Use of Workers' Compensation Data for Occupational Safety and Health: Proceedings from June 2012 Workshop

Department of Health and Human Services
Centers for Disease Control and Prevention
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David F. Utterback and Teresa M. Schnorr, Editors

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Foreword

The Use of Workers' Compensation Data for Occupational Safety and Health Workshop was convened in June 2012 at the Frances Perkins Department of Labor Building in Washington DC. This was the second workshop that provided an opportunity for workers' compensation insurance industry organizations, public health practitioners and researchers, and government administrative agencies to discuss uses of workers' compensation data for public health issues.

The burden of occupational injuries, illnesses and fatalities is substantial. In the U.S. alone, costs are estimated at $250 billion annually (Leigh 2011). Tracking these costs and underlying hazards is essential for control of the economic and social burdens.

Workers' compensation insurance covers but a fraction of these costs, although nearly all employers are required by the individual state mandates to have policies. Seemingly, claims records would be available for each incident yet investigators report at this workshop and elsewhere that the records are incomplete.

Collaboration across the vested interests is needed to make workers' compensation data more suitable for research and surveillance purposes. In combination with other occupational safety and health resources, further utilization of workers' compensation data can help alleviate the burden of occupational injuries and illnesses in the U.S. and elsewhere.

John Howard, M.D.
Director
National Institute for Occupational Safety and Health
Centers for Disease Control and Prevention

Leigh JP (2011) Economic burden of occupational injury and illness in the United States. Milbank Q. 2011 Dec;89(4):728-72. doi: 10.1111/j.1468-0009.2011.00648.x.

Exploring New Hampshire Workers' Compensation Data for its Utility in Enhancing the State's Occupational Health Surveillance System

Karla Armenti ScD§, Henry Vincent*, Rishika Nigam#, BS, MPH, and Alan Berko#
§New Hampshire Division of Public Health Services, Bureau of Public Health Statistics and Informatics, * New Hampshire Department of Labor, Workers' Compensation Division, # University of New Hampshire

Introduction

Workplace has an enormous impact on the health of the U.S. population. Nearly 3.1 million nonfatal workplace injuries and illnesses were reported among private industry employers in 2010, resulting in an incidence rate of 3.5 cases per 100 equivalent full-time workers. Workplace illnesses accounted for 5.1 percent of the 3.1 million injury and illness cases. [1]

Work-related injuries and illnesses impose a huge burden on workers, their families, businesses, and the economy. A new study, funded by the National Institute for Occupational Safety and Health (NIOSH), determined the cost of work-related injuries and illnesses in the United States to be $250 billion. This cost has risen by $33 billion since 1992, the last time a similar study was conducted. 2 In New Hampshire, workers' compensation claims alone cost approximately $239 million in 2008. [3]

Work-related injuries and illnesses can be prevented with appropriate and targeted interventions. Successful approaches to making the workplace safer begin with having the most accurate and current occupational health surveillance data, which are necessary to understand the root causes of the problems that lead to occupational injury and illness.[4] Unfortunately federal occupational health surveillance reporting requirements result in data gaps and shortfalls that do not accurately capture the true nature of occupational health and illness. This results in an inaccurate view that occupational health and illness is on a downward trend.

The major sources of occupational health data for surveillance purposes are: Bureau of Labor Statistics (BLS) Survey of Occupational Injury and Illnesses (SOII) and Census for Fatal Occupational Injury (CFOI), hospital discharge data and physician records, and state workers' compensation data. Data produced from these systems have been described as fragmentary, unreliable, and inconsistent, resulting in the underestimation of the true burden and magnitude of work related injuries and illnesses. [5]

The focus of this study was to better understand the contribution of workers' compensation data to surveillance of work-related

