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Workers' Compensation Data and the Potential for Advancing Chronic Disease Surveillance

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Abstract:

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The United States faces significant challenges in addressing workplace-related injuries and illnesses and their intersection with chronic disease. Chronic conditions, work-related or not, further exacerbate the public health burden, highlighting the need for a robust occupational public health surveillance system. Workers’ compensation, a form of social insurance that provides employees compensation for work related injuries and illnesses, holds potential for high quality data systems which could monitor chronic diseases and improve public health surveillance strategies. However, the existing limitations in reporting and collection, lack of uniform injury coding, and insufficient cost reporting, hinder its overwhelming potential for public health research. Despite the challenges, workers compensation data has repeatedly provided critical insights into occupational health issues, such as noise-induced hearing loss and carpal tunnel syndrome. This brief aims to identify these limitations and move forward, integrating workers’ compensation data with electronic medical records, standardizing coding practices, and incentivizing consistent and reliable injury reporting at both state and federal levels. By addressing these barriers, WC data can serve as a tool for advancing public health, especially within chronic disease prevention research.

Background

Building a comprehensive occupational public health system in the United States relies on high-quality, accessible workplace accident data. According to the Bureau of Labor Statistics, private sector employers reported 2.6 million non-fatal workplace injuries and illnesses in 2023, contributing to the burden of chronic disease in the US.¹ Outside formally documented workplace accidents, over a third of US workers have at least one chronic condition.² While not all chronic conditions are work-related, this highlights the need for a robust chronic disease surveillance system that examine occupation in more detail. The interplay between the workplace and chronic disease is crucial to assessing how chronic conditions outside of work relate to occupation.

This brief explores how workers' compensation (WC) data can monitor chronic diseases and conditions, leveraging existing data reporting systems to strengthen workplace injury reporting. In short, WC manages workplace injury disputes, covering treatment costs and lost wages due to occupational injuries or illnesses. If injured at work, an employee could file for WC and receive compensation for medical expenses and lost income.³

Limitations to Workers' Compensation Data

WC data in its current form has several limitations. Health data is among the most apparent of these.⁴ In fact, WC records are rarely treated as formal medical records, and when they are, they often are not reported by WC insurers.⁴ Additionally, underreporting in workplace illnesses and injuries remains an issue in broader occupational health data.⁴ Importantly, the Occupational Health and Safety Act (OSHA) expects WC insurers to maintain records on workplace accidents, but there is no requirement to report this data to OSHA, leading to potential underreporting.⁴

When looking into public health data quality, it has been found that WC data is, “not generally collected for research or for application to broader public health goals.”⁴ For instance when attempting to look at social determinants of health, researchers with the Workers’ Compensation Research Institute (WCRI) noted that they had to use county level data on social determinants of health, health outcomes, and costs.⁵ For public health professionals, reporting time, data reporting, and data collection all compound to limit their ability to comprehensively assess employee health.

Cost reporting is critical for evaluating WC programs, but weaknesses exist. In fact, the National Academy of Social Insurance highlighted weaknesses in their own cost reporting, noting that their cost reporting system might not cover the full extent of work-related injury costs, as some cost estimates do not include “human-costs” of work-related incidents.^{6(p.i)} If these costs were more comprehensively reported, they could provide insightful information to public health, providing a way to more universally assess chronic disease in the workplace. A potential cause of these limitations is that traditional health insurance companies report data on demographics, income, and health history to assess risk while WC insurers often focus on employer and industry risk, resulting in less information on health outcomes.^{6,7}

A common limitation when discussing WC data’s application to public health is a lack of uniformity in coding injuries and illnesses and the rift between WC accident reporting and public health surveillance. With respect to injury coding, there are several state and private organizations that have built coding guidelines for WC incidents.^{3(p.3)} Some examples are the Occupational Injury and Illness Classification System (OIICS) and the North American Industry Classification System (NAICS).^{3(p.3)} Unfortunately, these classification systems are not used across all states, and despite attempts at consolidating these systems, there is still not national

uniformity in coding guidelines.^{3(p.3, 21)} This results in barriers to a broader integration with public health surveillance.

