

First Year Annual Report
 Grant Number: 1U60OH011141-01
 Title: Using the Ohio Bureau of Workers' Compensation claim and policy data systems
 Date: September 18, 2017

Introduction

The primary objective of this study is to utilize the Ohio Bureau of Workers' Compensation (OBWC) claim and policy data systems for surveillance and prevention of occupational injuries, illnesses, fatalities, and exposures to occupational hazards. Rates of Workers' Compensation (WC) claims of injury per full time equivalents (FTE) by employer size and industry sector according to the North American Industry Classification System. Data from the OBWC claim of injury and policy systems is linked/joined with unemployment insurance (UI) data collected through the Quarterly Census of Employment and Wages (QCEW) program. The UI data is adjusted with hours per industry data from the BLS Labor Productivity and Costs program.

Major Accomplishments

We have received quarterly extracts for the UI data through the third quarter of 2016. Each quarterly file contains about 300,000 records for all Ohio employers and all their individual locations, with reported employment data for the quarter. This data has been stored, categorized, and is ready to be joined with WC data. This data is categorized into two major categories: private or public; and two sub-categories within each major category: single location or multiple locations. We have combined the data with BWC claims data for calendar year 2013 and 2015 are in process of combining the data for 2014.

For calendar year 2015 we generated industry sector rates at the two digit NAICS level and determine claims rates at the NORA Industry Sector Level shown in Table 1.

Table 1. Claims rates and median costs, all NORA sectors

NORA Sector	Sector Employee Count	Estimated FTE Employee Count	Employee Count Percent of Total	All Claims Count	All Claims Injury Rate	All Claims Median Cost
All Industry Sectors	2705091	2266594	100.00%	66926	2.95	\$655.58
Agriculture	13409	14387	0.50%	405	2.82	\$696.04
Construction	171913	170116	6.36%	5572	3.28	\$755.91
Healthcare & Social Service	404167	312899	14.94%	9505	3.04	\$583.17
Manufacturing	368704	368508	13.63%	16518	4.48	\$666.24
Mining	10533	11448	0.39%	324	2.83	\$961.26
Services	1218153	970616	45.03%	20733	2.14	\$599.61
Transportation, Warehousing & Utilities	93651	87122	3.46%	3276	3.76	\$1,037.63
Wholesale and Retail Trade	424561	345105	15.69%	10593	3.07	\$676.12

We also conducted an analysis of joined data from 2001 – 2011 to help select priority employers for our loss prevention services based on 3-digit and 4-digit NAICS groups. At the 3-digit level we selected sectors that had high claims rates and/or high lost time claims ratios. Using 4-digit NAICS analysis, we eliminated some 4-digit NAICS group from the priority list if they had low claims rates and low lost time claims ratios.

We have completed work with our IT department to establish dedicated server space, loaded with the MS SQL Server software to make the information available to internal safety researchers as well as web dashboards to be made available to external employers and safety professionals. We have obtained the computer software Tableau to allow for better dissemination of this information. We have received training to use Tableau in conjunction with our other data systems. The dedicated server space also has the benefit of allowing connections to run faster.

OBWC and NIOSH co-authored this journal article in September 2016. The article demonstrates that WC claims data linked to employment data can be used to prioritize industries for injury research and prevention activities among state-insured private employers.

Wurzelbacher, S. J., Al-Tarawneh, I. S., Meyers, A. R., Bushnell, Timothy., Lampl, M. P., Robins, D. C., Tseng, C.-Y., Wei, C., Bertke, S. J., Raudabaugh, J. A., Haviland, T. M. and Schnorr, T. M. (2016), Development of methods for using workers' compensation data for surveillance and prevention of occupational injuries among State-insured private employers in Ohio. *Am. J. Ind. Med.*, 59: 1087–1104.

OBWC has collaborated during this current reporting period with the Ohio Department of Health (ODH) on the Census of Fatal Occupational Injuries (CFOI). Previously the Ohio Department of Health worked on the CFOI. For the past several years OBWC has been working on the Survey of Occupational Injuries and Illnesses (SOII), also a program partially funded by the Bureau of Labor Statistics (BLS). It made good business sense for both programs to be administered by the same agency and same personnel. The Department of Health continues to be a good partner with OBWC on these programs and shares information and knowledge with us. We have also collaborated with ODH to inform employers in the State of Ohio on various wellness initiatives including the OBWC Workplace Wellness program. ODH also approved our IRB for this project.

We hired a Data Analytics Manager Steve Naber, Ph.D. on July 11, 2017. Our data analyst (Dave Robins) has been training Dr. Naber on data methods and processes related to this project. We are well on the way to meeting the specific aims for this project. Our IRB was renewed 5/8/17 for a period of 1 year until May 7, 2018. We will remain compliant with the human subjects' requirements of our institution and will provide a renewal to you prior to expirations.

Research Impacts

OBWC co-published a journal article with the National Institute for Occupational Safety and Health (NIOSH). This article titled, Development of methods for using workers' compensation data for surveillance and prevention of occupational injuries among State-insured private employers in Ohio, is an example of a product of research activities that have been on-going in the past and continue to develop and move forward with this project.

Our priority list mentioned above is currently being utilized and will continue to be during the 2nd year of the grant. We will determine how many of these customers have utilized our loss prevention services

and if these services have had an impact. Looking at 2015 data these employers represent 17% of our policies, 21% of our reported payroll, 31% of our claims, and 35% of our claims cost in the private sector.

Final Thoughts

We are working towards presenting the joined industry sector data on our website for public consumption. We are currently working with CPWR to include some data in the 6th edition of The Construction Chart Book this coming year.