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Workers' compensation insurer risk control systems: Opportunities for public health collaborations☆,☆☆

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ABSTRACT

Introduction: Workers' compensation (WC) insurers offer services and programs for prospective client selection and insured client risk control (RC) purposes. Toward these aims, insurers collect employer data that may include information on types of hazards present in the workplace, safety and health programs and controls in place to prevent injury/illness, and return-to-work programs to reduce injury/illness severity. Despite the potential impact of RC systems on workplace safety and health and the use of RC data in guiding prevention efforts, few research studies on the types of RC services provided to employers or the RC data collected have been published in the peer-reviewed literature. *Methods:* Researchers conducted voluntary interviews with nine private and state-fund WC insurers to collect qualitative information on RC data and systems. *Results:* Insurers provided information describing their RC data, tools, and practices. Unique practices as well as similarities including those related to RC services, policyholder goals, and databases were identified. *Conclusions:* Insurers collect and store extensive RC data, which have utility for public health research for improving workplace safety and health. *Practical applications:* Increased public health understanding of RC data and systems and an identification of key collaboration opportunities between insurers and researchers will facilitate increased use of RC data for public health purposes.

1. Introduction

The workers' compensation (WC) insurer system generates abundant safety and health data through its underwriting, claims, and risk control (RC) functions. Underwriters begin the insurance coverage process, which includes evaluating the risk for injuries associated with current or potential policyholder operations. RC consultants typically employed by the insurer conduct employer site visits to collect necessary underwriting information including data on workplace processes, exposures and controls, and safety and return-to-work (RTW) programs (Collins et al., 2002; Morin et al., 2015; Shockey, Babik, Wurzelbacher, Moore, & Bisesi, 2018). Underwriters use this information and other data sources to guide policyholder selection (to determine which organizations to insure), establish coverage terms including the types and extent of losses that will be covered by the insurance carrier, and premiums (the amount a policyholder pays for insurance). RC consultants also use this information to guide policyholder safety improvement and risk reduction efforts (Collins et al., 2002). When an illness or injury occurs and a policyholder files a claim (an application for insurance benefits; Utterback, Meyers, & Wurzelbacher, 2014), claims adjusters collect information from the policyholder about the nature of and events related to the injury/illness. This enables a determination of whether the insurance policy covers the loss and, if so, the amount of compensation due to the policyholder.

Claims administration produces extensive information on work-related medical conditions, treatments, and costs, with a focus on injuries. The RC process generates substantial employer information including data on safety programs and interventions. Researchers are increasingly using this information along with claims data for surveillance and occupational injury and illness prevention studies (Hogg-Johnson et al., 2012; Liberty Mutual Research Institute for Safety, 2016; Schofield, Alexander, Berberich, & MacLehose, 2017). Notable long-term partnerships between insurers and public health researchers have advanced occupational safety and health knowledge and practice (Goetzel et al., 2014; Newman et al., 2015; Wurzelbacher et al., 2016). For example, research on the effectiveness of the Ohio Bureau of Workers' Compensation (OHBWC) safety intervention grant (SIG) program indicated that the program reduced claim frequencies and costs (Wurzelbacher et al., 2014). Miller et al. (2017) estimated that the program saved millions

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of dollars in avoided workers' compensation costs and uncompensated wage losses annually, and contributed to increases in productivity.

While insurer-public health collaborations have used claims and safety and health program information, RC exposure information for research purposes may be underutilized. The importance of RC data within the insurance industry is clear, as insurers use the information to achieve or increase underwriting profit through improved insured client selection and pricing accuracy, while reducing the risk for claims and associated expenses. Although its potential for public health purposes has been noted (Morin et al., 2015; National Institute for Occupational Safety and Health [NIOSH], 2010; Utterback et al., 2014), RC data are likely underutilized both within and outside the insurance industry. For example, insurers and public health researchers could use RC data for identifying emerging risks not reflected in claims, and for understanding the distribution of hazards within and across industries. An understanding of risks and their early detection can aid in intervention and injury/illness prevention. RC information also can aid in developing evidence-based health and safety controls using data pooled across large samples of employers. Pooled data can assist in identifying trends and patterns that may not be detectable using smaller or more limited data sets. Further, pooling data across multiple insurers may increase generalizability of results and decrease selection bias. Lastly, RC data can be used to identify leading indicators of safety performance, which are measures of exposures or activities that take place prior to the occurrence of and in an effort to prevent injuries or reduce their severity (Morin et al., 2015; NIOSH, 2010). Examples include measures of organizational safety performance (NIOSH, 2010) and RTW programs. In contrast to leading indicators, lagging indicators such as claims and injury rates and costs, which reflect past incidents, traditionally have been used as safety measures (Wurzelbacher & Jin, 2011).

