

2022

WCIRB Geo Study

A Report on California Regional Differences





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About the WCIRB

For over 100 years, the Workers' Compensation Insurance Rating Bureau of California (WCIRB) has been California's trusted, objective provider of actuarially-based information and research integral to a healthy California workers' compensation system.

As a licensed rating organization and the Insurance Commissioner's designated statistical agent, the WCIRB performs a number of functions, including collection of premium and loss data on every California workers' compensation insurance policy, examination of policy documents, inspection of insured businesses, and test audits of insurer payroll audits and claims classifications. This data is used to advise the Insurance Commissioner and other stakeholders of the costs of providing workers' compensation benefits.

The WCIRB is a California unincorporated, private, nonprofit association comprised of all insurers licensed to transact workers' compensation insurance in California and has over 400 members. No public money is used to fund its operations.

For more information, please visit [wcirb.com](https://www.wcirb.com).

Let us know what you think by emailing us at ActuarialResearch@wcirb.com.

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Executive Summary

The California workers' compensation system is established, administered and interpreted on a statewide basis. Nevertheless, there are sharp differences in cost characteristics across regions of the state. This report highlights those differences.

Key findings include:

Even after controlling for regional differences in wages and industry mix, indemnity claim frequency is significantly higher in the Los Angeles (LA) Basin and significantly lower in the San Francisco Bay Area.

During the pandemic, indemnity claim frequency increased significantly in Orange County relative to the rest of the state and decreased significantly in Ventura and Santa Monica/San Fernando Valley.

The share of open indemnity claims has decreased substantially in all regions since 2013. The decreases have been larger in the LA Basin regions that had the highest initial open indemnity claim shares.

The share of larger indemnity claims (those with incurred costs greater than \$250,000) at third report level tends to be higher in regions that have lower indemnity frequency. Northern California regions, including the Bay Area and Peninsula/Silicon Valley, tend to have higher shares of larger indemnity claims.

During the pandemic, the median injured worker's average weekly wage increased significantly in all regions. The increases were largest in Fresno/Madera, San Gabriel Valley/Pasadena, Santa Monica/San Fernando Valley and Tulare/Inyo. The median wage in these regions has often been lower than the statewide average.

The share of cumulative trauma claims as a percent of all claims increased for all regions during the pandemic. The increase was largest in San Bernardino/West Riverside and LA/Long Beach which also have high relative frequency of indemnity claims. It was also relatively high in the Bay area and Sonoma/Napa which saw decreases in the relative frequency of indemnity claims.

Medical-legal costs are significantly higher in the LA Basin, Orange County and Santa Monica/San Fernando Valley regions than in the remainder of the state.

Paid allocated loss adjustment expenses (ALAE) are significantly higher in Southern California regions.

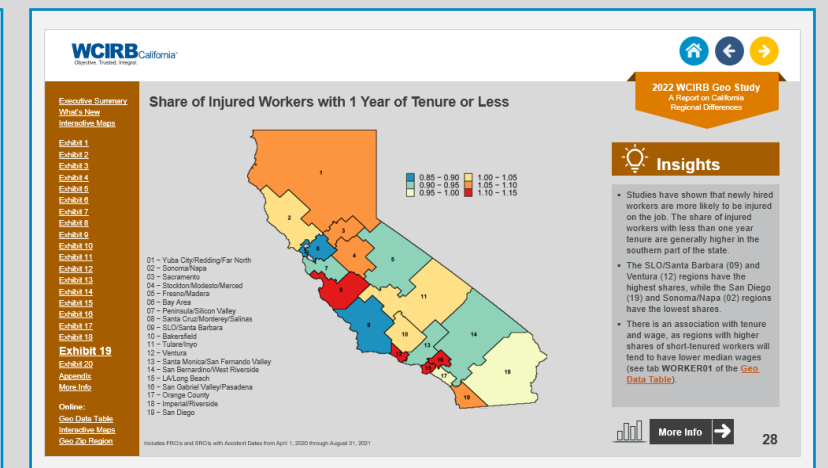
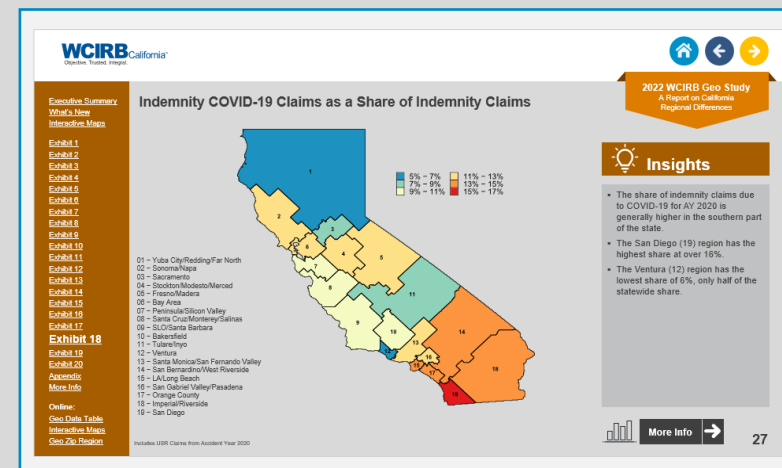
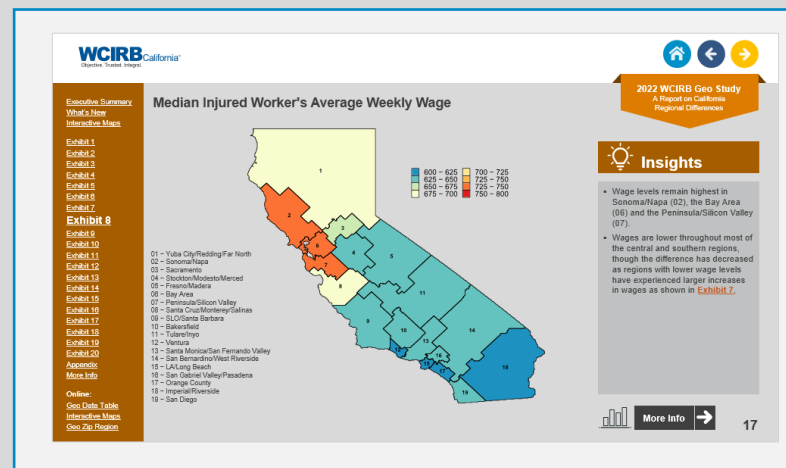
In 2020, nearly one in eight indemnity claims reported in California were due to COVID-19. Shares of COVID-19 claims were higher in Southern California.

Average weekly wages for workers with COVID-19 claims were significantly higher than average weekly wages for workers with non-COVID-19 claims in all regions. The differences were greatest in the Ventura, San Bernardino/West Riverside and San Diego regions.

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What's New

Three new maps, highlighting differences in COVID-19 experience and injured worker tenure, along with supplementary data are provided in this year's study, including:



A [mapping of nine-digit zip codes](#) and regional wage differentials to the study regions shown in [Exhibit 1](#) are available on the [WCIRB Geo Study](#) page on [wcirb.com](#). More information about the development of the maps and the data underlying the maps is included in the [Technical Appendix](#) to this report.

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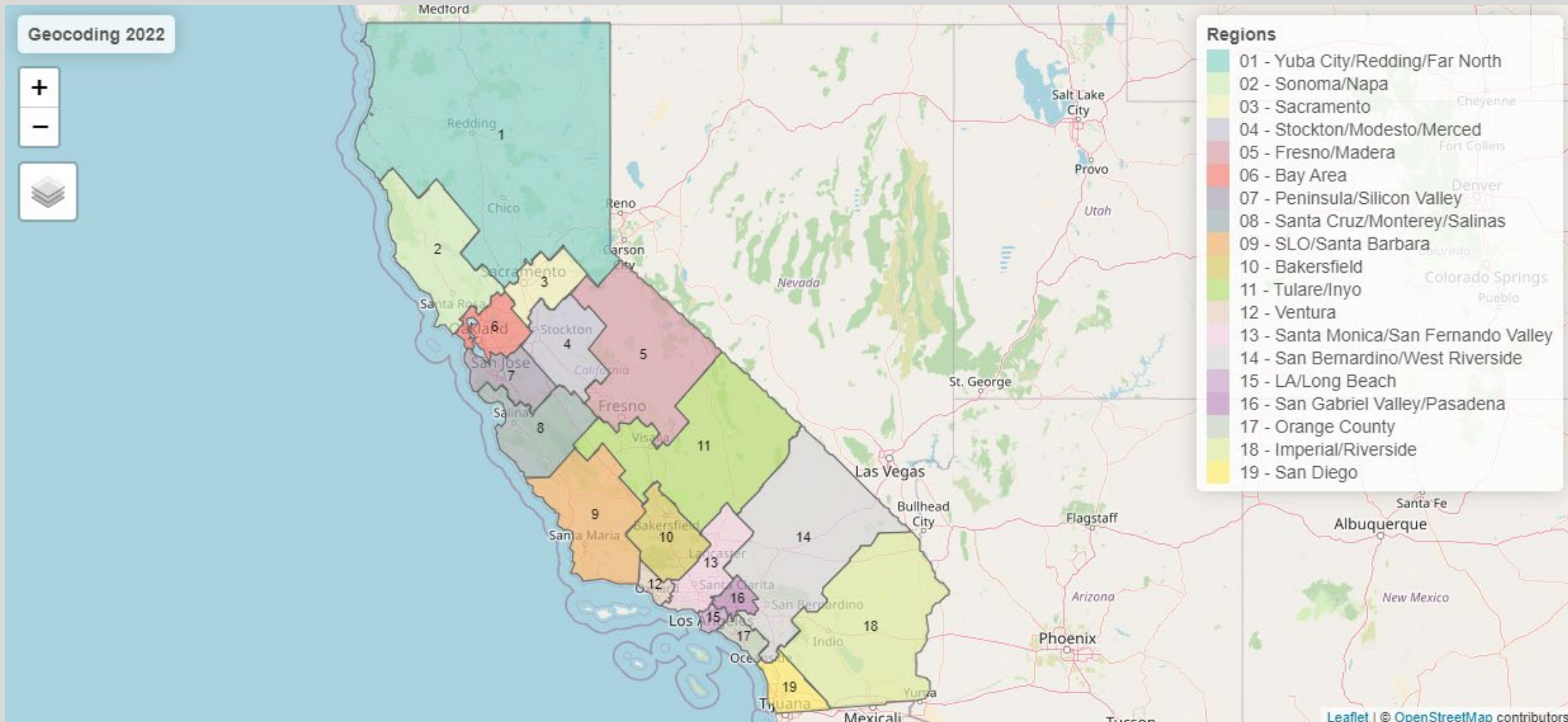
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Interactive Maps

Interactive versions of the geographic maps are now available in html format on the [WCIRB Geo Study](#) page on the WCIRB website.



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Basis of Analysis

- WCIRB staff have developed a dataset that allows estimates of the incidence of exposures and claims by classification and region. The dataset was developed by linking the WCIRB's unit statistical and medical transaction datasets with external data that complements the WCIRB's unit statistical data by providing refined geographical information.
- External data was used to control for regional wage differentials, industry mix and the number of workers at each location. WCIRB staff developed geographic regions that reflect high degrees of medical provider commonality while at the same time being robust, credible and independent of the claim cost measures under study. The [Technical Appendix](#) describes the methodologies used in the study in greater detail.
- This enriched dataset comprises eight policy years of data. For this study, the WCIRB used the experience of policy years 2013 to 2020, which covers policies incepting January 1, 2013 through December 31, 2020 and includes injuries occurring on those policies. Claims due to COVID-19 were excluded from exhibits except where specifically included.

Results

- This study is based on first report level unit statistical data for policy year 2020 that was linked with the WCIRB's medical transaction data and Dun and Bradstreet Hoovers (D&B Hoovers) data. The D&B Hoovers data was used to geolocate exposures by classification.
- Additional unit statistical data from third report level for policy years 2013 to 2018 and from fifth report level for policy years 2013 through 2016 underlies some exhibits and supplementary data tables.
- The WCIRB's medical transaction data was used to geolocate claims. The WCIRB's indemnity transaction data was used to study claims from the 2020 and 2021 accident years. The methods used in this study are discussed in greater detail in the [Technical Appendix](#).

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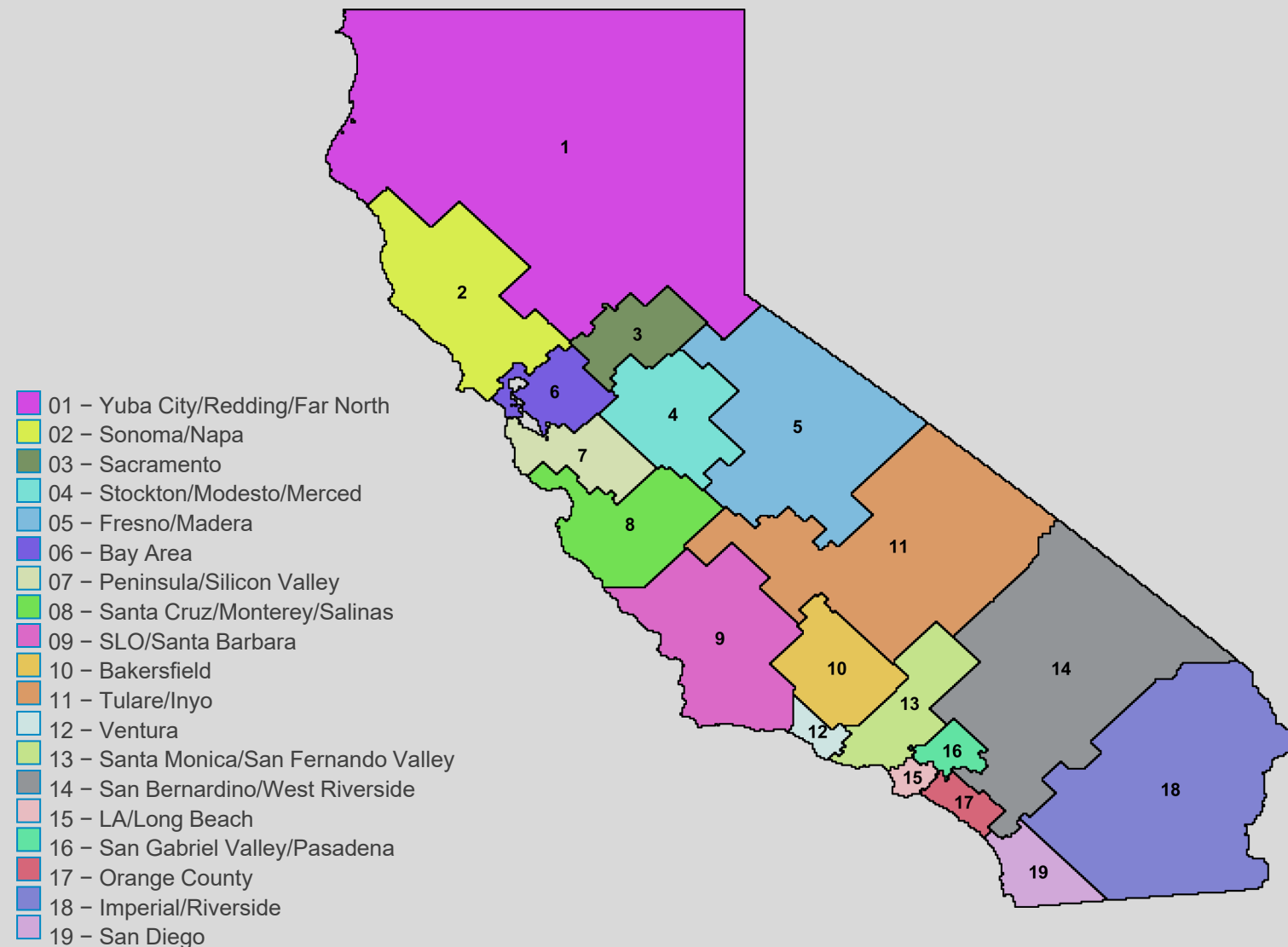
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Exhibits

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Geographic Regions



Description

- This map of the regions was developed by WCIRB staff.
- A mapping of nine-digit zip codes to the study regions is available on the [WCIRB Geo Study](#) page on the WCIRB website.
- The mapping also provides the regional wage relativities used to normalize payrolls across regions.

