

California Workers Compensation Surveillance Annual Report

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The project seeks to enhance the capacity of California to use workers' compensation (WC) data to conduct public health surveillance through the collection, analysis, interpretation, use, and dissemination of findings on the incidence of occupational injuries, illnesses, and exposures to hazards. Our specific aims are to:

- develop and increase collaborations among the Department of Industrial Relations (DIR), Department of Public Health (CDPH), Employment Development Department (EDD), and other stakeholders
- combine California Workers' Compensation Information System (WCIS) claims data with the Quarterly Census of Employment and Wages (QCEW) to develop rates of WC claims per full time equivalent (FTE) by NAICS industries and employer sizes
- summarize technical information about the utility and limitations of California WC and denominator databases and distribute a data analysis report that includes rates of WC claims by NAICS industries
- create a publically accessible de-identified WC case dataset including First Report of Injury (FROI) fields, and coordinate with NIOSH on an assessment of California WC costs;

MAJOR OUTPUTS

The major output for this period was developing a methodology for calculating rates by 4-digit NAICS code for the pilot period of reported claims from January 1, 2015, and June 30, 2015.

Claims Data and Matching Process

A total of 302,402 claims with a date of injury in the pilot period were sent to EDD to be matched on social security number (SSN) to the base wage file (BWF), a dataset of individuals populated through unemployment insurance records. Of these, we were able to match 279,651 (92%) to at least one employer. Claims with an unusable SSN or that matched to four or more BWF records were excluded from analysis (3,723 claims). A single employer was identified in 228,019 (75%), and for an additional 34,077 cases the employer information including FEIN, QCEW industry code, and WCIS industry code were used to link them to the correct employer. In total, an employer was identified for 264,142 injuries, 87% of total claims in WCIS during the pilot period. The 4-digit NAICS industries with the most claims were restaurants and other eating places

(15,355 claims), employment services (10,072 claims), grocery stores (7,670 claims), and general medical and surgical hospitals (6,973 claims).

Denominator Calculation

We obtained a QCEW denominator file for the same time period with employer account number, employer reporting unit, 6-digit NAICS code, multi-establishment employment indicator code, ownership code, and the average number of employees on a quarterly basis. For multi-establishment firms, we obtained unit-specific information for all units. During the pilot period, there were 1.2 million employers and 16 million employees in the state of California. For multi-establishment firms where 90% or more of the employment was in a single NAICS code we chose that NAICS code for the employer. We were able to determine the industry of 1.19 million employers and 14 million employees. To adjust these counts of employees to FTE, we calculated FTEs and rates using five different FTE-to-employee count ratios: American Community Survey (ACS) California estimates using two FTE-to-employee ratio calculations, ACS national estimates, Current Employment Statistics (CES) national estimates, and NIOSH Employed Labor Force (ELF) estimates derived from the Current Population Survey (CPS). Differences in the rates and ranks of the twenty industries with the highest rates were compared for each source of adjustment. After comparing these different, we decided to use the ACS California estimates because of our familiarity and prior work with ACS and the ease of using them.

Rates

The overall rate of injury was 3.1 injuries per 100 FTE. The twenty industries with the highest claim rates (4-digit NAICS) are listed in the table below:

Industry	Claims	Rate per 100 FTE
Interurban and Rural Bus Transportation	54	15.0
Couriers and Express Delivery Services	3084	10.7
Building Material and Supplies Dealers	4971	10.6
Animal Slaughtering and Processing	555	9.0
Waste Treatment and Disposal	484	9.0
Poultry and Egg Production	99	8.9
Scheduled Air Transportation	1781	8.8
Motor Vehicle Body and Trailer Manufacturing	243	8.5
Cattle Ranching and Farming	989	8.1
Other General Merchandise Stores	2280	8.0
Other Ambulatory Health Care Services	850	8.0
Foundries	250	7.9
Sheep and Goat Farming	19	7.7
Warehousing and Storage	1349	7.7
Waste Collection	706	7.6
Traveler Accommodation	6780	7.6
Other Furniture Related Product Manufacturing	118	7.1
Forging and Stamping	297	7.0
Logging	58	6.9
Sawmills and Wood Preservation	52	6.8

INTERMEDIATE OUTCOMES

A technical advisory group meeting was held on May 31, 2017 with 32 in-person and 11 webinar attendees including representatives from the Division of Occupational Safety and Health (Cal-OSHA), EDD, labor and advocacy groups, several workers' compensation insurers, occupational safety and health researchers, and other states using workers' compensation data. NIOSH staff presented by telephone, and project team staff presented rate calculation methodology, pilot rates, comparison of rates with the rates calculated by the Survey of Occupational Injuries and Illnesses (SOII), and several key utilities and limitations of the data. Lively discussion about the implications and applications of the data followed. After the meeting, several follow-up communications with outside researchers took place to further refine and explain the pilot methodology and plan for further publication.

Presentations were given at the Council of State and Territorial Epidemiologists (CSTE) annual conference (~40 attendees), the NIOSH State of the Science Research conference (~30 attendees), and at the Labor and Occupational Health Program of UC Berkeley (10 attendees). In addition, California co-lead a roundtable session at the CSTE conference about using WC data for public health prevention purposes with representatives from 17 states and NIOSH. Outcomes from the roundtable session include quarterly community of practice conference calls and a listserv for states using WC data for public health prevention.

END OUTCOMES

Since 2000, DIR has been collecting WCIS data, but researchers (both internal and external to the NIOSH project) have heretofore been unable to calculate rates. The quantity of claims coupled with poor industry coding has meant that DIR (and CDPH) have not been able to calculate overall injury rates or industry specific rates. This project is expanding on the utility of our work with WCIS, specifically through access to QCEW denominator data. As our methods for dealing with various data issues are codified, we will be able to advance our understanding of injury and illness rates in California, and develop further methods for calculating cost, adjusting numbers, and increasing awareness about the utility of this data set.