

Identifying Workers' Compensation as the Expected Payer in Emergency Department Medical Records¹

Larry L. Jackson, PhD, Susan J. Derk, MA, Suzanne M. Marsh, MPA, Audrey A. Reichard, OTR, MPH
National Institute for Occupational Safety and Health

Introduction

The National Institute for Occupational Safety and Health (NIOSH) uses the National Electronic Injury Surveillance System—occupational supplement (NEISS-Work), an emergency department (ED) based surveillance system, to produce national estimates of nonfatal occupational injuries and illnesses treated in US hospital EDs [Derk, 2007]. The occupational injury and illness data are collected from a national, probability-based, stratified cluster sample of 67 hospital EDs. At each hospital, abstractors review ED medical records for work-related injuries and illnesses. The abstractors identify cases as work-related if the injuries or illnesses occurred while the patient was doing work for compensation, work or chores related to agricultural production, or work conducted as a volunteer for an organized group. Civilian noninstitutionalized workers without regard to employment arrangement, worker status, age, industry, or business size are included. We use a work-related case definition similar to Occupational Safety and Health Administration (OSHA) Recordkeeping Rules [OSHA, 2012]. Hence, we include injuries and illnesses caused or significantly made worse by work for which the patient was seen in the ED. We presume that being seen in the ED qualifies as medical treatment beyond first aid. NEISS-Work does not capture the medical treatment provided. We exclude common illnesses and selected medical conditions along with cases involving self-medication, alcohol & drug cases, drug screening, and second visits to the ED. Hospital record abstractors review the entire medical record and use narrative and coded

information in the ED record to assess the work-relatedness of each case. Workers' compensation insurance as the expected payer, by itself, is sufficient to identify a case as work-related, providing that the narrative information in the medical record does not contradict the injury/illness as being work-related. However, workers' compensation insurance is not required for a case to be identified as work-related. Narrative information in the registrar's, nurse's, and/or doctor's notes indicating that an injury/illness occurred at work is sufficient to identify a case as work-related.

To better understand issues in identifying work-related injuries and illnesses in ED medical records, we audited records at about one-third of the hospitals participating in NEISS-Work. The primary goal of the audits was to estimate the number of work-related cases missed or non-work cases misclassified as work-related. A secondary goal was to better understand the various issues that abstractors deal with in identifying work-related cases on a daily basis. This report summarizes some of the issues that we identified qualitatively and in particular, the ability to identify workers' compensation (WC) as the expected payer for the medical care.

Methods

Abstractors collect NEISS-Work surveillance data at each hospital on a daily basis throughout the year. We use these data to provide national estimates of the number and rate of occupational injuries and illnesses treated in EDs. The surveillance data collected include the characteristics of the injured/ill worker,

¹The findings and conclusions in this report are those of the authors and do not necessarily represent the views of the National Institute for Occupational Safety and Health

nature of injury/illness, and the event or circumstances leading to the ED visit. In addition, some employment related information and the expected medical payer are collected. For work-related cases, the hospital abstractors identify the expected payer at the time of data abstraction based on administrative information in the ED record. Abstraction is typically done within 1 day to 1 week of treatment. The primary expected payer at time of admission may change as the billing process proceeds (e.g., between initial abstraction and audit). Moreover, the expected payer may not represent the final source(s) of medical payment. The NEISS-Work expected payer categories include: Injured/ill worker—personal insurance or self-pay; Employer/union—private insurance or direct-pay; Private health insurance—unspecified policy holder; Workers' Compensation; Other government; Other; and Not stated or unknown.

As part of our ongoing efforts to improve the NEISS-Work surveillance and understand its limitations, we conducted audits in 20 NEISS-Work hospitals stratified by hospital size (number of ED visits/year) and geographically distributed across the U.S. At each hospital we examined all ED records for a specified number of treatment days such that the total number of patient records reviewed exceeded 1,000 cases. Treatment periods reviewed typically ranged from a week for large hospitals up to three months for small hospitals. We abstracted all work-related cases at each hospital (~3% of all cases) for the time period reviewed. Although not conducted as a quantitative review, we observed numerous electronic medical record, charting, and other data issues while doing the audits.

Results

Preliminary, routine surveillance data for nonfatal occupational injuries and illnesses treated in a U.S. hospital ED in 2011 indicate that WC was the expected payer in about 55% of the estimated 2.9 million occupational injuries and illnesses (Figure 1). Cases listed as Government, non-entitlement programs (~2%) and employer/union (~2%) may also

have been WC insurance. For more than one-fourth of the cases, personal health insurance or self-pay was the expected payer.

