

October 24, 2016

2016 Study of Geographical Differences in California Workers' Compensation Claim Costs

WCIRB Actuarial Research Ward Brooks, FCAS, MAAA Vice President, Research

Acknowledgements

The author would like to thank the following WCIRB colleagues for their assistance in preparing this study.

- David Bellusci, Executive Vice President and Chief Actuary
- Shane Steele, Research Actuary
- Ryan Purcell, Senior Actuarial Research Analyst
- Michael Corona, Actuarial Research Assistant

About the Workers' Compensation Insurance Rating Bureau of California (WCIRB)

For over 100 years, the 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 California Insurance Commissioner's designated statistical agent, the WCIRB performs a number of functions, including collection of premium and loss data on every workers' compensation insurance policy, examination of policy documents, inspections of insured businesses, and test audits of insurer payroll audits and claims classification. 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 companies licensed to transact workers' compensation insurance in California, and has over 400 member companies. No state money is used to fund its operations.

For more information, please visit www.wcirb.com.

Executive Summary

This study provides important insights into regional differences in California workers' compensation claim frequency, severity and other claim dynamics. Importantly, this study controls for regional differences in wage levels and industrial mix by incorporating reasonable approximations of reported claims and payrolls by region over the study period.

Even after controlling for wage level and industrial mix, significant differences among California regions are observed. Key findings include:

- As in the 2015 study, significantly higher frequencies continue to be found in the Los Angeles region relative to statewide. Lower claim frequencies are found in the Silicon Valley and San Francisco Bay Area. Indemnity claim frequencies in the Los Angeles/Long Beach area are 24.0% higher than statewide while indemnity claim frequencies are 25.8% lower than statewide in Silicon Valley. The Los Angeles/Long Beach area has the highest share of indemnity claims, 39.0%, compared to a statewide average of 35.2% and the highest share of all claims that are cumulative trauma, 8.3%, compared to a statewide average of 5.2% at first report.
- The median permanent disability rating is higher in the northern regions of the state than in the central and southern regions. Lower median permanent disability ratings, in most of the regions depicted as experiencing higher costs in the state, suggest that the higher costs may be more related to the greater incidence of permanent disability claims in these regions.
- The Los Angeles/Long Beach area is the most litigious region. Nearly 29% of indemnity claims in the Los Angeles/Long Beach area involve a medical legal report even at the early valuation date of the study. In comparison, the statewide share is 23.0%. Medical legal costs are over 2.8% of total incurred costs on indemnity claims in the Los Angeles/Long Beach area compared with 2.0% statewide.
- Pharmaceutical spending as a percentage of total medical costs also varies by region. The proportion of total paid medical costs attributable to pharmaceutical spending ranges from a low of 4.5% in the Tulare/Inyo region to a high of 9.7% in the San Luis Obispo/Santa Barbara region.

Nine new maps are provided in this year's study, including:

- 1. The shares of indemnity claims that are permanent disability (Exhibit 9);
- 2. The median permanent disability rating by region (Exhibit 10);
- 3. The share of paid medical that is spent on pharmaceuticals (Exhibit 15); and
- 4. Regional loss ratio relativities after application of experience rating modifications (Exhibit 16).

A mapping of nine-digit zip codes and regional wage differentials to the study regions shown in Exhibit 1 is available in the <u>Research and Analysis</u> section of the WCIRB website (<u>www.wcirb.com</u>). More information about the development of the maps and the data underlying the maps is included in the Technical Appendix to this report.

Basis of Analysis

WCIRB staff has 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 transactional datasets with external data and complements the WCIRB's unit statistical data by providing refined geographical information. External data was used to control for regional wage differentials, industrial 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 one policy year of data and is therefore only a snapshot in time. For this study, the WCIRB used the experience of policy year 2013, which covers policies incepting January 1, 2013 through December 31, 2013 and includes injuries occurring over calendar years 2013 and 2014. Future datasets will enable the WCIRB to monitor changes in regional claim costs over time as the WCIRB builds on this work.

Results

This study is based on first report level unit statistical data for policy year 2013 that was linked with the WCIRB's medical transactional data and Dun and Bradstreet's Hoover's (Hoover's) data. The Hoover's data was used to geolocate exposures by classification. The WCIRB's medical transactional data was used to geolocate claims. The methods used in this study are discussed in greater detail in the Technical Appendix.

Exhibit 1 provides a map of the regions developed by WCIRB staff. A mapping of nine-digit zip codes to the study regions is available in the <u>Research and Analysis</u> section of the WCIRB website (<u>www.wcirb.com</u>). The mapping also provides the regional wage relativities used to normalized payrolls across regions.