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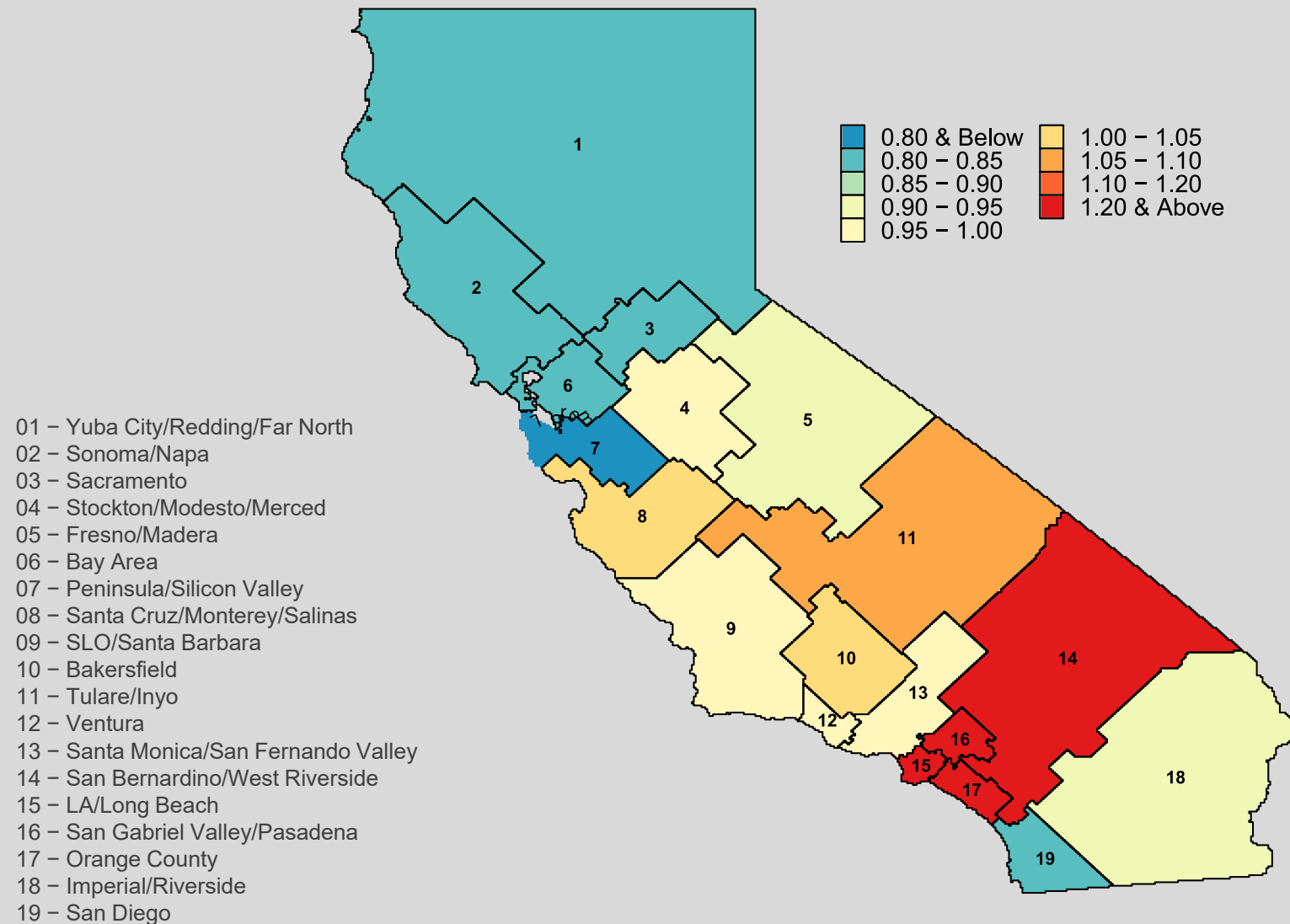
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Indemnity Claim Frequency Relative to Statewide



Insights

- Claim frequencies for the Los Angeles area continue to be significantly higher than the statewide average, while claim frequencies for the Bay Area are lower even after controlling for industry mix and wage level differences.
- The LA/Long Beach (15) region has the highest claim frequency, more than one quarter above average, while the Peninsula/Silicon Valley (07) region has the lowest.
- Regional frequency patterns are generally true at the industry level, though there is significant volatility. These are shown in the [Geo Data Table](#).



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PY 2018 to PY 2020 Change in Indemnity Claim Frequency Relative to Statewide

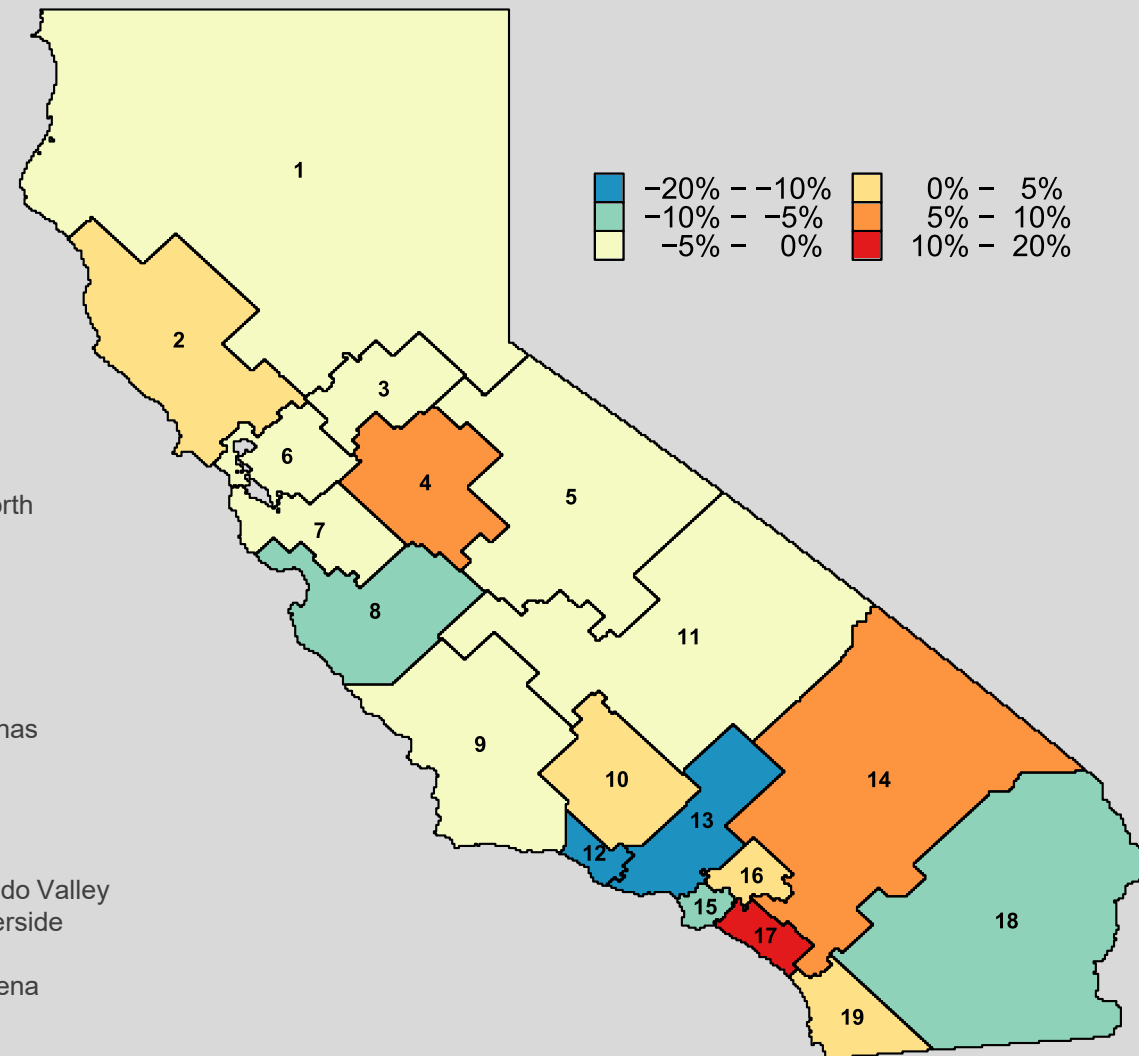
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17 – Orange County
18 – Imperial/Riverside
19 – San Diego



Insights

- Regional differences in indemnity claim frequency have been relatively stable over time for most regions.
- Most regions' two-year changes in frequency relativity are within +/-5%.
- From policy year 2018 to 2020 frequency relativities in Ventura (12) and Santa Monica/San Fernando Valley (13) have decreased by over 10%, while Orange County (17) has increased by 18%.



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PY 2018 to PY 2020 Change in Medical-Only Claim Frequency Relative to Statewide

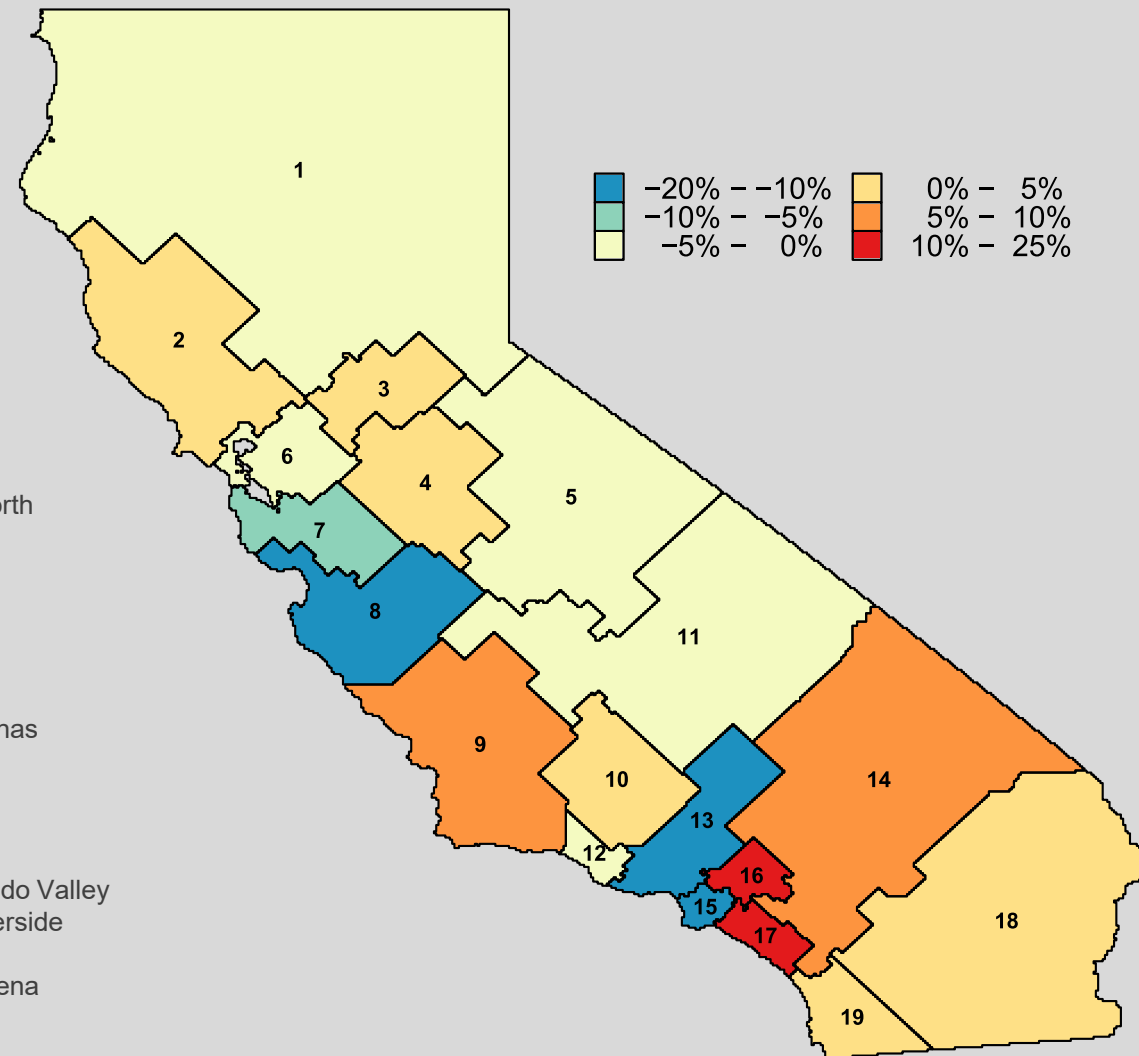
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Insights

- Regional differences in medical-only claim frequency have been relatively stable over time for most regions.
- Most regions' two-year changes in frequency relativity are within +/-5%.
- The largest two-year decline in medical-only frequency relativity occurred in Santa Cruz/Monterey/Salinas (08) at -16.5%, while the largest increase occurred in San Gabriel/Pasadena (16) at 23.7%.