Although the usefulness of RC information has been recognized, until recently, minimal research investigating RC data and systems had been published in the peer-reviewed literature. A few recent studies shed light on insurer industrial hygiene (IH) data and their value for public health purposes. Estill (2015) found IH exposure data provided by the OHBWC to be useful for public health research. However, Estill (2015) and Shockey et al. (2018) found that data formats and collection forms were not all standardized, thereby limiting data utility. Further, because data were stored in individual or imaged documents rather than in a centralized database, they were difficult and time-consuming to extract. To facilitate data standardization, Babik, Shockey, Moore, and Wurzelbacher (2018) gathered IH data collection forms from 10 organizations, including a combination of five state-based and private insurers. Researchers then convened a panel of IH researchers and practitioners to develop a core set of IH data collection fields based on these forms. Standardized fields are suited for inclusion in WC insurer data collection forms and RC databases. Together these studies provided an initial understanding of IH data collected by insurers, demonstrated insurer interest in standardizing data, and facilitated data standardization by interested insurers and other organizations.

Although there are few research studies on RC data in the peer-reviewed literature, numerous surveys by and for members of the insurance industry have been completed (Al-Tarawneh, Jordan, & Rienerth, 2015; Ward Group, 2016). Several state WC organizations also collect RC information from insurers (Missouri Department of Labor & Industrial Relations, n.d.; Arkansas Workers' Compensation Commission, 2007; Pennsylvania Department of Labor & Industry, 2016; Texas Department of Insurance, 2017). This information is collected for specific purposes, however, and is not available for public health use.

While these previous studies and surveys have advanced the understanding of RC data and processes, a more extensive review of the scope of RC information is needed to address existing knowledge gaps. Consequently, researchers developed the current study. Primary goals included raising awareness of RC data and systems among public health researchers and encouraging its use through increased collaboration between researchers and insurers to improve occupational safety and health. Toward this end, key collaboration opportunities were identified. Additional study aims included identifying questions for use in future quantitative survey-based studies designed to yield data more representative of U.S. insurers, disseminating common and notable safety and RC practices, and facilitating insurer benchmarking of practices against others' practices and procedures.

2. Methods

In 2015 and 2016, WC insurers attending insurance and state-based carrier meetings including those of the American Association of State Compensation Insurance Funds (AASCIF), the Insurance Loss Control Association (ILCA), and Insurance Services Office (ISO) were invited to participate in the study. This study was designed to be a small-scale, qualitative investigation of risk control data and practices with a goal of spurring future research. As such, the number of participants was limited to enable in-depth exploration of interview topics with multiple departments within each insurer. Consequently, participating organizations were not selected to be representative of all U.S. commercial insurers, but to provide qualitative information on practices and tools used by selected RC departments.

Participants engaged in semi-structured interviews and provided RC-related documents including risk assessment forms, organizational charts, department manuals, service guidelines, and RC consultant performance metrics. Interview questions are provided in Appendix A. Between October 2015 and November 2016, phone-based and in-person interviews with RC managers and staff, underwriters, and claims representatives from participating insurers were conducted. Interviews ranged in duration from 6 h with RC management to 30 min with underwriters and claims representatives. Interview questions focused on RC department practices and system usage, risk assessment forms and collected data, and RTW programs. Interviews with claims and underwriting representatives were held to acquire information on the interaction and collaboration between claims, underwriting, and RC departments in providing insurance coverage and RC service to policyholders. RC department practices, forms, and databases change frequently to accommodate policyholder needs and improve RC service. The following information describes RC practices at the time of the interviews.

3. Results

Results are summarized below for aspects most relevant to public health practice. Information more closely related to insurance and RC practices is provided in the online supplemental material. A glossary of insurance terms is provided in Appendix B.

3.1. Carrier characteristics

Four state funds and five private insurers providing monoline WC and multiline policies with regional to national coverage participated in this study. Carriers insured 700–127,000 policyholders annually, with three carriers insuring 700–1125 policyholders, four insuring 14,000–62,500 policyholders, and two insuring 125,000–127,000 policyholders. Gross annual premiums ranged from approximately $123 million to nearly $3 billion. Totals included premiums from all commercial lines policies. Primary policyholder sectors for participating insurers included agriculture and forestry operations, healthcare and social services, manufacturing, construction, retail, and service industries including dry cleaning, education, restaurants, financial services, and transportation.

The characteristics in Table 1 describe participating RC departments.