August 4, 2023

ABOUT RESEARCH ALERT

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Journal articles marked with an asterisk indicate an IWH scientist or adjunct scientist is included in the list of authors.

*Carnide N, Landsman V, Lee H, Frone MR, Furlan AD, and Smith PM. Workplace and non-workplace cannabis use and the risk of workplace injury: findings from a longitudinal study of Canadian workers. Canadian Journal of Public Health. 2023; [epub ahead of print]. https://doi.org/10.17269/s41997-023-00795-0 [open access]

Abstract: Objectives: Findings of previous studies examining the relationship between cannabis use and workplace injury have been conflicting, likely due to methodological shortcomings, including cross-sectional designs and exposure measures that lack consideration for timing of use. The objective was to estimate the association between workplace cannabis use (before and/or at work) and non-workplace use and the risk of workplace injury. Methods: Canadian workers participating in a yearly longitudinal study (from 2018 to 2020) with at least two adjacent years of survey data comprised the analytic sample (n = 2745). The exposure was past-year workplace cannabis use (no past-year use, non-workplace use, workplace use). The outcome was past-year workplace injury (yes/no). Absolute risks and relative risks (RR) with 95% confidence intervals (CIs) were estimated between workplace and non-workplace cannabis use at one time point and workplace injury at the following time point. Models were adjusted for personal and work variables and were also stratified by whether respondents' jobs were safety-sensitive. Results: Compared to no past-year cannabis use, there was no difference in workplace injury risk for non-workplace cannabis use (RR 1.09, 95%CI 0.83-1.44). However, workplace use was associated with an almost two-fold increased risk of experiencing a workplace injury (RR 1.97, 95%CI 1.32-2.93). Findings were similar for workers in safety-sensitive and non-safety-sensitive work.

Conclusion: It is important to distinguish between non-workplace and workplace use when considering workplace safety impacts of cannabis use. Findings have implications for workplace cannabis use policies and substantiate the need for worker education on the risks of workplace cannabis use.

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*Jetha A, Bakhtari H, Rosella LC, Gignac MAM, Biswas A, Shahidi FV, Smith BT, Smith MJ, Mustard C, Khan N, Arrandale, VH, Loewen PJ, Zuberi D, Dennerlein JT, Bonaccio S, Wu N, Irvin E, Smith PM. Artificial intelligence and the work-health interface: a research agenda for a technologically transforming world of work. American Journal of Industrial Medicine. 2023; [epub ahead of print].

https://doi.org/10.1002/ajim.23517 [open access]

Abstract: The labor market is undergoing a rapid artificial intelligence (AI) revolution. There is currently limited empirical scholarship that focuses on how AI adoption affects employment opportunities and work environments in ways that shape worker health, safety, well-being and equity. In this article, we present an agenda to guide research examining the implications of AI on the intersection between work and health. To build the agenda, a full day meeting was organized and attended by 50 participants including researchers from diverse disciplines and applied stakeholders. Facilitated meeting discussions aimed to set research priorities related to workplace AI applications and its impact on the health of workers, including critical research questions, methodological approaches, data needs, and resource requirements. Discussions also aimed to identify groups of workers and working contexts that may benefit from AI adoption as well as those that may be disadvantaged by AI. Discussions were synthesized into four research agenda areas: (1) examining the impact of stronger AI on human workers; (2) advancing responsible and healthy AI; (3) informing AI policy for worker health, safety, well-being, and equitable employment; and (4) understanding and addressing worker and employer knowledge needs regarding AI applications. The agenda provides a roadmap for researchers to build a critical evidence base on the impact of AI on workers and workplaces, and will ensure that worker health, safety, well-being, and equity are at the forefront of workplace AI system design and adoption

Berton F, Carreri A, Devicienti F, and Ricci A. The collective voice of unions and workplace training in Italy: new insights from mixed methods. British Journal of Industrial Relations. 2023; 61(3):595-622.

https://doi.org/10.1111/bjir.12745 [open access]

Abstract: Using a three-phase approach that combines quantitative (pooled OLS, fixed effects and IV) with qualitative (semi-structured interviews) analyses, we find that in Italy, workplace unions are more likely to enhance training when they sign a firm-level agreement and when they can get access to external funds for financing. We also identify three channels: what we call a 'maturation effect', double-track communication and watch-dog function. We argue that these results are consistent with the idea that the impact of workplace unions on training depends on the empowerment of its collective voice within an institutional



framework that does not fit either of the standard models provided by collective and liberal market economies.