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Limited* Incurred Severity on Indemnity Claims Relative to Statewide

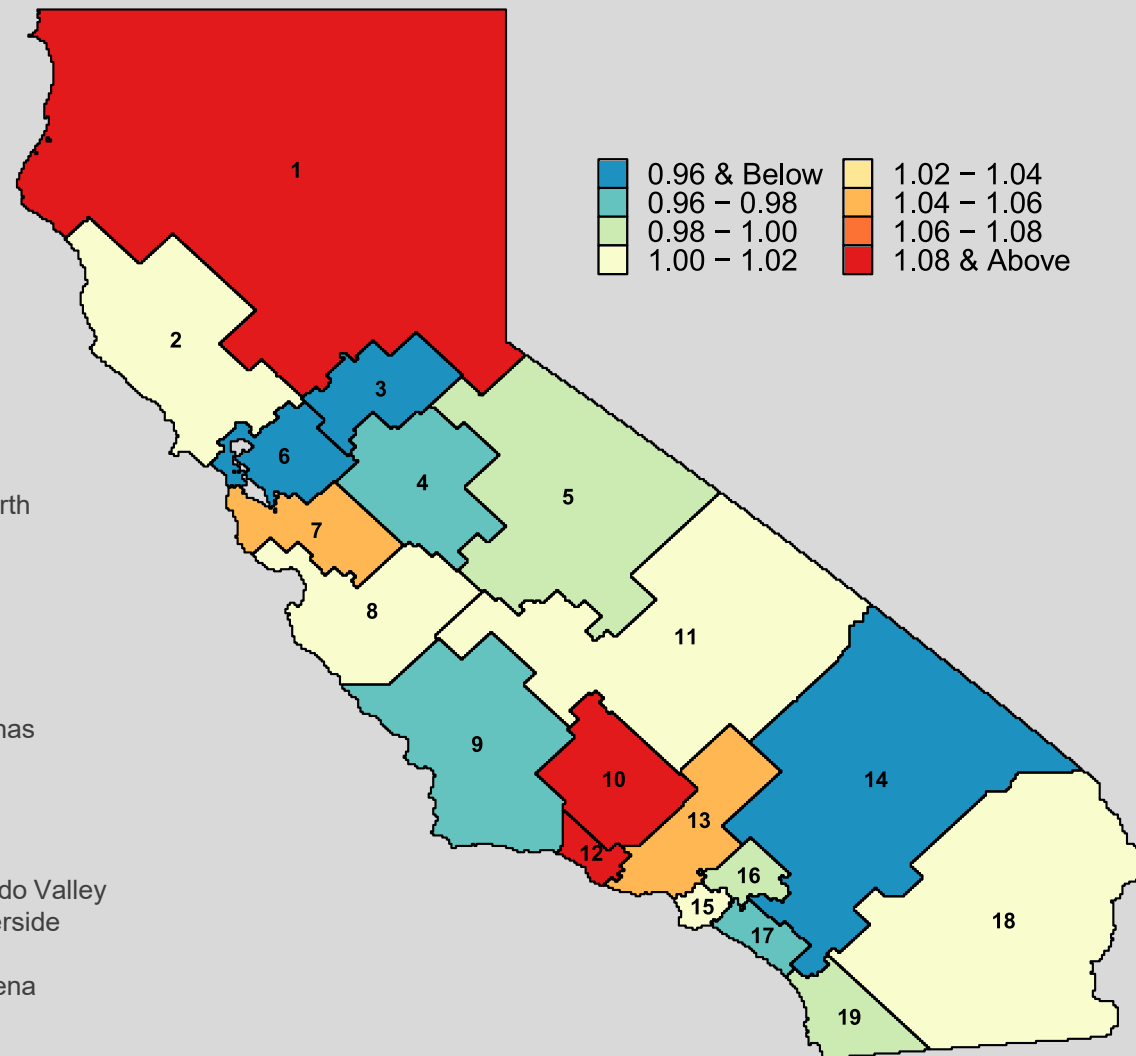
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* Limited to \$500,000



Insights

- Regional differences in indemnity claim severity are more muted than for claim frequency. The severity relativities shown are adjusted for classification mix.
- The highest severity cost region in the state is now Yuba City/Redding/Far North (01), at 13% above average.
- The lowest severity costs are in the Sacramento (03) region, over 8% below average.
- Regional relativities in severities at mature levels (42 and 66 months from policy inception) continue to be very similar to those shown at 18 months maturity for the same policy years (tabs **SEV04** and **SEV05** in the [Geo Data Table](#)).

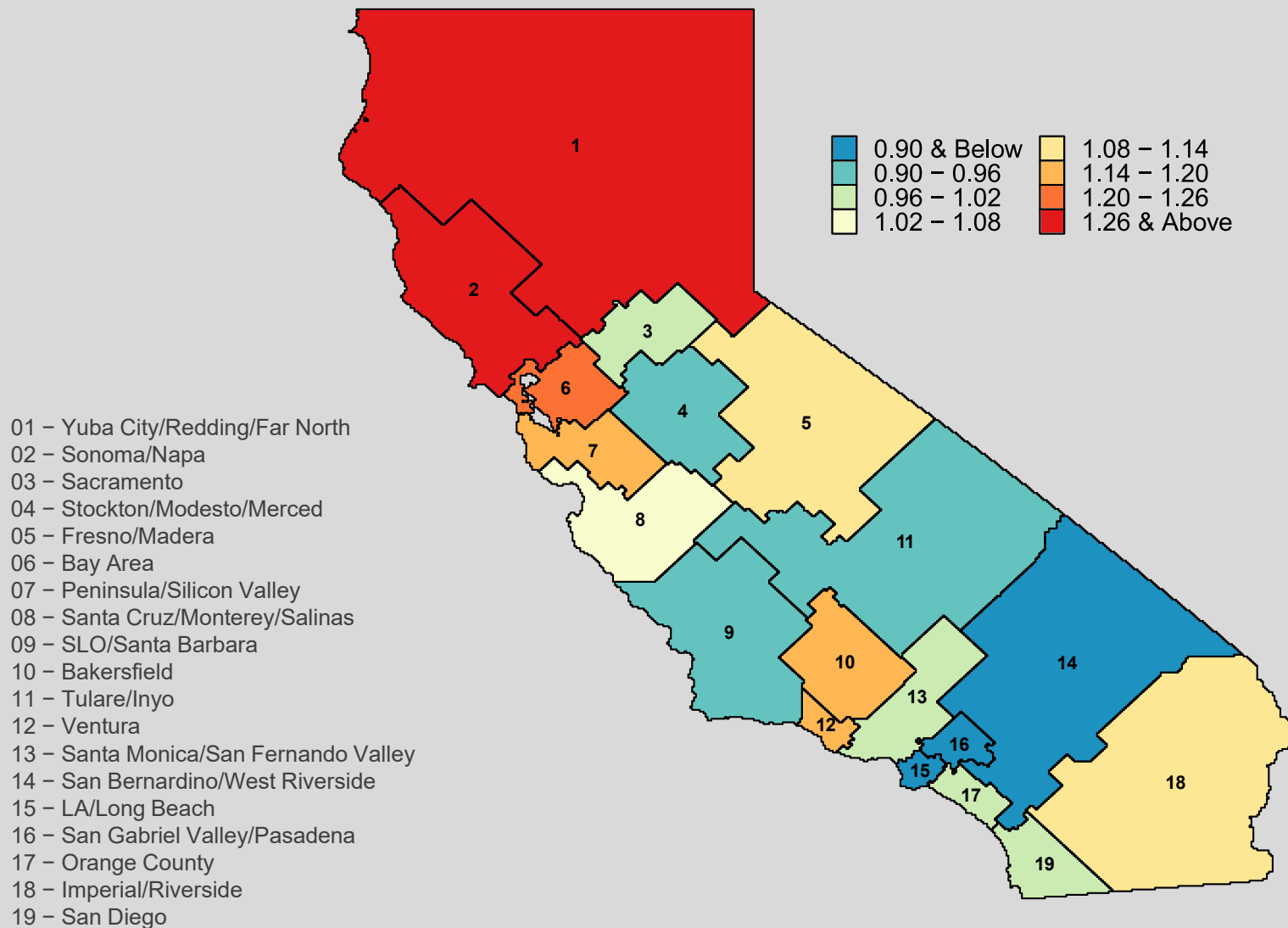


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3-Year Average Ratio of Actual to Expected Indemnity Claims in Excess of \$250,000: RL 3



Insights

- After adjustment for industry mix, regions with lower indemnity frequency tend to have a higher share of large claims.
- The Yuba City/Redding/Far North (01) region has the highest share of large claims, with or without adjustment for industry mix.
- The LA/Long Beach (15) region has a below-average share of large claims, with or without adjustment for industry mix.
- These claims may serve as a leading indicator of extremely large claims. See the multi-jurisdictional study of Countrywide Mega Claims for more information.



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PY 2018 to PY 2020 Change in Median Injured Worker's Average Weekly Wage

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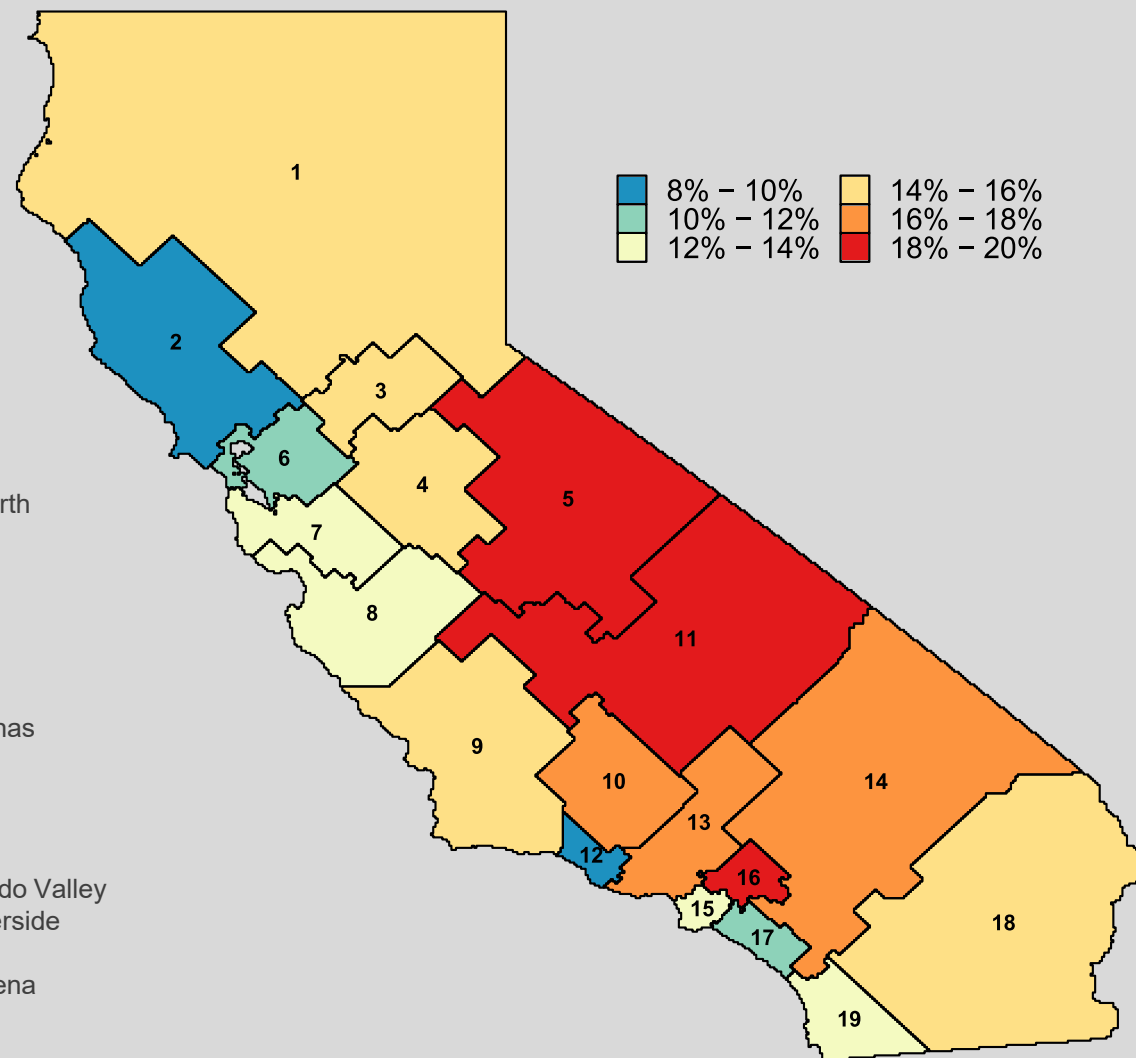
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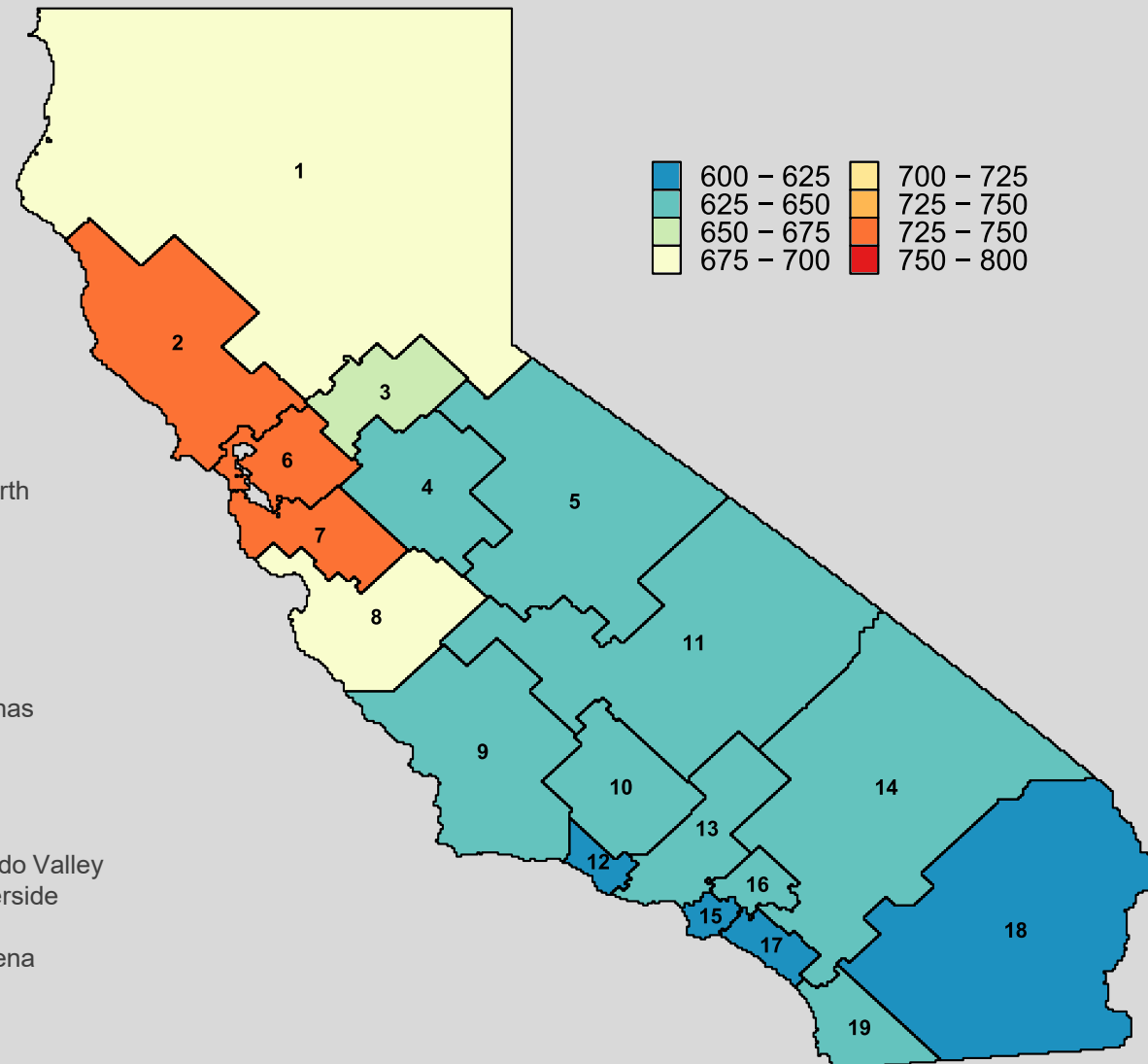
- All regions experienced an increase in median injured worker wages from policy year 2018 to 2020. Wage increases were larger in most of the central and southern regions, which have lower wage levels relative to other part of the state as shown in [Exhibit 8](#).
- The Fresno/Madera (05) and Tulare/Inyo (11) regions both experienced a 19% increase over the past two years.