[1]United States Department of Labor, Bureau of Labor Statistics. Workplace Injury and Illness Summary, 2010, available at: http://bls.gov/news.release/osh.nr0.htm. Accessed July 17, 2012.
[2] Leigh, J. Paul, Economic Burden of Occupational Injury and Illness in the United States. The Milbank Quarterly, Vol. 89, No. 4, 2011 (pp. 728–772), http://onlinelibrary.wiley.com/doi/10.1111/j.1468-0009.2011.00648.x/pdf.
[3] Sengupta, I., Reno V, Burton JF., Workers Compensation: Benefits, Coverage, and Costs, 2008, September 2010, National Academy of Social Insurance.
[4] Friedman, L.S. and L. Forst, The impact of OSHA recordkeeping regulation changes on occupational injury and illness trends in the US: a time-series analysis. Occupational Environmental Medicine, 2007. 64(7): p. 454-60.
[5] Azaroff LS, Levenstem C., Wegman DH. "Occupational Injury and Illness Surveillance: Conceptual Filters Explain Underreporting." Am J Public Health. 2002 Sept; 92(Pt.9):1421-29.

injuries and illnesses in New Hampshire. We believe that WC data can be used for prevention priority setting purposes (as part of our fundamental, core occupational health surveillance program [6]); and to augment (not replace) what we know from other data sources, such as hospital discharge, death and cancer data, and labor statistics data.

While the focus of the WC system is primarily to set up and manage claims, and to submit required reports, there is valuable information that can be tracked to better understand the burden of work-related injury and illness on a state level. These include frequency of specific injuries, lost work time, severity, disability status, medical treatment and outcomes, types of injury, industry and establishment information, and cost. Any narrative text can also provide some data related to hazard identification.

Constraints do exist, however, that limit the usefulness of WC data for general public health surveillance purposes. Because WC data systems focus on management of the claims process and ratemaking (and are therefore insurance industry driven), there is less general health information and job related details. Illnesses are difficult to identify in WC data, due to the long latency period often associated with specific illnesses. Thus, acute injury data are more representative of worker population risks than are occupational illness data.

Although WC is an important data source for occupational health surveillance, not every state has unfettered access to record level data. There may be restrictive state privacy laws and confidentiality rules that can impede data sharing and analysis.

New Hampshire Workers' Compensation Data
Nearly 45,000 workplace injuries and illnesses are reported to the NH Department of Labor (NH DOL) in any given year. The Workers' Compensation Division of the New Hampshire Department of Labor was created in 1947 and has the responsibility for administration of the State's Workers' Compensation Law (RSA 281-A). This law originally enacted in 1911, requires employers to maintain insurance coverage to provide no fault workers' compensation for employees in case of accidental injury, death or occupational disease, "arising out of and in the course of employment" (RSA 281-A:2 XI).

Under the NH state law, every employer has to report to the Commissioner of the NH Department of Labor (DOL) any injury sustained by an employee in the course of employment as soon as possible, but no later than 5 days after the employer learns of the occurrence of such an injury (referred to as the First Report of Injury).

The law specifies the level of medical and wage replacement income benefit to be paid to injured workers and at the same time bars the employee from suing the employer for the injury. The division's coverage section is responsible for ensuring that all employers maintain this specific insurance coverage. The claims section's duties include scheduling and conducting hearings on contested cases, and monitoring the service of the insurance carriers to determine that benefit payments are provided in a timely manner. The Vocational Rehabilitation section is responsible for monitoring the vocational rehabilitation process. [7] The only exclusions in the law pertain to corporate officers and limited liability company members, who are not required to carry workers' compensation coverage on themselves until they have a fourth officer or member or a single employee. There is also no requirement for sole proprietors or for partners in partnerships to cover themselves for workers' compensation. [8]

[6] Occupational Health Indicators: A Guide for Tracking Work-Related Health Conditions and Their Determinants,at:http://www.cste.org/dnn/programsandactivities/occupationalhealth/occupationalhealthindicators/tabid/85/default.aspx
[7] State of New Hampshire, Department of Labor, 59th Biennial Report, July 1, 2009 – June 30, 2011. Available at http://www.labor.state.nh.us/biennialrpt.pdf.
[8] Title XXIII, Labor, Chapter 281-A, Workers' Compensation, Section 281-A:18-a, Exclusion of Executive Officers and Members of Limited Liability Companies.