Exhibits 2 and 3 show indemnity and total claim frequency relative to statewide, respectively. The expected statewide frequencies were developed at a classification level. Claim frequencies for the Los Angeles area are higher than the statewide average while claim frequencies for the Bay Area are lower, even after controlling for industrial mix and wage level differences.

Exhibit 4 shows incurred indemnity severity on indemnity claims relative to statewide. These indemnity severities are at first report level and are not necessarily the indemnity severities ultimately expected as claims mature.

Exhibit 5 shows the median injured worker's average weekly wage for geolocated claims. Higher wages tend to prevail in California's Los Angeles and San Francisco Bay Area urban centers. Indemnity severities have *not* been adjusted to reflect regional wage differences.

Exhibit 6 shows the incurred medical severity for indemnity claims, controlled for classification mix, relative to statewide. As with the indemnity severities, these medical severities are at first report level and are not necessarily the severities ultimately expected as claims mature.

Exhibit 7 shows the total incurred losses on indemnity claims, controlled for classification mix, relative to statewide. This map combines the indemnity and medical losses of Exhibits 4 and 6 for a more comprehensive picture of regional cost differences. The regional severities of the Los Angeles area, San Joaquin Valley and Central Coast regions are higher than those of the northern California and San Diego areas.

Exhibit 8 shows the share of total claims that are indemnity claims. The higher shares of indemnity claims in the higher cost regions of Exhibit 7 explain some of the cost differences observed in Exhibit 7.

Exhibit 9 shows the share of indemnity claims that are permanent disability. As permanent disability claims are more costly than temporary indemnity claims, regional differences in their shares explain some of the regional cost differences.

Exhibit 10 shows the median permanent disability rating by broader regions. Broader regions were used for this metric as the data source is less robust than the sources for other measures. While permanent disability claims represent only 32.9% of the number of indemnity claims at early maturities, they represent 53.2% of the total incurred costs ultimately expected at these maturities. Lower permanent disability ratings in most of the higher cost regions suggest that the higher costs seen in Exhibit 7 may be more related to the incidence of permanent disability claims in these regions rather than the permanent disability claims' higher costs.

Exhibit 11 shows the share of claims that are cumulative trauma or occupational disease by region. These shares are at first report level and do not reflect the shares ultimately expected. The incidence of cumulative injury claims is significantly higher in the Los Angeles area and other parts of southern California.

Exhibit 12 shows the share of indemnity claims with a medical-legal report. 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 is a measure of litigiousness. Exhibit 12 shows that litigiousness in the Los Angeles area is significantly higher than the rest of the state.

Exhibit 13 shows medical-legal costs paid on indemnity claims as a share of total incurred for each region. The shares for Los Angeles area regions are higher than for other regions of the state, reflecting both the higher incidence of permanent indemnity claims in these areas and the higher levels of litigiousness.

Exhibit 14 shows injured workers' median ages by region for permanent disability claims. Broader regions are used for this metric due to the robustness of the available data. The median age of injured workers is relatively consistent across the state.

Exhibit 15 shows the share of medical paid to date for prescription medications. Higher shares are observed in the Los Angeles area.

Exhibit 16 shows regional loss ratio relativities after application of experience rating for experience rated employers.

Exhibit 1: Geographic Regions



Exhibit 2: Indemnity Frequency Relative to Statewide Controlled for Class Mix and Wage Level - at First Report Level



19 - San Diego

Exhibit 3: Total Frequency Relative to Statewide Controlled for Class Mix and Wage Level - at First Report Level



19 - San Diego

Exhibit 4: Incurred Indemnity on Indemnity Claims Relative to Statewide Controlled for Class Mix - at First Report Level



19 - San Diego



Exhibit 5: Median Injured Worker's Average Weekly Wage

Exhibit 6: Incurred Medical on Indemnity Claims Relative to Statewide Controlled for Class Mix - at First Report Level



19 - San Diego

Exhibit 7: Total Incurred Losses on Indemnity Claims Relative to Statewide Controlled for Class Mix - at First Report Level



19 - San Diego





19 - San Diego



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

Source: Policy Year 2013 Geocoded Unit Statistical Data at First Report Level

18 - Imperial / Riverside

19 - San Diego



Exhibit 10: Median Permanent Disability Rating

Source: Permanent Disability Claim Survey Data - Policy Year 2013 Claims Valued as of September 30, 2015



Exhibit 11: Cumulative Injury & Occupational Disease Claims as a Share of Total Claim Counts