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Median Injured Worker's Average Weekly Wage



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Insights

- Wage levels remain highest in Sonoma/Napa (02), the Bay Area (06) and the Peninsula/Silicon Valley (07).
- Wages are lower throughout most of the central and southern regions, though the difference has decreased as regions with lower wage levels have experienced larger increases in wages as shown in [Exhibit 7](#).

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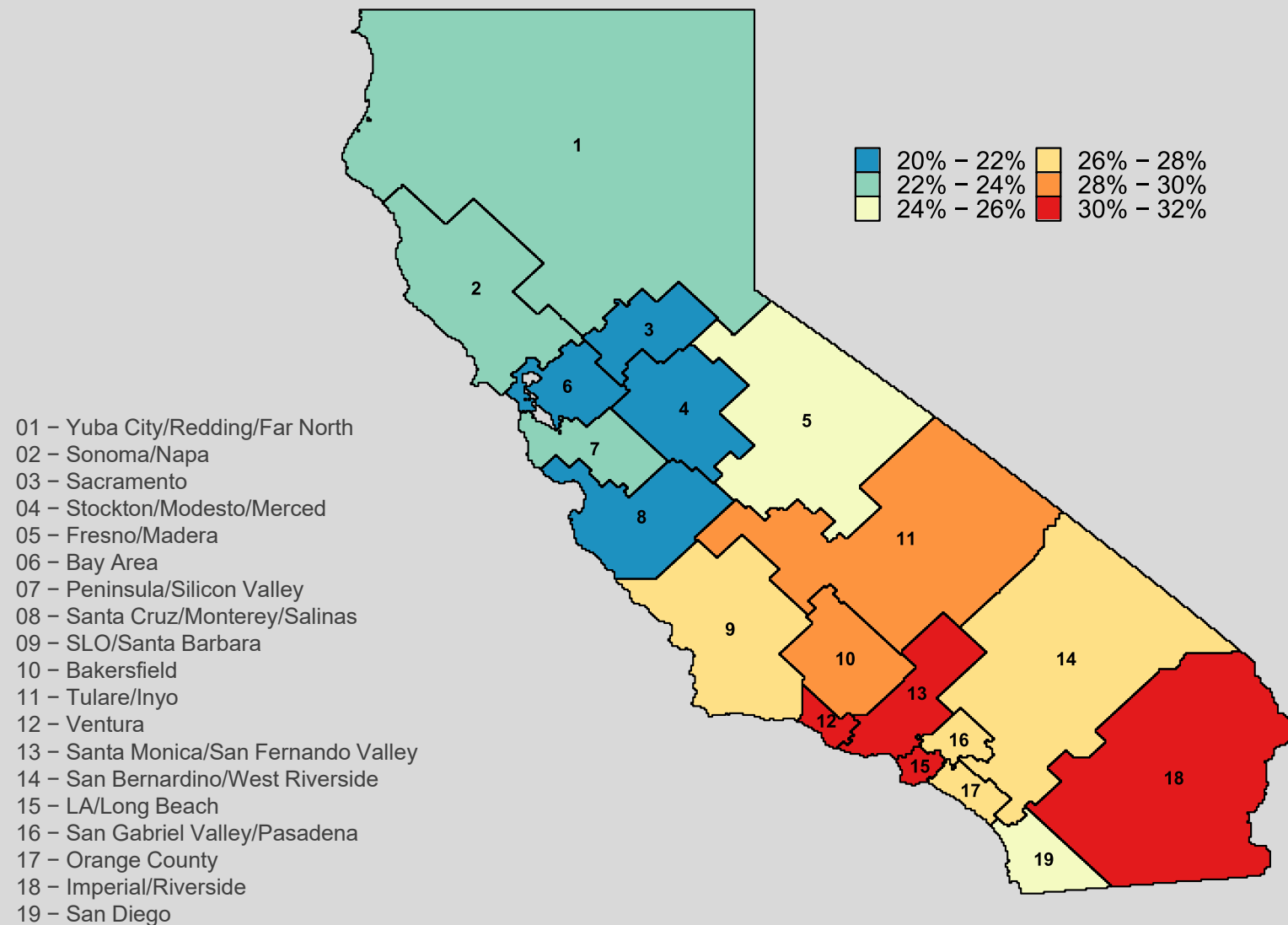
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Permanent Disability Claims as a Share of Indemnity Claims



Insights

- The shares of indemnity claims that are PD claims are higher in Southern California.
- In all Northern California regions, less than 25% of indemnity claims involve permanent disability, while in some Southern California regions, more than 30% involve permanent disability.
- As PD claims are more costly than temporary indemnity claims, regional differences in their shares explain some of the regional differences in average claim severity.
- While the overall share of PD claims increases at later maturities (42 and 66 months from policy inception), regional patterns remain similar. (Tabs **CLAIM03** and **CLAIM04** in the [Geo Data Table](#)).

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PY 2018 to PY 2020 Change in Indemnity Claim Cumulative Injury & Occupational Disease Claims as a Share of Total Claims

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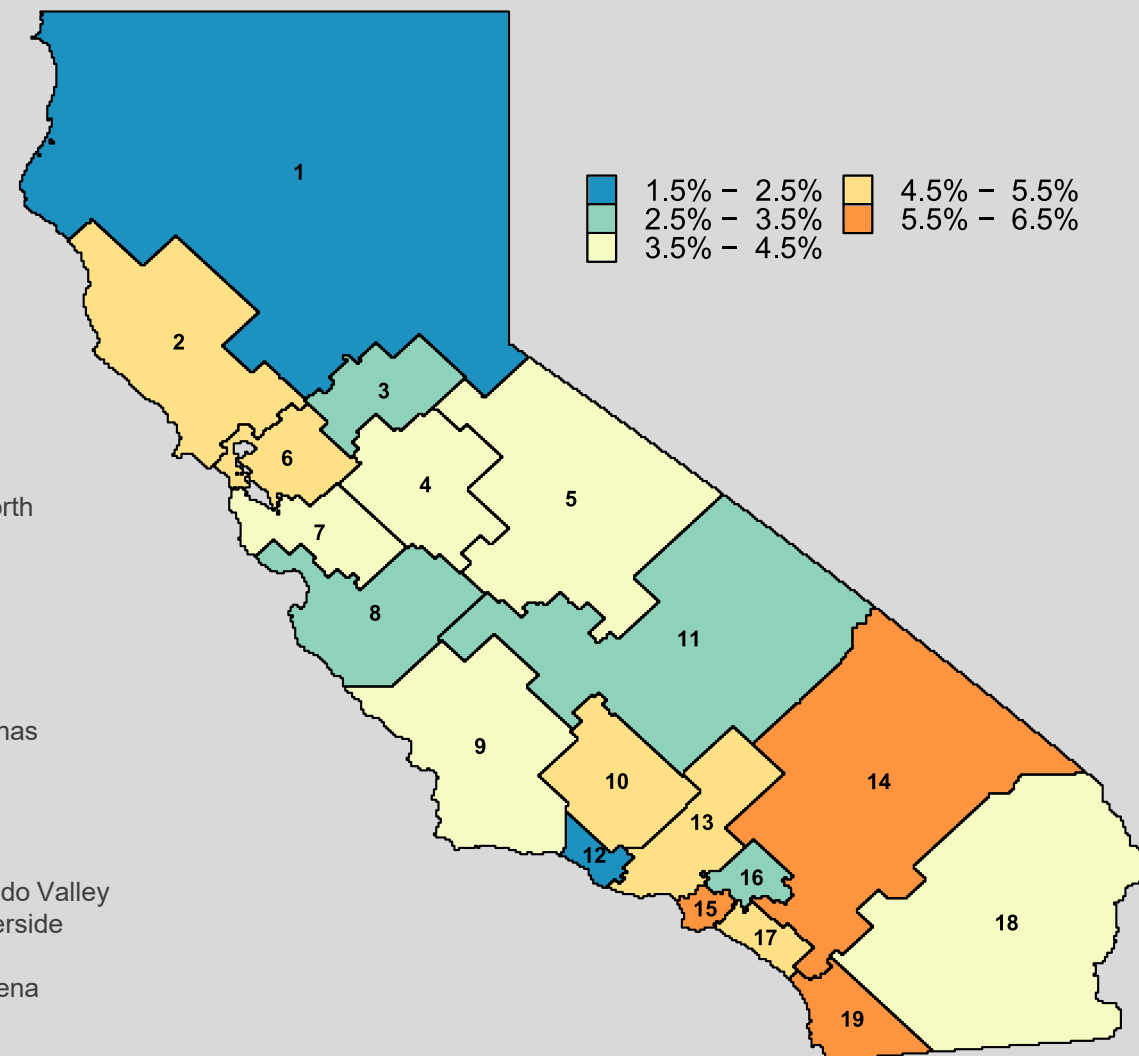
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- 18 – Imperial/Riverside
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Insights

- All regions have experienced an increase in the share of cumulative trauma claims from policy year 2018 to 2020.
- Southern regions generally experienced a slightly greater increase.
- The largest increases of 6% were in the San Bernardino/West Riverside (14) and LA/Long Beach (15) regions, while the smallest increase was 2% in the Tulare/Inyo (11) region.

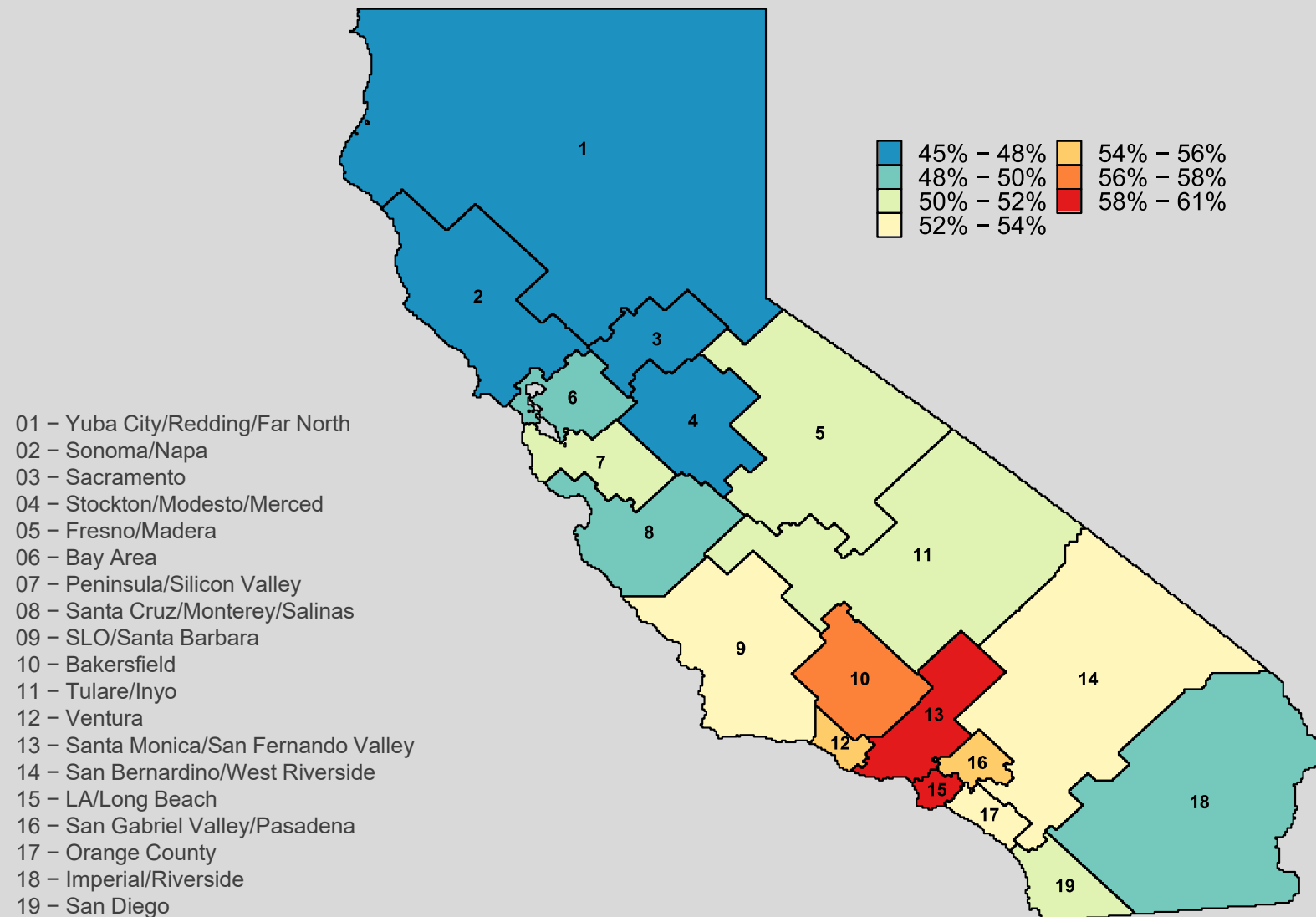


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Open Share of Indemnity Claims



* Limited to \$500,000



Insights

- The share of indemnity claims that are open at first report level (18 months maturity) is significantly higher in Southern California.
- This remains one of the largest regional differences observed in the state.
- Regional differences in the open share of indemnity claims are similar at later maturities (42 and 66 months) as they are at early maturities (18 months) although the size of the difference decreases (tabs **CLAIM13** and **CLAIM14** in the [Geo Data Table](#)).