There are many private carriers offering workers' compensation insurance in New Hampshire. Larger employers may be self-insured. Carriers are required to provide government agencies with claims information that is used for administrative purposes such as oversight, hearings for adjudication of disputes and other matters.

NH uses the first report of injury to establish a WC claim. The employer must file (or cause to be filed via the insurance company) the first report of injury to the NH DOL. The carrier has 21 days to investigate/review the claim and then accept or deny it. Employers can use an EDT –electronic data transfer to file the report.

The claim does not and will not contain any other medical information unless the claim is contested (denied) by the carrier. Of the 46,000 +/- total WC claims each year about 3-5% are contested. Contested claims include more medical treatment information as the hearing officer may need it to make his/her initial findings.

Methods

The NH Workers' Compensation data set was analyzed to better understand its potential in estimating work related injuries that occurred in 2008 and 2009, thereby enhancing the NH Occupational Health Surveillance System. This was a descriptive analysis of WC data, focusing on data completeness and data quality.

Data files in the NH WC system are arranged based on the date when the NH Department of Labor receives the work related injury or illness report irrespective of the date of injury or illness. We received two excel spreadsheets (2008 and 2009 data files) based on the year when DOL received the incident report. Twenty-eight indicators were present in each data file. Of importance for further analysis were Type of Injury, Cause of Injury, Type of loss, Treatment, Claim Type, Managed Care, Accident Premise.

Results

The total number of records received by the DOL in 2008 was 45,210 and in 2009 was 40,500 (based on date of report, not date of injury). In both 2008 and 2009 files, more than 40% of the data were missing from mostly all the field types except the Type and Cause of Injury. 41% of the data were missing from the Treatment field. Nearly 96% of the data were missing for Who Paid for the Medical Treatment. The data were filled completely for Age and Date of Injury but the age ranged from 0 to 99 years. For the 2008 WC data file, Date of Injury ranged from 1908 to 2008 and for 2009 WC data file, Date of Injury ranged from 1980 to 2009.

Table 1 presents the percent data missing from the 2008 and 2009 WC data files.

Type of Loss: For combined 2008 and 2009 data, 47% of the data were missing. 51% were Traumatic Injury, 1% were Cumulative Injury, and less than 1% were Occupational Disease. Treatment: For combined 2008 and 2009 data, 41% of the data were missing. 28% of the total number of workers received Minor Treatment at a clinic or hospital; 13% received No Treatment at all and 13 % received an Emergency Evaluation.

Accident Premises: For combined 2008 and 2009, 88% of data were missing. Of the 12% with Accident Premises information, 77% were Employer's Location and 74% in 22% were listed as Other.

Discussion

Workers' compensation data are a valuable source for documenting work-related injuries and illnesses. This information can improve our understanding of the causes and prevention of workplace injury and disease. Missing data, however, is something that can impact interpretation and must be considered when utilizing workers' compensation data for population based surveillance. The amount of missing fields in the WC data set makes it difficult to determine the true incidence of occupational injury and illness. Using WC data in conjunction with other public health data sets provides additional important information in tracking occupational injuries and illnesses in the United States.