Bjorkedal ST, Fisker J, Hellstrom LC, Hoff A, Poulsen RM, Hjorthoj C, et al. Predictors of return to work for people on sick leave with depression, anxiety and stress: secondary analysis from a randomized controlled trial. International Archives of Occupational & Environmental Health. 2023; 96(5):715-734.

https://doi.org/10.1007/s00420-023-01968-7 [open access]

Abstract: Purpose: Knowledge about predictors of return to work (RTW) in people on sick leave with common mental disorders (CMDs) may inform the development of effective vocational rehabilitation interventions for this target group. In this study, we investigated predictors of RTW at 6 and 12 months in people on sick leave with depression, anxiety disorders or stress-related disorders. Methods: We have performed a secondary analysis, utilizing data from two RCTs that evaluated the efficacy of an integrated health care and vocational rehabilitation intervention. Data were obtained from mental health assessments, questionnaires and registers. Using Cox regression analysis, the relationship between baseline variables and RTW was analysed at 6 and 12 months after randomization within the group of CMD as a whole and within the subgroups of depression, anxiety and stress-related disorders. Results: Symptom burden and employment status at baseline predicted RTW in the CMD group (n = 1245) and in the three diagnostic subgroups at both time points. RTW selfefficacy predicted RTW in the depression group but not in the anxiety or stress subgroups. Conclusion: Many predictors of RTW were similar over time and, to some extent, across the CMD subgroups. Findings highlight the need not only to take health-related and psychological factors into account when developing vocational rehabilitation interventions but also to consider workplace strategies and options for support.

Cajander N, Reiman A, and Tappura S. Occupational safety and health and temporary agency work in multiemployer restaurants. Work. 2023; 75(3):939-952.

https://doi.org/10.3233/WOR-220033

Abstract: Background: Current occupational safety and health (OSH) literature calls for sociotechnical, system-level approaches that increase understanding of the underlying reasons for insufficient OSH performance in nonstandard employment that is associated with lower labour and social security protection when compared with traditional forms of work. Objective: This study focused on temporary agency work (TAW) which is a central form of nonstandard employment. The objective was to explore OSH issues in temporary agency work (TAW) in small and medium-sized multiemployer restaurants in Finland and discuss the issues from the perspectives of the agency worker, user company and agency. Methods: A directed content analysis method was used to examine the data obtained from semi-structured interviews (n = 20) with agency workers, restaurant managers and experts representing the temporary work agencies, a pension insurer, and a labour union. The balanced work system theory was used as a framework for this qualitative analysis. Results: A



variety of OSH risks and hazards in TAW were identified. In addition, the complexity of OSH management was highlighted in this triangular employment relationship between the agency worker, the user company, and the agency. Conclusion: This study reveals problems related to OSH in TAW. Restaurants are entities separate from agencies, so establishing and adhering to a common process of OSH management is not simple.

DeBono NL, Daniels RD, Beane Freeman LE, Graber JM, Hansen J, Teras LR, et al. Firefighting and cancer: a meta-analysis of cohort studies in the context of cancer hazard identification. Safety and Health at Work. 2023; 14(2):141-152.

https://doi.org/10.1016/j.shaw.2023.02.003 [open access]