These barriers in addition to an uncertain level of detail in these records can prevent public health from being included in workplace safety assessment.^{3(p.2-3)} Every state does maintain a longitudinal dataset that is suitable for public health research, but the surveillance capacity of this data can vary significantly, especially when compared with traditional health insurance data.^{3(p.2-3)}

How Workers' Compensation Data Can be Used to Improve Public Health:

Public health surveillance is the primary mechanism for evaluating and shaping the future of public health policy. Through this tracking of public health trends, researchers have been able to improve population health through intentional and evidence-based interventions. Despite the shortcomings, WC data has been used on many occasions to accurately identify job-related chronic disease.

Some examples of when WC data has been used to address public health issues was occupational asbestos exposure and its impact on lung disease in the 1930s, noise-related hearing loss in the 1950s, and repeated hand motion at work and its impact on carpal tunnel syndrome in the 1980s.⁴ Identifying these problems through data trends was the first step toward improvement, WC data provided new and unique insights on occupational public health that became indispensable for keeping up with new challenges in chronic disease.

WC data can be used to identify potential causes of disease that might not be detected through regular public health surveillance. WC research has been very uniquely useful for preventing chronic disease. For example, preventing occupationally induced hearing loss with ear protection and innovations in equipment is a widespread occupational health practice. In 2022, 71%

Americans worked full-time or over 35 hours per week., so being able to understand work's influence on chronic disease will be essential to keeping public health, and public policy up-to-date and informed on the workplace and its new challenges.¹

The awareness of the need for a more unified WC system has existed for over 50 years. The National Commission on State WC Laws, which was held in the 1970s as an attempt to draft federal policies for state WC.^{9(pg.19)} These policies centered compulsory state workers compensation programs, though the bill was never enacted into law.^{9(p.20)} In a more recent example, after a ProPublica report in 2015 highlighting drastic differences in WC injury payouts and no centralized federal resource on different state level WC policies, there was another push for more federal oversight on state level WC.^{9(p. 22)} Similarly to the National Commission, this also did not result in any federal oversight.^{9(p.22)} Although the attempts for federal oversight were not implemented, these initiatives did propel WC as an issue for state and national advocacy.

Primary Recommendation:

National recommendations for improving WC exist; for example, the Center for Disease Control and Prevention's (CDC)DC's intermediate goal 1.3, which calls for integrating WC data with electronic medical records systems.¹⁰ Through this integration, coding for WC claims and health records can be made uniform through existing electronic medical records systems.³ This policy would expand the scope, quality, and generalizability of occupational public health research. This would also remove many barriers to investigating and intervening to reduce chronic disease in the workplace. Finally, through this action, medicine and occupational health can challenge the binary view of workplace injury, viewing chronic disease through the intersection of primary care and occupational health and not the separation of the two.

Routes for Implementation:

Through federal actions like the National Commission on State WC in the 1970's and the 2015 call for further federal oversight on WC policy, policy makers can evaluate best practices for recording incidents, coding and reporting standards, and how an integration of these systems can reduce additional burdens on all stakeholders.^{9(p.18,22)}

If an organized federal initiative fails, policy makers and public health experts involved in state policy making can also push for change in WC policy. This can be done through financial incentives to private or self-insured WC insurance organizations in exchange for more comprehensive reporting of demographic and health information.⁴ Additionally, state level policy makers can push for a stronger integration of WC records into a medical format on a patient level, as opposed to being coded into medical records systems as administrative records. As mentioned through this essay, these policies both on the state and federal level would provide a new lens for public health to assess chronic disease. Through this lens, new interventions would be promoted, growing on the longstanding legacy of using WC as a tool to push forward new solutions to address chronic disease. Admittedly, barriers to these initiatives exist, but by including public health, WC insurers, practitioners, and occupational health specialists, chronic disease can be assessed and mitigated through new transdisciplinary approaches to prevention.

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