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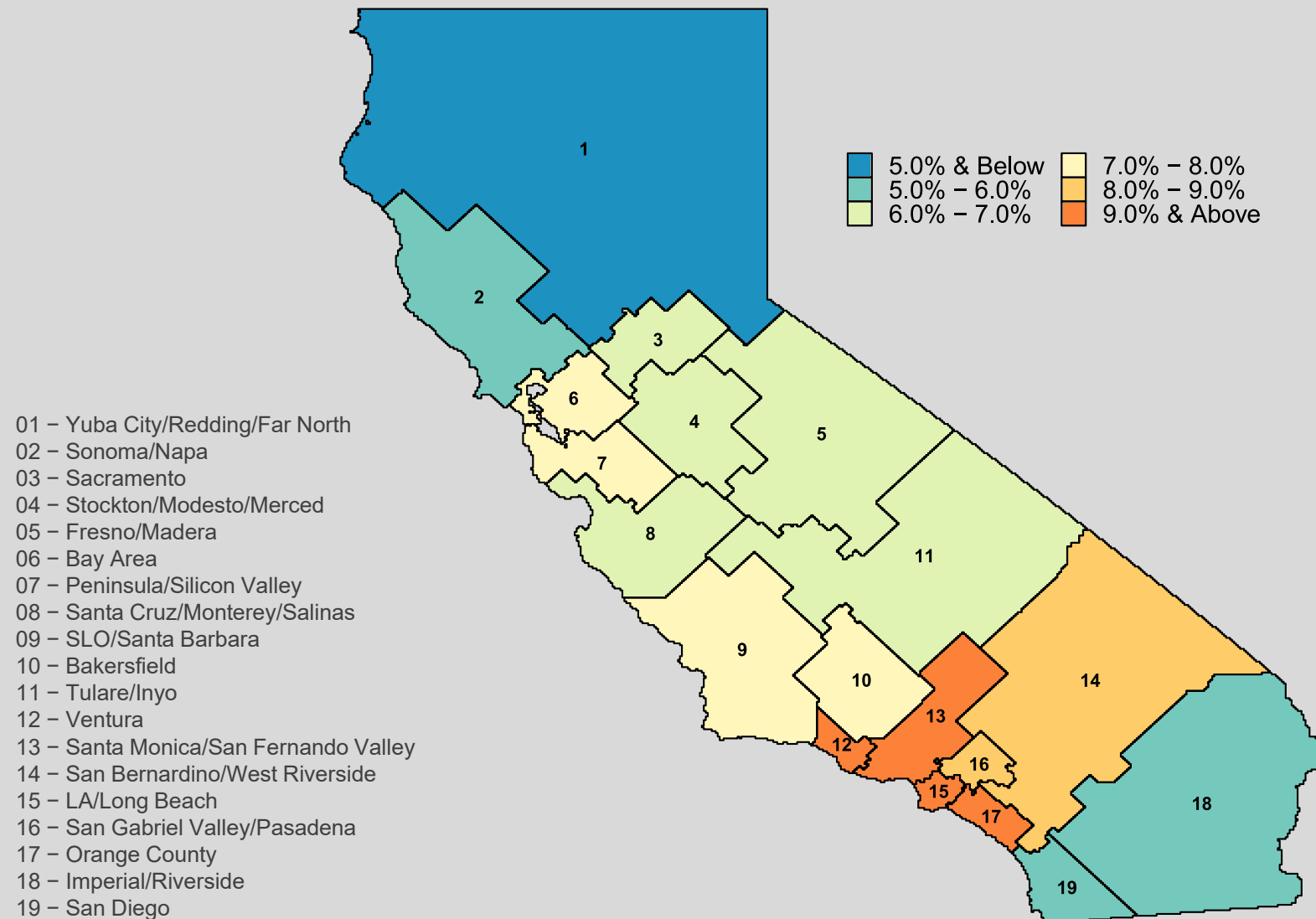
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Paid Medical for Medical-Legal as a Share of Total Paid Medical



Insights

- Medical-legal reports account for a significantly greater share of paid medical in the Los Angeles Basin than in the rest of the state.
- Medical-legal costs decreased for all regions relative to paid medical costs.
- Medical-legal costs increased for all regions except Orange County.
- Both the share of paid medical for medical-legal reports and regional differences have generally been consistent over time.
- There were significant changes to the Medical-Legal Fee Schedule adopted effective April 1, 2021. This summary contains data from both before and after the changes.



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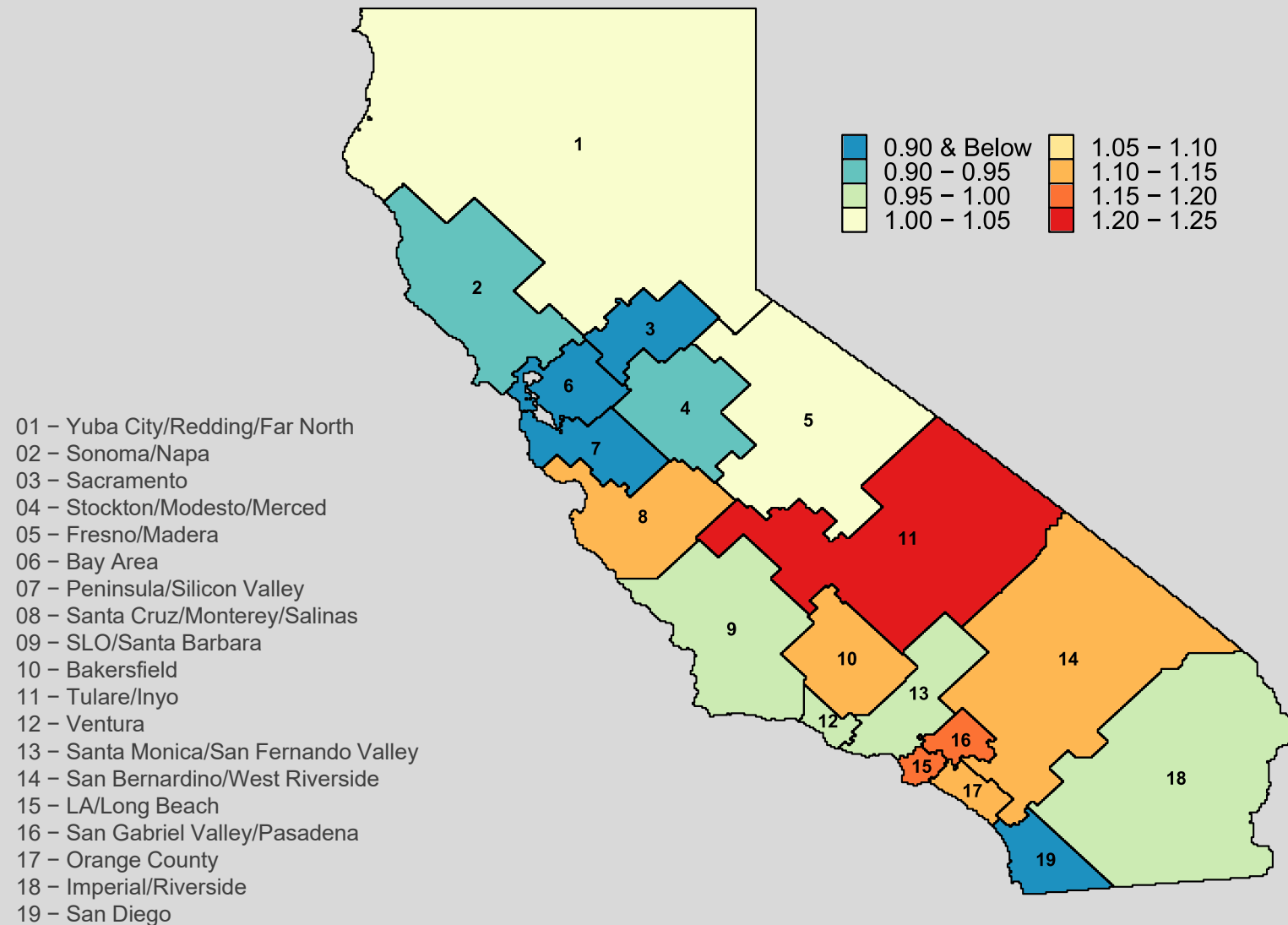
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Ratio of Limited* Losses to Modified Pure Premium



* Limited to \$500,000



Insights

- Limited loss ratios are highest in the LA/Long Beach (15), San Gabriel Valley/Pasadena (16) and Tulare/Inyo (11) regions and lowest in the Sacramento (03), San Diego (19) and Bay Area (06) regions.
- These differences in limited loss ratios are largely driven by regional differences in indemnity frequency rates discussed previously.
- Regional patterns are generally similar but somewhat more varied at 42 and 66 months. (Tabs **LR02** and **LR03** in the [Geo Data Table](#)).



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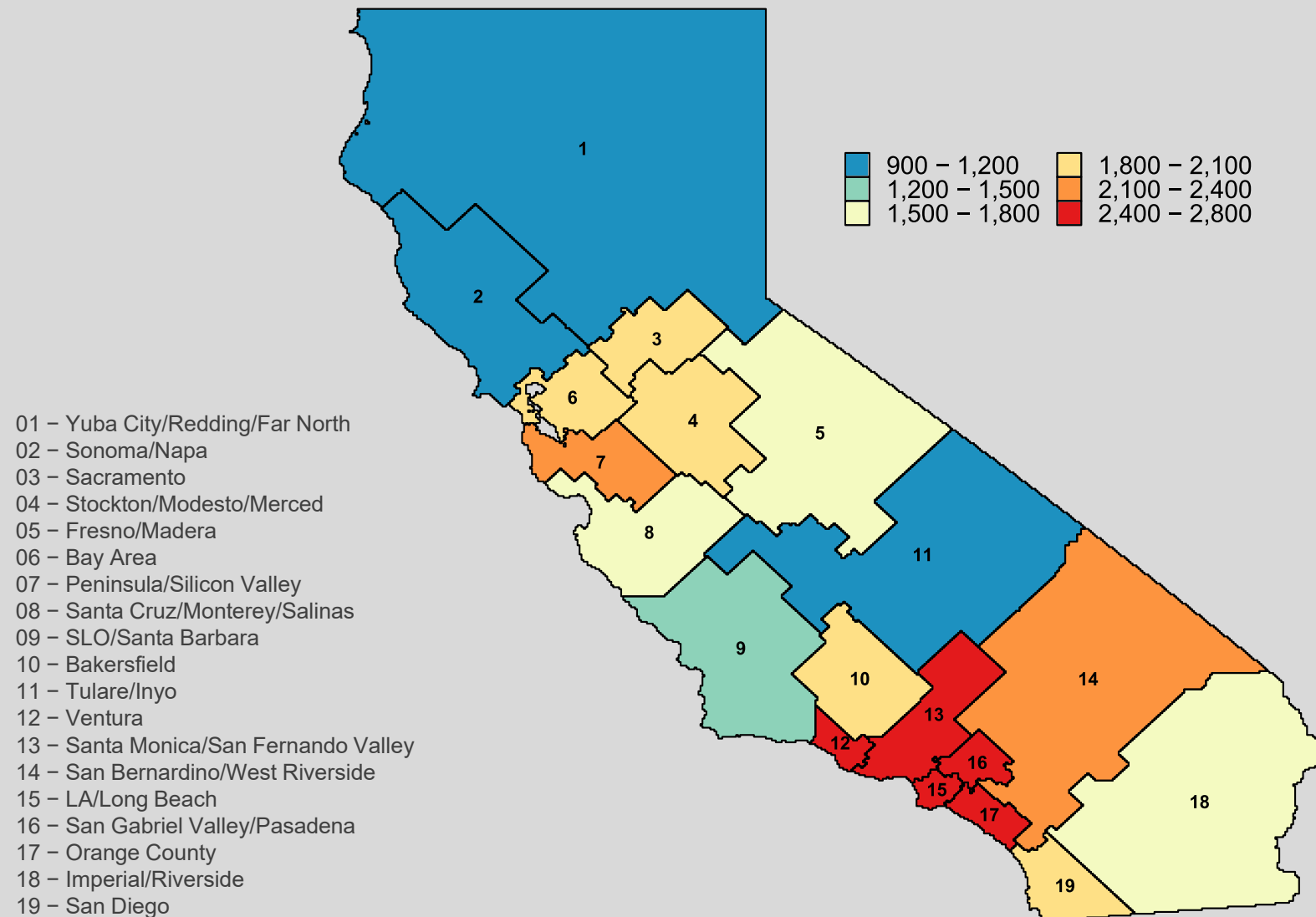
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Median Paid ALAE on Permanent Disability Claims



Insights

- Paid ALAE is significantly higher in the Los Angeles Basin. The lowest ALAE costs tend to be in the more rural areas of the state.
- The statewide median paid ALAE decreased modestly in 2019 and 2020 after increases from 2013 through 2018. Most regions experienced decreases in 2020.
- Regional differences in median paid ALAE were more modest at both 42 months (tab **ALAE02** in the [Geo Data Table](#)) and at 66 months (tab **ALAE03**).