- 18 Imperial / Riverside
- 19 San Diego

Exhibit 12: Percent of Indemnity Claims with a Medical Legal Report



Source: Policy Year 2013 Geocoded Unit Statistical Data at First Report Level with Medical Transactional Data as of January 12, 2016





19 - San Diego

Source: Policy Year 2013 Geocoded Unit Statistical Data at First Report Level with Medical Transactional Data as of January 12, 2016

Exhibit 14: Median Injured Worker Age for Claims with Permanent Disability



Source: Permanent Disability Claim Survey Data - Policy Year 2013 Claims Valued as of September 30, 2015



Exhibit 15: Paid Medical for Pharmaceuticals as a Share of Total Paid Medical

- 19 San Diego

Source: Policy Year 2013 Geocoded Unit Statistical Data at First Report Level with Medical Transactional Data as of January 12, 2016





- 18 Imperial / Riverside
- 19 San Diego

Conditions and Limitations

The WCIRB has completed this study of geographical differences based primarily on reported unit statistical payroll and claim costs, medical transactions and wage information for policies incepting between January 1, 2013 and December 31, 2013 and reflects approximately 90% of the insured system. In reviewing this information, the following should be noted:

- The study reflects a reasonable approximation of reported claims and payrolls by region within California during the study period, but not a precise segregation of those components on a risk-by-risk basis. Nor does the study suggest whether the regional differences identified in the study have existed at similar levels in the past, or will persist in the future. As a result, the study does not provide a basis to reflect such differences in the advisory pure premium rates developed by the WCIRB for proposal to the Insurance Commissioner.
- 2. This report reflects a compilation of individual insurer submissions of data 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 source information underlying each insurer's data submission is not verified by the WCIRB. Similarly, the external sources of information relied upon by the WCIRB in the study were generally accepted without audit.
- The claim and loss information shown in the study reflects information at early maturity levels. Development
 patterns may differ across regions and it is possible that, in particular, severity differences at an ultimate level
 may differ significantly from those based on early maturity levels.

The information provided represents statewide and regional summaries based on the amounts reported by insurers writing workers' compensation insurance in California. The results for any individual insurer can differ significantly from the average of all insurers. 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.

Technical Appendix

Increasing anecdotal 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 Hoover's 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 Hoover's—provides an enriched database that allows for more refined analyses of geographical differences across California.

The exposure and claim geolocating protocols benefited greatly from the voluntary participation of several insurers who reviewed samples of exposure and claim allocations for their policies.

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)
- Occupational Employment Survey (to develop regional wage adjustments)
- Self-Insurance Rosters of the Division of Workers Compensation's Self Insurance Program

Methods of Linkage—USR to Hoover's

Multiple methods were used to link USR and Hoover's 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.

As with the 2015 study, there is a temporal mismatch between the WCIRB's policy year 2013 USR data and the Hoover's data, which was as of January 5, 2015. This mismatch was not immaterial. Hoover's identifies newly founded employer locations. Approximately 3.5% of Hoover's *records* were identified as founded *after* the USR inception dates included in the study. A comparable share of USR data is likely associated with employers that went out of business between the study period and the timing of the Hoover's data capture. Additionally, employers move, which can prevent matching on employer addresses. In spite of these obstacles, staff was able to develop a credible database that represented approximately 92% of the target policy year's data. The missing data was evaluated for its potential to bias regional differentials and no significant biases were found. Over time, the availability of contemporaneous Hoover's and USR data will ameliorate many of these problems and allow for enhanced USR-Hoover's match rates.

In parallel with linking the USR and Hoover's data, WCIRB staff also matched Hoover's data to the self-insurance rosters published by the California Division of Workers' Compensation's Self Insurance Program. Self-insured employers identified in the Hoover's data were then excluded from matching with USR data to increase the overall quality of the matching.

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 done, and employer experience 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 this excluded data.

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 Hoover's to be at each location. Each classification's exposures were allocated to locations using the industries at the location provided by Hoover's. 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.

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 39.2.

Identifying Optimal Geographic Units of Analysis

A market area approach was used to identify economically cohesive geographical units. To identify economically cohesive geographical units, staff examined the "correlation" of medical providers among geographic units. The idea is that geographies 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 14, so the expected number of geolocating MDC observations for a geographic unit with 130 claims was 1,820.

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.

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.

Tables

The following tables provide the data underlying the exhibit maps:

- Table 1 provides the data underlying Exhibits 2 and 3.
- Table 2 provides the data underlying Exhibits 4 through 7 and 16.
- Table 3 provides the data underlying Exhibits 8, 9 and 11.
- Table 4 provides the data underlying Exhibits 12, 13 and 15.
- Table 5 provides the data underlying Exhibits 10 and 14.