Table 1. Percent data missing from the WC data files. (File names are based on the year when NH DOL received the injury report)

	Data missing in percent (%)	
Indicators	2008 WC data file (n=45210)	2009 WC data file (n=40500)
Injury cause	72.00	75.68
Injury extent	72.01	75.68
Injury body	72.00	75.68
Injury date	0.31	0.14
SIC industry code	67.73	55.86
NAICS industry code	56.49	56.64
WCIO injury code	12.10	10.80
WCIO body part code	12.03	10.74
WCIO injury cause	12.08	10.78
Initial treatment code	41.29	41.16
Type of loss	47.64	46.12
Accident premise	87.47	87.89

Figure 1. Percentage of Nature and Cause of Injury

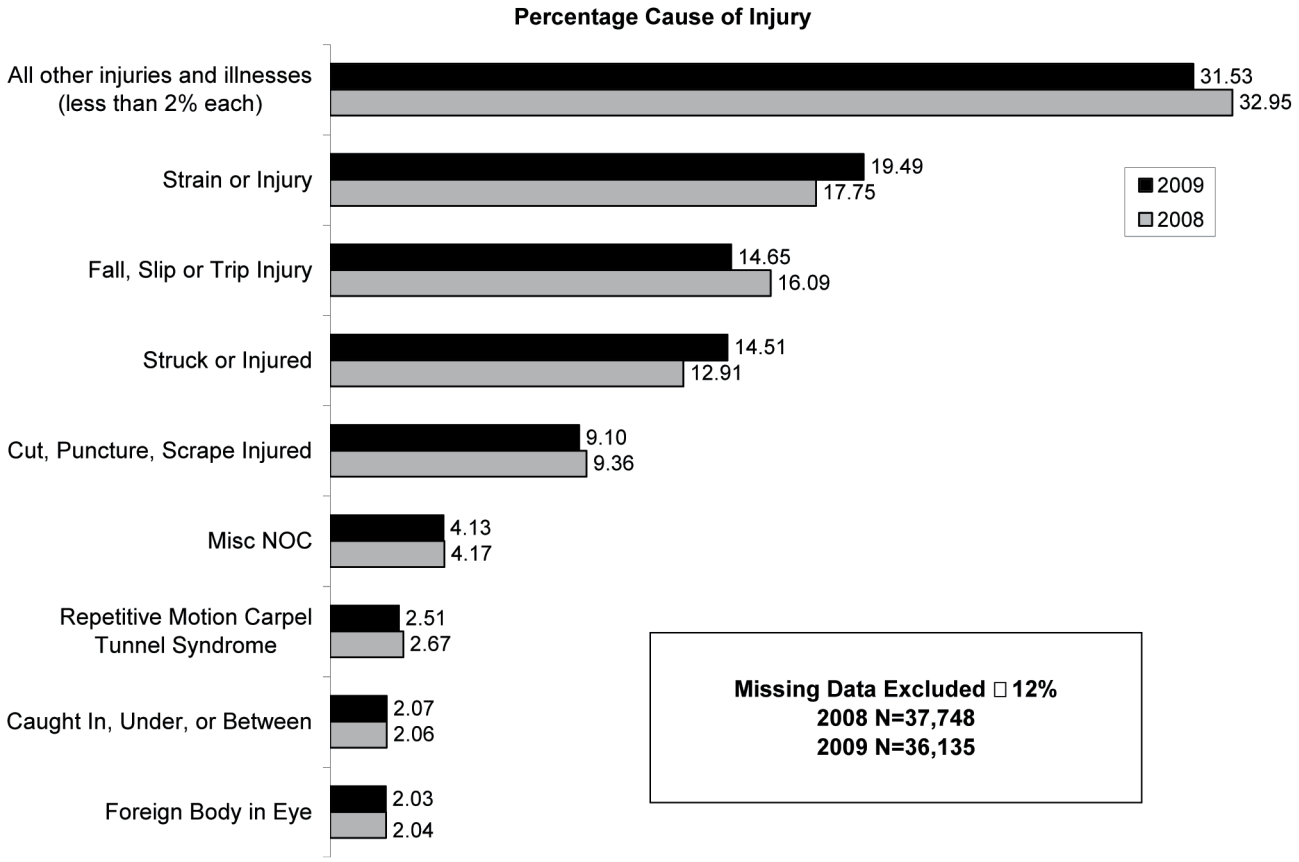

Figure 2. Percentage Nature of Injury