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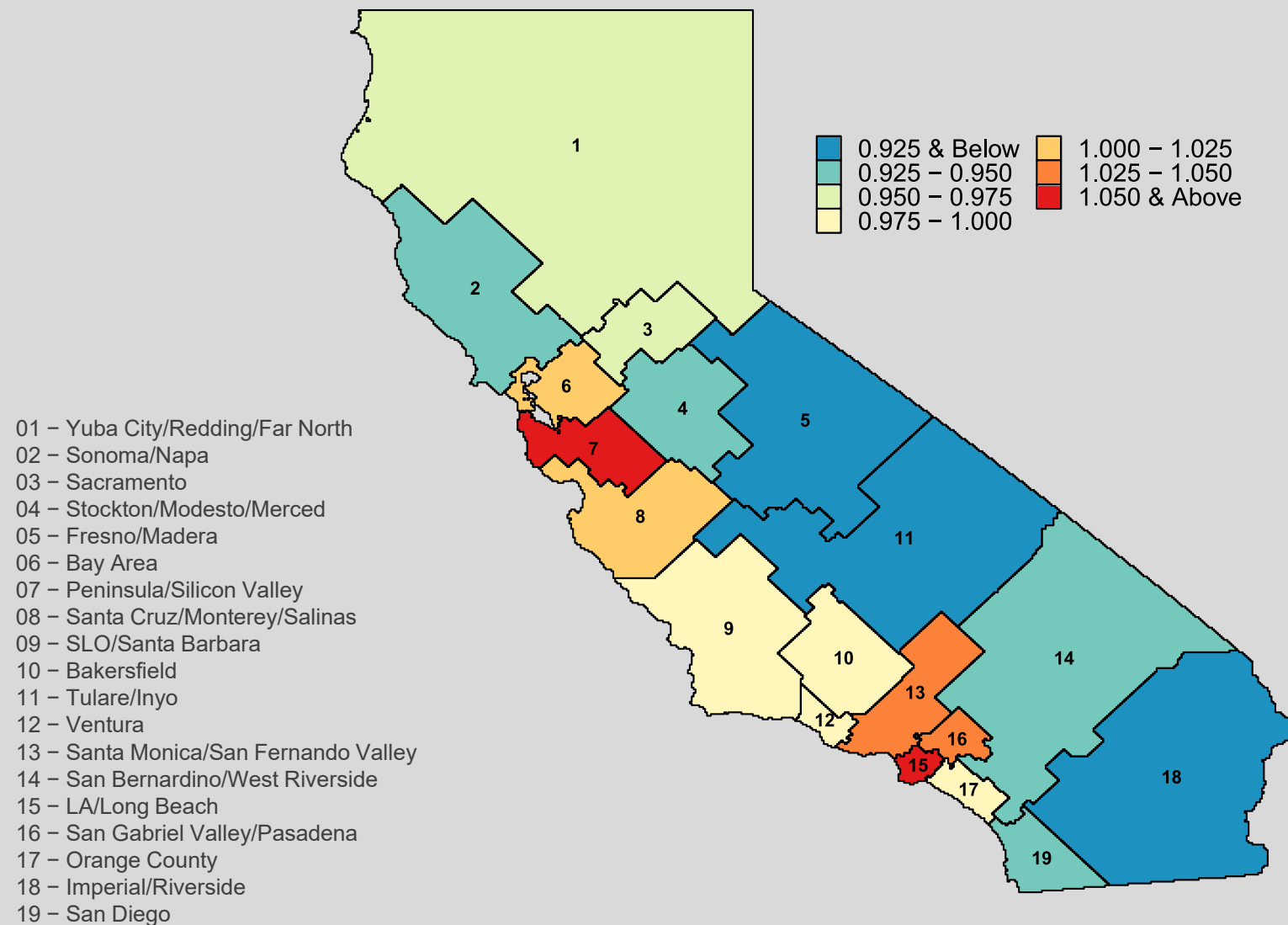
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Limited* Incurred Loss Development Relative to Statewide: RL 1 to RL 5



* Limited to \$500,000



Insights

- The regional differences in loss development are relatively modest. Urban regions tend to have higher loss development.
- Loss development is somewhat higher in the Los Angeles Basin than most of the rest of the state. This could be related to the higher proportion of cumulative trauma claims (tab **CLAIM05** in the [Geo Data Table](#)).
- The Fresno/Madera (05) region has the lowest.
- These differences are similar to those for development from RL 1 to RL 3 (tab **DEV01** in the [Geo Data Table](#)).



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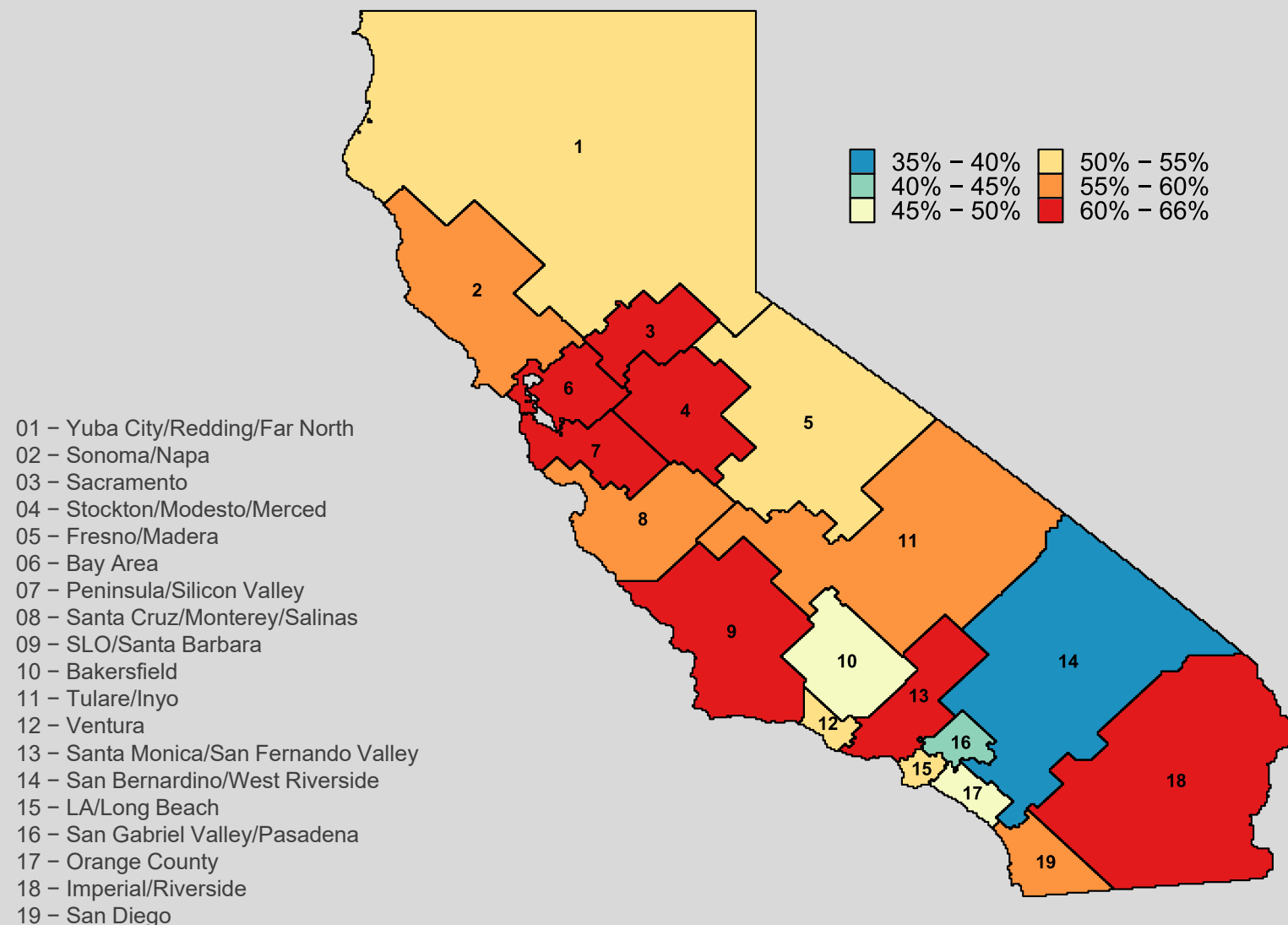
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Share of COVID-19 Indemnity Claims with Indemnity Benefits Only



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Includes USR Claims from Accident Year 2020



Insights

- Many of each region's COVID-19 indemnity claims are currently reported with indemnity payments but without any medical payments. The percentage of these claims may decrease as claims mature.
- For accident year 2020, the Imperial/Riverside (18), Sacramento (03) and Bay Area (06) regions had the highest share of reported indemnity-only COVID-19 claims at more than 10% above the statewide average.



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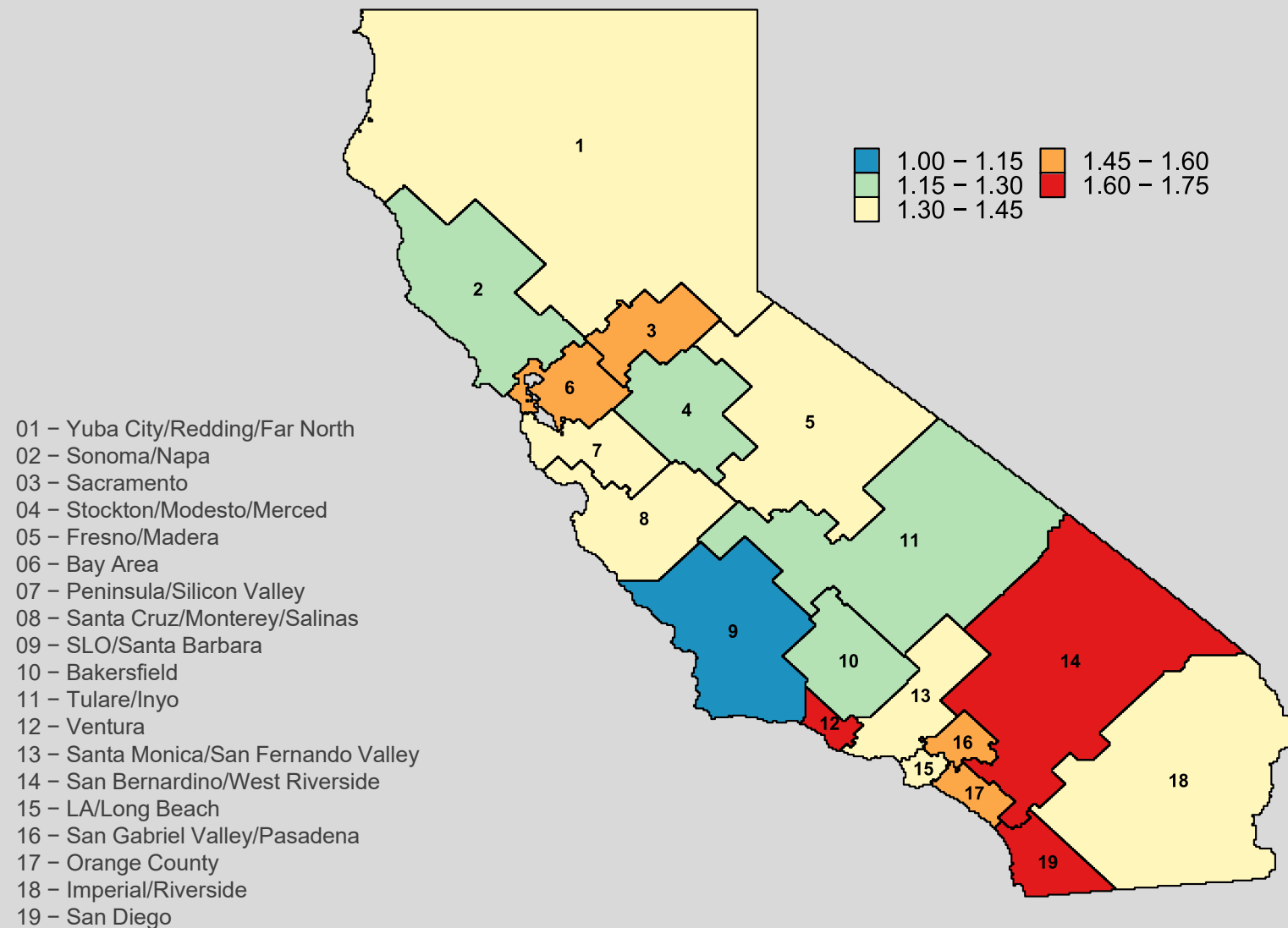
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Ratio of COVID-19 Median Wage to Non-COVID-19 Median Wage



Includes USR Claims from Accident Year 2020



Insights

- Regional differences in the injured worker median wage for COVID-19 vs. non-COVID-19 claims are relatively modest. The Ventura (12) and San Bernardino/West Riverside (14) regions have the largest differences.
- For all regions, the median average weekly wage for COVID-19 claims is higher than for non-COVID-19 claims.



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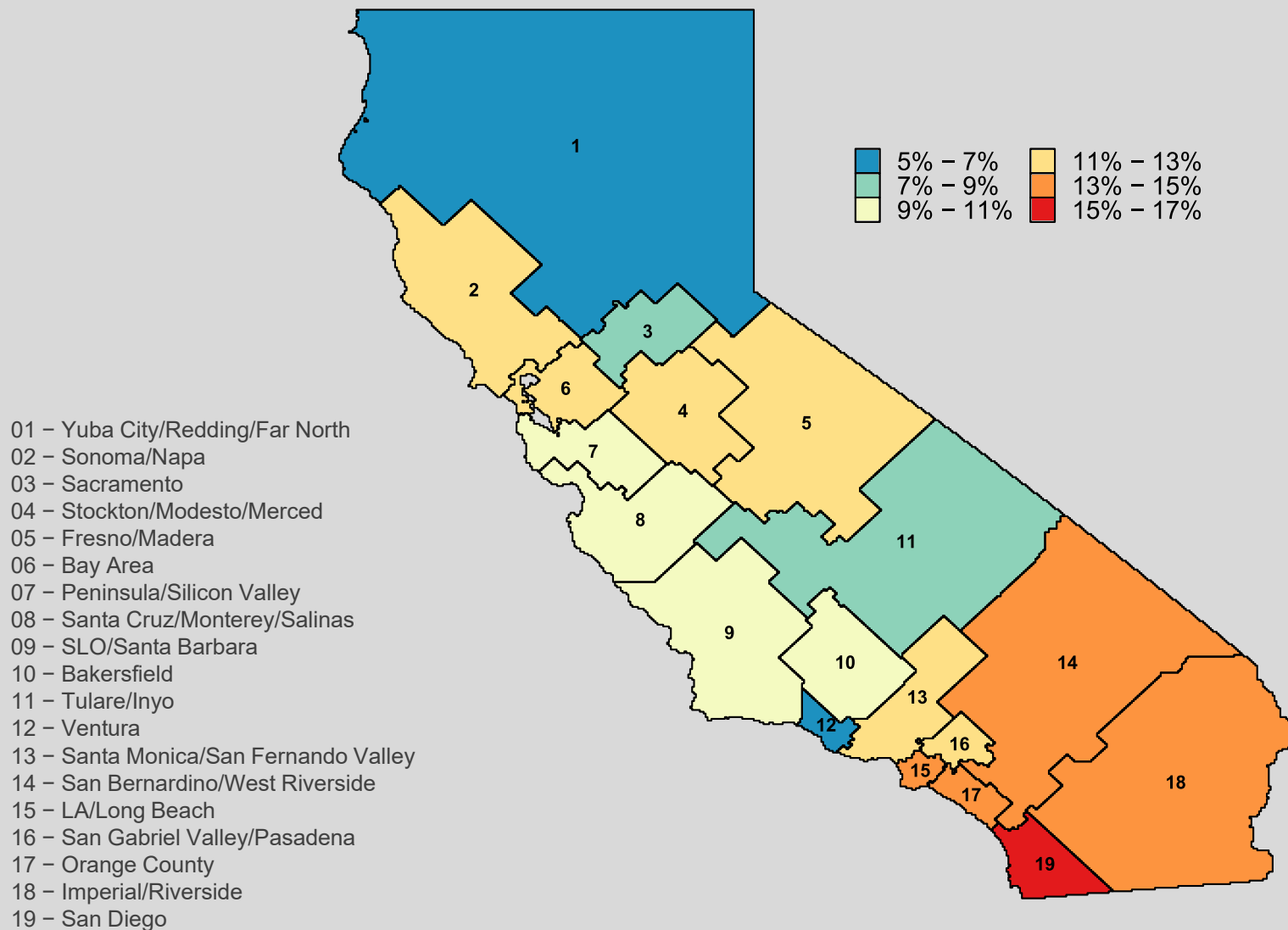
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Indemnity COVID-19 Claims as a Share of Indemnity Claims



Includes USR Claims from Accident Year 2020



Insights

- The share of indemnity claims due to COVID-19 for AY 2020 is generally higher in the southern part of the state.
- The San Diego (19) region has the highest share at over 16%.
- The Ventura (12) region has the lowest share of 6%, only half of the statewide share.