During our audits, we found that record abstractors rely on a multitude of information systems that vary widely across the NEISS-Work hospitals. All audited hospitals had an electronic ED registration system. Some EDs used fully electronic medical record systems. Some hospitals used a combination of electronic and paper records. A few hospitals used paper charting processes only. Hospitals used as many as 4 independent electronic record systems with diverse levels of integration, technologies, sophistication, and accessibility. Because of hospital customization and requirements, electronic medical record systems varied across hospitals even when provided by the same information system vendor.

In general, NEISS-Work record abstractors had access to select employment and insurance information which included the guarantor, employer name, and insurance details for one or more insurers (Table 1). The prevalence and completeness of numerous fields and forms/reports along with conflicting information in various components of the medical records varied greatly between hospitals. Our audits suggested that to identify work-related cases in the ED medical record it is critical to have narrative information indicating "at work" in the doctor's or nurse's notes or standardized "at work" check boxes that are actually used. Because the NEISS-occupational supplement is the only NEISS program collecting expected payer information it was unclear if some abstractors only reviewed the expected payer information when other medical record information already indicated that the case was work-related. A few hospitals appeared to be indicating WC as the expected payer for all work-related cases as a matter of practice. Common problems in identifying the patient as employed and the expected payer as WC are highlighted in Table 2. Also, abstraction of the expected payer information within 1 to 2 days of treatment occasionally differed from the expected payer indicated during the audits.

Summary

NEISS-Work captures occupational injuries and illnesses for all types of civilian workers including the self-employed and family members working in a family business. The latter types of worker are often not covered by WC. Nevertheless, approximately 90% of U.S. civilian workers are legally required to be covered by WC.² Routine NEISS-Work surveillance data suggest that 55% of the ED-treated work-related cases in 2011 had an expected payer of private employer workers' compensation insurance. An additional 4% may have had WC coverage through government agencies or direct, self-insured employer payments. Our qualitative information from the audits identified many issues in capturing WC as the expected payer, but provided no clue as to whether WC is being underutilized in the ED, misidentified, or simply not identified in the medical records. Obviously, the ultimate proportion of the ED-treated cases paid by WC is unknown and may vary widely from hospital to hospital and state to state. In a 10-state telephone interview study, the proportion of workers who self-reported a work-related injury with payment by WC varied from 50-77% [Bonauto et al., 2010]. The survey results included all forms of medical treatment, not just occupational injuries and illnesses treated in an ED as reported here. Utilization of WC may vary across medical venues.

To improve the capture of WC as the expected payer in NEISS-Work ED surveillance will require specialized training for abstractors, largely on an individual hospital basis. Although potentially feasible, it is unclear if the training would significantly influence or change the proportion of cases indicated with WC as the expected payer. Improvements and standardization of insurance classification practices from state to state and within electronic medical record systems would aid identification of WC as well as other insurers

as the expected payer in a broad spectrum of medical venues. The standardization would likely aid surveillance and injury prevention activities. Ultimately, knowing how many injured/ill workers actually file a WC claim and the claim is paid compared to the number of cases with WC indicated as the "expected payer" would further aid interpretation of our surveillance data.

References

- BLS [2012]. Labor force statistics from the Current Population Survey. Available at <http://www.bls.gov/cps/tables.htm>.
- Bonauto DK and others [2010]. Proportion of Workers Who Were Work-Injured and Payment by Workers' Compensation Systems --- 10 States, 2007. *MMWR* July 30, 2010 / 59(29);897-900.
- Derk SJ, Marsh SM, Jackson LL. [2007]. Nonfatal Occupational Injuries and Illnesses—United States, 2004. *MMWR* April 27, 2007 / 56(16);393-397.
- OSHA [2012]. OSHA Injury and Illness Recordkeeping. Available at <http://www.osha.gov/recordkeeping/>.
- Sengupta I, Reno V, Burton JF Jr, Baldwin M [2012]. *Workers' Compensation: Benefits, Coverage, and Costs, 2010*. National Academy of Social Insurance, Washington, DC. 120 p.

² Percentage was derived from the number of covered workers (124.5 million) [Sengupta et al., 2012] and the number of U.S. employed workers (139.1 million) in 2010 [BLS, 2012].

Figure 1. Percentages of expected payers for nonfatal occupational injuries and illnesses treated in U.S. hospital emergency departments—2011 (preliminary data).