A mapping of U.S. Postal Service nine-digit zip codes to the study regions is available in the <u>Research and Analysis</u> section of the WCIRB website (<u>www.wcirb.com</u>). 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.

Table 1: Data Underlying Exhibits 2 and 3

		Relative to Statewide		
		Frequency*		
		Indemnity	Total	
Region	Region Name	Claims	Claims	
01	Yuba City / Redding / Far North	0.874	0.913	
02	Sonoma / Napa	0.852	0.913	
03	Sacramento	0.879	0.972	
04	Stockton / Modesto / Merced	1.034	1.137	
05	Fresno / Madera	1.128	1.191	
06	Bay Area	0.865	0.895	
07	Peninsula / Silicon Valley	0.742	0.818	
08	Santa Cruz / Monterey / Salinas	1.008	1.126	
09	SLO / Santa Barbara	0.827	0.843	
10	Bakersfield	1.010	1.037	
11	Tulare / Inyo	1.077	1.106	
12	Ventura	0.990	1.030	
13	Santa Monica / San Fernando Valley	1.179	1.038	
14	San Bernardino / West Riverside	1.051	1.034	
15	LA / Long Beach	1.240	1.126	
16	San Gabriel Valley / Pasadena	1.193	1.185	
17	Orange County	0.960	0.934	
18	Imperial / Riverside	0.811	0.817	
19	San Diego	0.907	0.972	
Total	Statewide	1.000	1.000	

Source: Policy Year 2013 Geocoded Unit Statistical Report Data at First Report Level * Before Credibility

Table 2: Data Underlying Exhibits 4 through 7 and 16

		Relative to Statewide				_
		Incurred	Incurred	Total	Loss Ratio	Median
		Indemnity	Medical	Incurred	(Limited Losses	Injured Worker's
		on Indemnity	on Indemnity	on Indemnity	to Modified	Average
Region	Region Name	Claims	Claims	Claims	Pure Premiums)	Weekly Wage
01	Yuba City / Redding / Far North	0.918	0.986	0.958	0.864	480
02	Sonoma / Napa	0.867	0.864	0.866	0.845	534
03	Sacramento	0.954	1.006	0.983	0.856	500
04	Stockton / Modesto / Merced	0.957	0.942	0.948	1.070	480
05	Fresno / Madera	1.012	0.991	1.000	1.150	445
06	Bay Area	0.996	0.913	0.948	0.836	558
07	Peninsula / Silicon Valley	0.993	0.906	0.943	0.803	560
08	Santa Cruz / Monterey / Salinas	0.982	1.073	1.036	1.079	482
09	SLO / Santa Barbara	1.067	1.029	1.045	0.957	481
10	Bakersfield	1.021	0.987	1.001	1.015	450
11	Tulare / Inyo	0.986	1.053	1.026	1.243	439
12	Ventura	0.964	0.985	0.977	1.019	456
13	Santa Monica / San Fernando Valley	1.059	1.033	1.044	1.133	450
14	San Bernardino / West Riverside	1.026	1.079	1.056	1.008	462
15	LA / Long Beach	1.005	0.975	0.988	1.183	445
16	San Gabriel Valley / Pasadena	0.965	0.989	0.979	1.115	445
17	Orange County	1.051	1.080	1.068	0.999	461
18	Imperial / Riverside	0.945	0.964	0.956	0.848	445
19	San Diego	0.971	0.971	0.971	0.911	480
Total	Statewide	1.000	1.000	1.000	1.000	479

Table 3: Data Underlying Exhibits 8, 9 and 11

				Cumulative
			Permanent Disability	Injury &
		Indemnity Claims	Claims as a	Occupational Disease
		as a Share of	Share of Indemnity	Claims as a Share of
Region	Region Name	Total Claim Counts	Claim Counts	Total Claim Counts
01	Yuba City / Redding / Far North	34.0%	29.7%	2.9%
02	Sonoma / Napa	34.2%	26.8%	3.4%
03	Sacramento	32.5%	27.5%	3.4%
04	Stockton / Modesto / Merced	33.2%	31.2%	2.7%
05	Fresno / Madera	34.7%	31.1%	3.5%
06	Bay Area	34.4%	27.0%	4.2%
07	Peninsula / Silicon Valley	30.9%	27.7%	4.3%
08	Santa Cruz / Monterey / Salinas	31.6%	28.4%	2.9%
09	SLO / Santa Barbara	35.3%	35.8%	3.9%
10	Bakersfield	36.1%	29.5%	3.6%
11	Tulare / Inyo	35.9%	29.9%	2.9%
12	Ventura	33.4%	40.0%	5.3%
13	Santa Monica / San Fernando Valley	38.3%	36.8%	7.2%
14	San Bernardino / West Riverside	36.3%	34.6%	4.6%
15	LA / Long Beach	39.0%	39.8%	8.3%
16	San Gabriel Valley / Pasadena	34.6%	34.5%	5.9%
17	Orange County	36.1%	36.2%	6.1%
18	Imperial / Riverside	35.0%	35.5%	3.6%
19	San Diego	33.0%	32.5%	5.2%
Total	Statewide	35.2%	33.4%	5.2%