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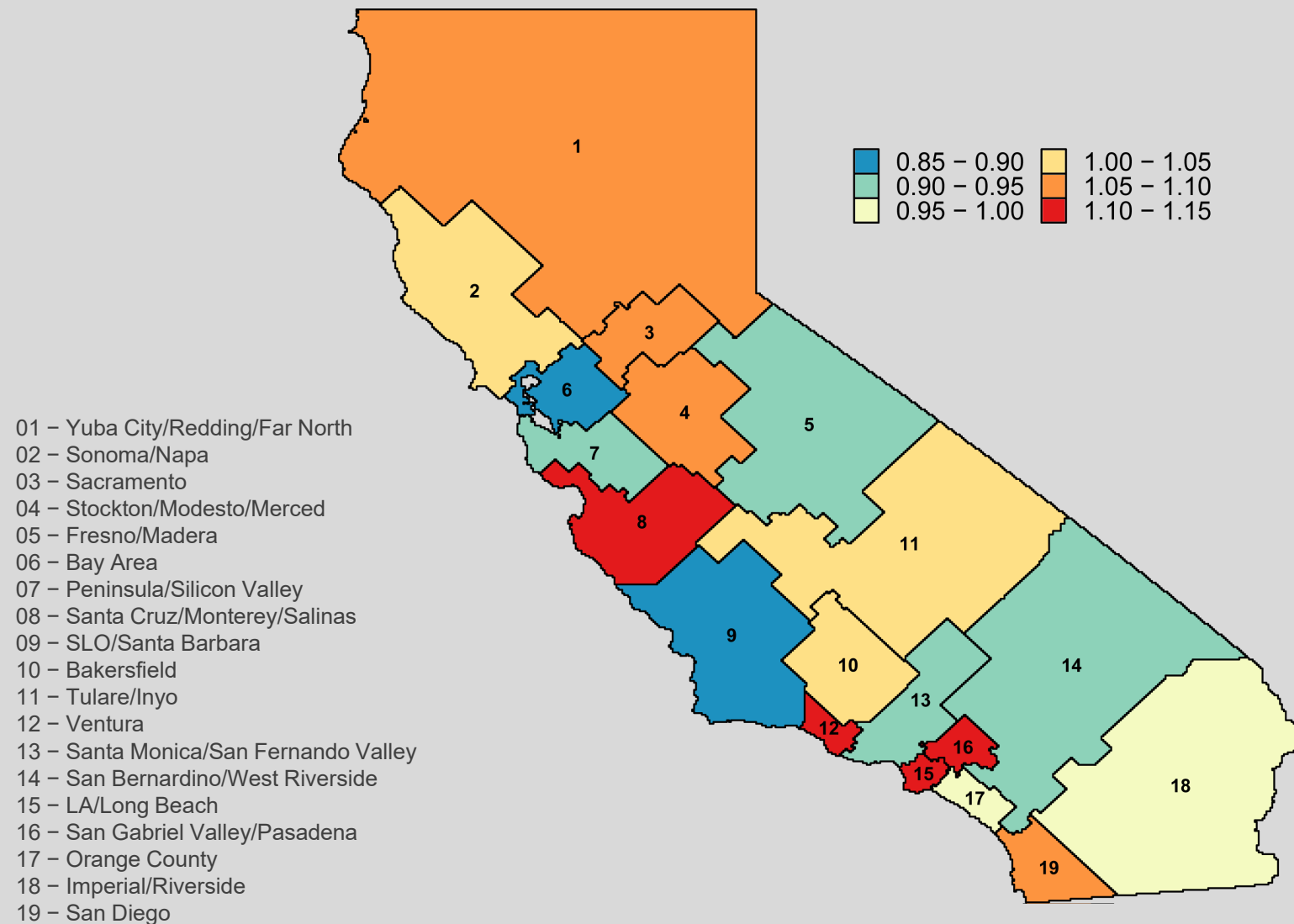
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Share of Injured Workers with 1 Year of Tenure or Less



Includes FROIs and SROIs with Accident Dates from April 1, 2020 through August 31, 2021



Insights

- Studies have shown that newly hired workers are more likely to be injured on the job. The share of injured workers with less than one year tenure are generally higher in the southern part of the state.
- The SLO/Santa Barbara (09) and Ventura (12) regions have the highest shares, while the San Diego (19) and Sonoma/Napa (02) regions have the lowest shares.
- There is an association with tenure and wage, as regions with higher shares of short-tenured workers will tend to have lower median wages (see tab **WORKER01** of the [Geo Data Table](#)).



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AY 2020 to AY 2021 Change in the Share of Employees with 1 Year of Tenure or Less

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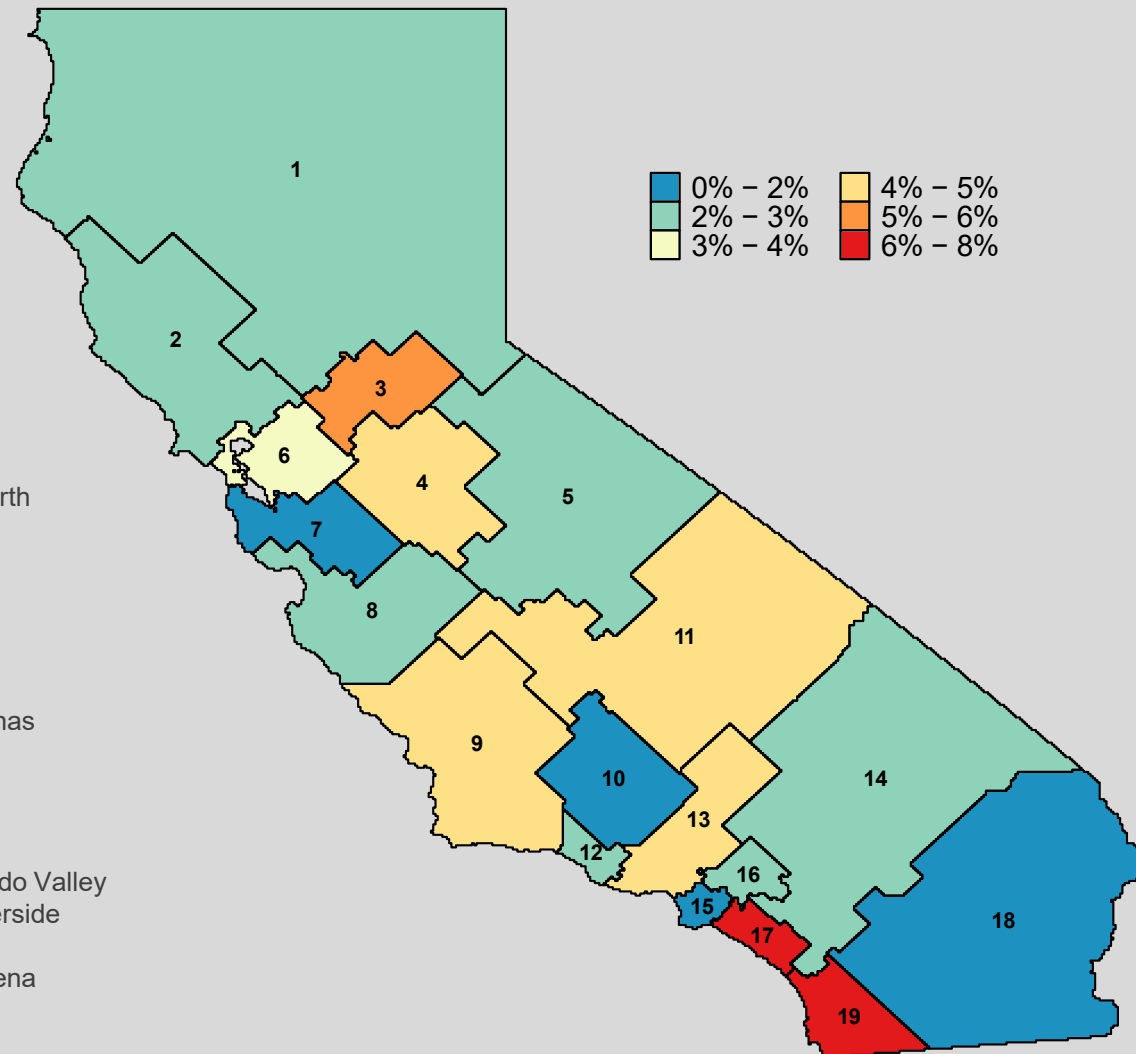
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18 – Imperial/Riverside
19 – San Diego



Insights

- In all regions, the share of claims from workers with less than one year of experience at their current job increased.
- The largest increases were in the San Diego (19), Orange County (17) and Sacramento (03) regions. The smallest increases were in the Peninsula/Silicon Valley (07) and Imperial/Riverside (18) regions.
- Regions with the largest increases in claims from newly hired workers had the largest relative increases in indemnity claim frequency while regions with the smallest increases had decreases in relative indemnity claim frequency.



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Technical Appendix

Technical Appendix

Increasing evidence of geographical differences in California workers' compensation claim costs led WCIRB staff to develop a database that could provide refined estimates of regional claim frequencies and other claim cost differentials. This database resolves two problems with Unit Statistical Report (USR) data, which does not provide geographic information for exposures or claims.

The first problem is determining the appropriate allocation of USR exposures by classification to geographic locations. This problem was resolved by linking the WCIRB's USR data to D&B Hoovers data, which provides information on employer locations, including the industries at each location and estimates of the number of employees at each location. The second problem is determining the appropriate allocation of claims to employer locations. This problem was resolved by using the geographic information for select data available in the WCIRB's medical data call (MDC). The resulting triple-linked database – USR, MDC and D&B Hoovers – provides an enriched database that allows for more refined analyses of geographical differences across California.

In addition to the three primary data sources used to form the triple-linked database, WCIRB staff also utilized the following sources:

- WCIRB policy and inspection report data (for names and addresses)
- WCIRB indemnity transaction data (for accident year 2020 and 2021 claims)
- Occupational Employment Survey (to develop regional wage adjustments)
- Self-Insurance Rosters from the Office of Self-Insurance Plans within the director's office of the Department of Industrial Relations (to identify D&B Hoovers records without associated workers' compensation policies)

Methods of Linkage – USR to D&B Hoovers

Multiple methods were used to link USR and D&B Hoovers data. Linkages were established using employer names (including owner/proprietor, Doing Business As and parent company names), addresses and Federal Employer Identification Numbers. A protocol was established among linkage methods to avoid ambiguity. Ambiguously matched data was excluded from the study.

Over time, the availability of contemporaneous D&B Hoovers and USR data has ameliorated many of these problems and allowed for enhanced USR-D&B Hoovers match rates. In the 2022 study, approximately 94% of the target policy year's data was successfully matched.

In parallel with linking the USR and D&B Hoovers data, WCIRB staff also matched D&B Hoovers data to the self-insurance rosters published by the Office of Self-Insurance Plans within the director's office of the Department of Industrial Relations. Self-insured employers identified in the D&B Hoovers data were then excluded from matching with USR data to increase the overall quality of the matching.

Geolocating Exposures

Exposures were allocated to locations recognizing regional wage differentials (developed from the Occupational Employment Survey) and the relative number of employees estimated by D&B Hoovers to be at each location. Each classification's exposures were allocated to locations using the industries at the location provided by D&B Hoovers. Note that the regional wage differentials are by county – not by WCIRB region. The regional wage differentials used in the study are provided in the zip code-to-region mapping.

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Geolocating Claims

Claims were allocated to locations at which the claim's classification had exposure allocated. Claims were located to the nearest such location by calculating the location of each claim's "center of medical services" determined from MDC observations. All MDC features were used to geolocate claims. Features were weighted in proportion to their accuracy in geolocating so that features that provide good geolocating information receive greater weight than features that provide poor geolocating information. The average number of MDC observations used to geolocate a claim was 27.7.

Identifying Optimal Geographic Units of Analysis

A market area approach was used to identify economically cohesive geographical units. To identify economically cohesive geographical units, WCIRB staff examined the "correlation" of medical providers among geographic units. The idea is that regions utilizing common providers form a more natural geographic unit.

To identify economically cohesive geographical units, WCIRB staff first identified the minimum number of claims required in a geographic unit for reasonably stable results. A selection of 130 claims was made based on reviewing the clustering patterns for geographical units with greater claim volumes and identifying the volumes below which the ability to detect previously identified and stable clusters deteriorated. The average geolocated claim's number of MDC observations used in geolocating was 27.7, so the expected number of geolocating MDC observations for a geographic unit with 130 claims was 3,601.