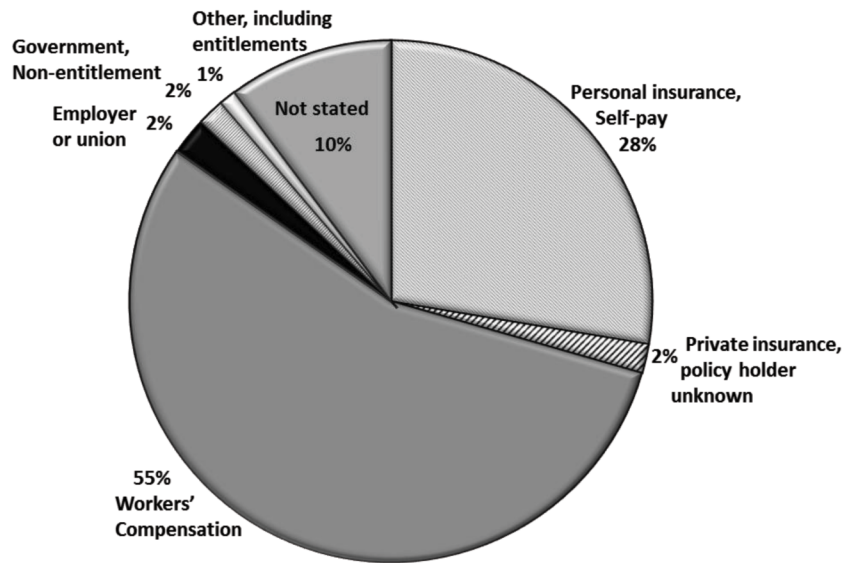


Table 1. Qualitative assessment of prevalence of employment and insurance information fields or forms in medical records and the completeness of the information.

Prevalence*	Information Field or Form	Description
Common	Guarantor	The person or entity that is financially responsible for patient.
Common	Employer name (patient's and/or guarantor's employer)	The employer's (or union, in some instances) name and address.
Moderate	Patient's occupation	Free text that may contain employment status terms in place of occupation (e.g., self-employed) or non-employment terms (e.g., retired, student, homemaker)
Rare	Employment status	Uniform Billing (UB04) classes: Employed (full- or part-time), Homemaker, Child, Active Military Duty, Retired, Self-employed, Student, Unemployed, Disabled, or Unknown.
Common	Primary, secondary, and tertiary insurance providers	Provider/carrier name, plan type (e.g., HMO, PPO, Medicare), policy #, group #, subscriber, etc.
Rare	Workers' Compensation	Carrier name and plan information.
Rare	First report of injury form	Narrative description of employment, injury circumstances, and injury characteristics completed at the ED.
Rare	Insurance verification form	Hospital verification of insurance and/or employment/work-relatedness of incident.
Common	Financial class	1-3 digit grouping of insurance types (e.g., BCBS, Medicare, Medicaid, Commercial, Workers' Compensation, and Military). Used for high level reporting. Transparent to registration and billing users.
Rare	Other	Registrar or nurse notes " <i>Gave patient Workers' Compensation forms</i> "

*Prevalence: Common = common field and usually completed; Moderate = field often available, but only moderately completed; Rare = field, form, and/or information rarely available.

Table 2. Common employment and expected payer identification issues in medical records.

Data elements	Issues
Employer	Frequently provided, but may not be correct business name; employer may be missing, incomplete, not collected, or not updated from a prior visit
Occupation	Often missing, inaccurate response, not collected, or not updated from a prior visit
Industry	Never collected, except indirectly in healthcare provider notes (e.g., “hurt at meat packing plant”)
Accident location	Rarely explicitly specified except for motor vehicle incidents; often implied in healthcare provider notes (e.g., “hurt at work” & employer is a restaurant)
Injury at work	Field is infrequently available. When the field is present, the default response is commonly equal to “no”
Insurance	Abstractors require local knowledge of insurance providers and plan types; Workers’ Compensation carriers may not be obvious
Financial class	Knowledge of codes is essential; however, financial class may not match insurance plans listed
Employment and employment status indicators	May not be updated for current visit; may default to child or student for young workers or retired for older workers

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
National Institute for Occupational Safety and Health



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

David F. Utterback and Teresa M. Schnorr, Editors

Department of Health and Human Services
Centers for Disease Control and Prevention
National Institute for Occupational Safety and Health

May 2013