 Harrison Street, 17th Floor
Oakland, CA 94612
888.CA.WCIRB (888.229.2472)

wcirb.com



wcirb.com

WCIRBCalifornia™
Objective. Trusted. Integral.

1901 Harrison Street, 17th Floor
Oakland, CA 94612
888.229.2472

© 2022 Workers' Compensation Insurance Rating Bureau of California. All rights reserved.