Staff then developed a customized grid for the state for which each cell had at least 130 claims. Cells varied in geographic area as required to include at least 130 claims. Cells smaller than 1.3mi² in geographic area but with more than 130 claims were not subdivided. The provider "correlation" matrix for the grid was then calculated. If two geographic units had half of the providers in common, then the "correlation" between the two units was 0.50. The provider "correlations" range between zero and unity. The statewide average provider "correlation" across the grid was 0.12.

Methods of Linkage – USR to MDC

The USR data was linked with MDC data using insurer, policy and claim number matching. While more straightforward, the linkages between these datasets are not complete. Not all insurers participate in MDC. For the study period, approximately 11% of insured data was not in MDC because the insurer did not participate in MDC. Matching was performed and employer experience was included at the policy level. For example, for an employer insured by two insurers, one of which participated in MDC while the other did not participate in MDC, only the experience of the insurer that participated in MDC was included. Further, only claims that were medically active and for which data was submitted to MDC are available in MDC. USR claims for which there were no medical payments captured in MDC will not be available to match with MDC. Settlements paid directly to injured workers, for example, typically would not be captured in MDC. The claim experience captured in the study, therefore, represents a subset of all claim experience. No regional biases were detected due to excluding this data.

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Unity less the provider “correlation” was used as a measure of dissimilarity between geographic units. Cluster analysis using Ward’s 2D linkage criterion was then performed using this measure of dissimilarity. The cluster analysis algorithm first divided the state into two clusters such that the dissimilarity within the clusters is minimized. This process was repeated iteratively for each division until a desired number of clusters was reached. WCIRB staff evaluated a range of clusters and selected 19 as striking a good balance between robustness in the geographic units’ results and the level of refinement. The average provider “correlation” for the selected 19 geographic regions is 0.40.

A mapping of U.S. Postal Service nine-digit zip codes to the study regions is available in the Research section of the WCIRB website. The mapping includes the regional wage differentials. Note that an accurate mapping requires the use of the nine-digit, or zip plus 4, codes. Regions are not uniquely identified at the five-digit zip code level, and five-digit zip codes may map to multiple regions.

WCIRB Indemnity Transaction Data

The WCIRB began the mandatory collection of indemnity transaction data from most carriers for transactions beginning April 1, 2020. Data from these carriers is expected to represent 88% of claims in the insured market. Detailed transaction information is reported for each first report of injury (FROI) and subsequent report of injury (SROI) as reported to the Division of Workers’ Compensation. This data is reported well before USR or MDC data is available, in some cases the day after the injury occurs. FROI and SROI records are reported for medical only and expense only claims as well as indemnity claims.

For this report, FROI records reported with accident dates from April 1, 2020

through August 31, 2021 were used to identify claims coded as arising from exposure to COVID-19 and combined with information from the SROI records for those claims. Claims were located based on the employer zip code and the zip code of the injury site which are listed in the most recent FROI record submitted for each claim. Zip codes outside of California were excluded.

In future reports, indemnity transaction data will be available for the policy year underlying the majority of the report. The WCIRB intends to use this information to refine claim locating protocols and provide additional insight into claim costs and other regional trends.

Let us know what you think about this study by emailing us at ActuarialResearch@wcirb.com.



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Exhibit 2: Indemnity Claim Frequency Relative to Statewide

- This map shows the regional indemnity claim frequency relative to statewide. The expected statewide frequencies were developed at a classification level, so relativities are adjusted for industry mix.
- The regional indemnity claim frequency relativities for policy years 2013 through 2020 are provided on tab **FREQ01** in the [2022 WCIRB Geo Study – Exhibits \(XLS\)](#).
- The regional total claim frequency relativities (not mapped) for policy years 2013 through 2020 are provided on tab **FREQ03**.
- The regional indemnity claim frequency relativities by industrial sector for policy years 2013 through 2020 are provided on tabs **FREQ04** through **FREQ09**.



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Exhibit 3: PY 2018 to PY 2020 Change in Indemnity Claim Frequency Relative to Statewide

- This map shows the percentage point change in indemnity claim frequency relativity from policy year 2018 to policy year 2020.
- The data underlying this map as well as changes in prior policy years are provided on tab **FREQ02** in the [2022 WCIRB Geo Study – Exhibits \(XLS\)](#).



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Exhibit 4: PY 2018 to PY 2020 Change in Medical-Only Claim Frequency Relative to Statewide

- This map shows the percentage point change in medical-only claim frequency relativity from policy year 2018 to policy year 2020.
- The data underlying this map as well as changes in prior policy years are provided on tab **FREQ10** in the [2022 WCIRB Geo Study – Exhibits \(XLS\)](#).



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Exhibit 5: Limited* Incurred Severity on Indemnity Claims Relative to Statewide

- This map shows total incurred severity on indemnity claims, controlled for classification mix, relative to statewide.
- These severities are at first report level, with all losses limited to \$500,000, and are not necessarily the severities ultimately expected as claims mature.
- The regional total incurred severity relativities for indemnity claims for policy years 2013 to 2020 are provided on tab **SEV01**, for policy years 2013 to 2018 at third report level on tab **SEV04** and for policy years 2013 to 2016 at fifth report level on tab **SEV05** in the [2022 WCIRB Geo Study – Exhibits \(XLS\)](#).
- The regional incurred indemnity severity relativities for policy years 2013 to 2020 are provided on tab **SEV02**.
- The regional medical incurred severity relativities for indemnity claims for policy years 2013 to 2020 are provided on tab **SEV03**.



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Exhibit 6: 3-Year Average Ratio of Actual to Expected Indemnity Claims in Excess of \$250,000: RL 3

- This map shows the PY 2016-2018 average share of indemnity claims which are incurred in excess of \$250,000 at third report level relative to expected count adjusted for industry mix.
- To adjust for industry mix, expected excess claim count shares were developed at the classification level.
- The regional shares of claims for PY 2013-2015, 2014-2016, 2015-2017, and 2016-2018 are provided on tab **SEV10** in the [2022 WCIRB Geo Study – Exhibits \(XLS\)](#).



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Exhibit 7: PY 2018 to PY 2020 Change in Median Injured Worker's Average Weekly Wage

- This map shows the percentage point change in median injured worker's average weekly wage for claims with permanent disability from policy year 2018 to policy year 2020.
- The data underlying this map as well as changes in prior policy years are provided on tab **WORKER01** in the [2022 WCIRB Geo Study – Exhibits \(XLS\)](#).



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Exhibit 8: Median Injured Worker's Average Weekly Wage

- This map shows the policy year 2020 median injured worker's wage for claims with permanent disability. The median injured worker's wage for policy years 2013 to 2020 is provided on tab **WORKER02** in the [2022 WCIRB Geo Study – Exhibits \(XLS\)](#).
- Annual changes in median injured worker's wages for policy years 2013-2020 are provided on tab **WORKER01**.
- The median injured worker's age for claims with permanent disability for policy years 2013 to 2020 is provided on tab **WORKER03**.



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Exhibit 9: Permanent Disability Claims as a Share of Indemnity Claims

- This map shows the policy year 2020, at first report level, regional shares of indemnity claims that are permanent disability.
- Each region's permanent disability share of indemnity claims for policy years 2013 to 2020 are provided on tab **CLAIM01** in the [2022 WCIRB Geo Study – Exhibits \(XLS\)](#). Each region's indemnity claim share of total claims for policy years 2013 to 2020 (not mapped) are provided on tab **CLAIM02**.
- Each region's permanent disability share of indemnity claims for policy years 2013 to 2018 at third report level are provided on tab **CLAIM03** and for policy years 2013 to 2016 at fifth report level are tab **CLAIM04**.
- Higher shares of more costly indemnity claims explain some of the cost differences observed in [Exhibit 9](#).



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Exhibit 10: PY 2018 to PY 2020 Change in Indemnity Claim Cumulative Injury & Occupational Disease Claims as a Share of Total Claims

- This map shows the percentage point change in indemnity claim cumulative injury and occupational disease from policy year 2018 to policy year 2020.
- The data underlying this map as well as changes in prior policy years are provided on tab **CLAIM06** in the [2022 WCIRB Geo Study – Exhibits \(XLS\)](#).
- The cumulative injury shares by region for policy years 2013 to 2020 are provided on tab **CLAIM05**. Third report values of cumulative injury share are provided on tab **CLAIM07** and fifth report values of cumulative injury share on tab **CLAIM08**.



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Exhibit 11: Open Share of Indemnity Claims

- This map shows each region's share of indemnity claims that were reported as open at first report level for policy year 2020.
- The regional open shares for indemnity claims at first report level for policy years 2013 to 2020 are provided on tab **CLAIM09**, at third report level are provided on tab **CLAIM13** and at fifth report level are provided on tab **CLAIM14** in the [2022 WCIRB Geo Study – Exhibits \(XLS\)](#).
- The regional open shares for all claims at first report level for policy years 2013 to 2020 are provided on tab **CLAIM11**, at third report level are provided on tab **CLAIM15** and at fifth report level are provided on tab **CLAIM16**.
- The regional open shares for permanent disability claims at first report level for policy years 2013 to 2020 are provided on tab **CLAIM12**, at third report level are provided on tab **CLAIM17** and at fifth report level are provided on tab **CLAIM18**.



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Exhibit 12: Paid Medical for Medical-Legal as a Share of Total Paid Medical

- This map shows the policy year 2020 share of paid medical accounted for by medical-legal reports.
- Medical-legal reports are used to address disputed issues and are expected to be more frequent for permanent disability claims.
- The incidence of medical-legal reports beyond that explained by differences in permanent disability shares suggests a degree of litigiousness.
- The regional values of medical-legal as a share of total paid medical for policy years 2013 to 2020 are provided on tab **MDC01** in the [2022 WCIRB Geo Study – Exhibits \(XLS\)](#). These values relative to statewide are provided on tab **MDC02**. The regional shares of indemnity claims with a medical-legal report for policy years 2013 to 2020 are provided on tab **MDC03**.
- The regional median permanent disability rating is provided in tab **SEV06** for first report, in tab **SEV07** for third report and in tab **SEV08** for fifth report.



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Exhibit 13: Ratio of Limited* Losses to Modified Pure Premium

- This map shows regional loss ratio relativities after application of experience rating for experience rated employers for policy year 2020.
- Expected losses contemplate a \$500,000 per claim limit and are controlled for classification mix and regional wage level differences. Each claim's actual losses are limited to \$500,000.
- The limited losses are compared to the modified pure premium for those risks, which is the premium generated at the approved advisory pure premium rates adjusted by the applicable experience modifications.
- The regional loss ratio relativities for policy years 2013 to 2020 are provided on tab **LR01**, for policy years 2013 to 2018 at third report on tab **LR02** and for policy years 2013 to 2016 at fifth report on tab **LR03** in the [2022 WCIRB Geo Study – Exhibits \(XLS\)](#).



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Exhibit 14: Median Paid ALAE on Permanent Disability Claims

- This map shows the regional median paid allocated loss adjustment expense (ALAE) per permanent disability claim for policy year 2020.
- The regional median paid ALAE per permanent disability claim for policy years 2013 to 2020 at first report is provided on tab **ALAE01**, at third report on tab **ALAE02** and at fifth report on tab **ALAE03** in the [2022 WCIRB Geo Study – Exhibits \(XLS\)](#).
- The regional average paid ALAE per permanent disability claim for policy years 2013 to 2020 at first report is provided on tab **ALAE07**, at third report on tab **ALAE08** and at fifth report on tab **ALAE09**.
- The regional paid ALAE shares of incurred losses on permanent disability claims at first report are provided on tab **ALAE04**, at third report on tab **ALAE05** and at fifth report on tab **ALAE06**.



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Exhibit 15: Limited* Incurred Loss Development Relative to Statewide: RL 1 to RL 5

- This map shows regional indemnity claim count development relativities from first report level to fifth report level for policy year 2016.
- This development includes incurred but not reported claims, as well as claims initially categorized as medical-only at first report level that had an indemnity payment or reserve at third report level.
- The relativities from RL 1 to RL 3 for policy years 2013 to 2018 are provided on tab **DEV01** and for policy years 2013 to 2016 from RL 1 to RL 5 on tab **DEV02** in the [2022 WCIRB Geo Study – Exhibits \(XLS\)](#).
- The regional indemnity claim count development relativities for policy years 2013 to 2018 from RL 1 to RL 3 are provided on tab **DEV05** and for policy years 2013 to 2016 from RL 1 to RL 5 are provided on tab **DEV06**.



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Exhibit 16: Share of COVID-19 Indemnity Claims with Indemnity Benefits Only

- This map shows the share of indemnity claims where the injury arose out of exposure to COVID-19 and where there are reported indemnity benefits but no reported medical benefits.
- Claims were identified as arising from COVID-19 if coded using Catastrophe Number 12.
- This is based on accident year 2020 claims from policy year 2019 and 2020 data at first report level.
- The regional shares of indemnity claims arising from exposure to COVID-19 with reported indemnity benefits, but no reported medical benefits are provided on tab **COV01** in the [2022 WCIRB Geo Study – Exhibits \(XLS\)](#).



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Exhibit 17: Ratio of COVID-19 Median Wage to Non-COVID-19 Median Wage

- This map shows the ratio of the median injured worker's wage for COVID-19 claims to the median injured worker's wage for non-COVID-19 claims.
- Claims were identified as arising from COVID-19 if coded using Catastrophe Number 12.
- This is based on accident year 2020 claims from policy year 2019 and 2020 data at first report level.
- The regional relativities for the ratio of the median wages are provided on tab **COV07** of the [2022 WCIRB Geo Study – Exhibits \(XLS\)](#).



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Exhibit 18: Indemnity COVID-19 Claims as a Share of Indemnity Claims

- This map shows the share of all indemnity claims where the injury arose out of exposure to COVID-19.
- Claims were identified as arising from COVID-19 if coded using Catastrophe Number 12.
- This is based on accident year 2020 claims from policy year 2019 and 2020 data at first report level.
- The regional relativities for the share of indemnity claims due to COVID-19 are provided on tab **COV08** of the [2022 WCIRB Geo Study – Exhibits \(XLS\)](#).



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Exhibit 19: Share of Injured Workers With 1 Year of Tenure or Less

- This map shows the share of all claims where the injured worker had been hired less than one year prior to the date of injury.
- This is based on accident year 2020 claims.



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Exhibit 20: AY 2020 to AY 2021 Change in the Share of Employees with 1 Year of Tenure or Less

- This map shows the percentage point change in the share of all claims where the injured worker had been hired less than one year prior to the date of injury from accident year 2020 to accident year 2021.
- This is based on accidents from the second, third and fourth quarters of each year.



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