Table 4: Data Underlying Exhibits 12, 13 and 15

		Percent of	Medical Legal	
		Indemnity	Costs Paid on	Paid Medical
		Claims with a	Indemnity Claims	for Pharmaceuticals
		Medical Legal	as a Share of	as a Share of Total
Region	Region Name	Report	Total Incurred	Paid Medical
01	Yuba City / Redding / Far North	20.8%	1.48%	4.7%
02	Sonoma / Napa	17.3%	1.32%	5.0%
03	Sacramento	19.9%	1.42%	5.8%
04	Stockton / Modesto / Merced	22.0%	1.86%	5.4%
05	Fresno / Madera	21.2%	1.53%	6.5%
06	Bay Area	19.5%	1.55%	5.7%
07	Peninsula / Silicon Valley	22.6%	1.65%	6.1%
08	Santa Cruz / Monterey / Salinas	20.4%	1.40%	5.2%
09	SLO / Santa Barbara	19.9%	1.49%	9.7%
10	Bakersfield	23.0%	1.98%	8.3%
11	Tulare / Inyo	21.0%	1.36%	4.5%
12	Ventura	23.3%	2.31%	7.7%
13	Santa Monica / San Fernando Valley	24.9%	2.44%	8.3%
14	San Bernardino / West Riverside	22.9%	1.81%	6.8%
15	LA / Long Beach	28.9%	2.82%	8.4%
16	San Gabriel Valley / Pasadena	24.2%	2.10%	7.0%
17	Orange County	25.1%	2.08%	7.3%
18	Imperial / Riverside	16.7%	1.22%	7.5%
19	San Diego	18.1%	1.48%	6.5%
Total	Statewide	23.0%	1.95%	6.9%

Source: Policy Year 2013 Geocoded Unit Statistical Report Data at First Report Level with Medical Transactional Data as of January 12, 2016

Table 5: Data Underlying Exhibits 10 and 14

		Median	Median Injured
		Permanent	Worker Age
Collapsed	Region	Disability	for Claims with
Region	Name	Rating	Permanent Disability
01, 03, 04	Far North / Sacramento / Stockton	21.0	51.5
02, 06	Bay Area / Sonoma / Napa	23.0	48.0
07, 08	Silicon Valley / Santa Cruz / Salinas	22.0	51.0
05, 10, 11	Bakersfield / Tulare / Inyo / Fresno	17.5	47.0
09, 12, 13	SLO / Santa Barbara / Ventura / Santa Monica	17.0	48.0
14	San Bernardino / West Riverside	15.0	49.0
15	LA / Long Beach	18.0	49.0
16	San Gabriel Valley / Pasadena	18.5	52.0
17	Orange County	16.0	53.0
18, 19	Imperial / Riverside / San Diego	15.5	50.0
Total	Statewide	18.3	49.7

Source: Permanent Disability Claim Survey Data - Policy Year 2013 Claims Valued as of September 30, 2015

Notice

This 2016 Study of Geographical Differences (Report) was developed by the Workers' Compensation Insurance Rating Bureau of California (WCIRB) for the convenience of its users. This Report was developed for the limited purpose of assessing regional differences in California workers' compensation claim frequency and severity during a specific period of time and may not reflect trends before or after the specific period addressed in this Report. The WCIRB has made reasonable efforts to ensure the accuracy of this Report. You must make an independent assessment regarding the use of this Report based upon your particular facts and circumstances. The WCIRB shall not be liable for any damages of any kind, whether direct, incidental, punitive or consequential, arising from the use, in reliance upon information provided in this Report.

© 2016 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.

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 on any form of social media.

Workers' Compensation Insurance Rating Bureau of California, WCIRB, WCIRB California, WCIRB Connect, WCIRB Inquiry, X-Mod Direct, eSCAD 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.

888.229.2474 (CA-WCIRB) www.wcirb.com Twitter: @WCIRB