Abstract: OBJECTIVE: We performed a meta-analysis of epidemiological results for the association between occupational exposure as a firefighter and cancer as part of the broader evidence synthesis work of the IARCMonographs program. METHODS: A systematic literature search was conducted to identify cohort studies of firefighters followed for cancer incidence and mortality. Studies were evaluated for the influence of key biases on results. Randomeffects meta-analysis models were used to estimate the association between everemployment and duration of employment as a firefighter and risk of 12 selected cancers. The impact of bias was explored in sensitivity analyses. RESULTS: Among the 16 included cancer incidence studies, the estimated meta-rate ratio, 95% confidence interval (CI), and heterogeneity statistic (I(2)) for ever-employment as a career firefighter compared mostly to general populations were 1.58 (1.14-2.20, 8%) for mesothelioma, 1.16 (1.08-1.26, 0%) for bladder cancer, 1.21 (1.12-1.32, 81%) for prostate cancer, 1.37 (1.03-1.82, 56%) for testicular cancer, 1.19 (1.07-1.32, 37%) for colon cancer, 1.36 (1.15-1.62, 83%) for melanoma, 1.12 (1.01-1.25, 0%) for non-Hodgkin lymphoma, 1.28 (1.02-1.61, 40%) for thyroid cancer, and 1.09 (0.92-1.29, 55%) for kidney cancer. Ever-employment as a firefighter was not positively associated with lung, nervous system, or stomach cancer. Results for mesothelioma and bladder cancer exhibited low heterogeneity and were largely robust across sensitivity analyses. CONCLUSIONS: There is epidemiological evidence to support a causal relationship between occupational exposure as a firefighter and certain cancers. Challenges persist in the body of evidence related to the quality of exposure assessment, confounding, and medical surveillance bias

Fetherman DL and Cebrick-Grossman J. Use of the PRECEDE-PROCEED model to pilot an occupational physical activity intervention: tailored through a community partnership. Workplace Health & Safety. 2023; 71(8):367-374.

https://doi.org/10.1177/21650799231180793

Abstract: BACKGROUND: Healthcare and social assistance workers are at increased risk for obesity. This industry has limited access to workplace health promotion resources and reports low rates of physical activity programs for workers. METHODS: This article describes the application of the PRECEDE-PROCEED Model (PPM) to plan, implement, and evaluate a pilot physical activity intervention, Project Move, tailored to promote occupational physical



activity and reduce sedentary behaviors among female workers. Actions taken by the community-based participatory research partnership assisted in the identification of the predisposing, reinforcing, and enabling factors that influenced the physical activity behaviors of female workers. The resources and capacities of the partnership were leveraged to implement and evaluate the pilot intervention. FINDINGS: After the 12-week intervention, the participants' daily average steps while at work met the recommended minimum 7,000 steps/day, and the time spent sitting decreased along with positive changes in health-related psychosocial measures. CONCLUSIONS/APPLICATION TO PRACTICE: The PPM represents a feasible approach for community-based participatory partnerships to create a tailored intervention to address the occupational physical activity and sedentary behaviors of at-risk female healthcare and social assistance workforce

Foley H, Bugarcic A, Adams J, Wardle J, Leach M, and Steel A. Criteria for the selection, evaluation and application of traditional knowledge in contemporary health practice, education, research and policy: a systematic review. Health Information and Libraries Journal. 2023; [epub ahead of print].

https://doi.org/10.1111/hir.12499

Abstract: Background: Traditional and complementary medicine (T&CM) is highly utilised and draws on traditional knowledge (TK) as evidence, raising a need to explore how TK is currently used. Objectives: Examine criteria used to select, evaluate and apply TK in contemporary health contexts. Methods: Systematic search utilising academic databases (AMED, CINAHL, MEDLINE, EMBASE, SSCI, ProQuest Dissertations Theses Global), Trip clinical database and Google search engine. Citations and reference lists of included articles were searched. Reported use of TK in contemporary settings was mapped against a modified 'Exploration-Preparation-Implementation-Sustainment' (EPIS) implementation framework. Results: From the 54 included articles, EPIS mapping found TK is primarily used in the Exploration phase of implementation (n = 54), with little reporting on Preparation (n = 16), Implementation process (n = 6) or Sustainment (n = 4) of TK implementation. Criteria used in selection, evaluation and application of TK commonly involved validation with other scientific/traditional evidence sources, or assessment of factors influencing knowledge translation. Discussion: One of the difficulties in validation of TK (as a co-opted treatment) against other evidence sources is comparing like with like as TK often takes a holistic approach. This complicates further planning and evaluation of implementation. Conclusion: This review identifies important criteria for evaluating current and potential contemporary use of TK, identifying gaps in research and practice for finding, appraising and applying relevant TK studies for clinical care.

Henry JS, Kulesza ET, Williams Awodeha NF, Hicks SB, Middleton RA, and Robinson M. A way forward with multicultural considerations, advocacy, and accessibility across the 2023 revised code of professional ethics for rehabilitation counselor educators and practitioners. Rehabilitation Counseling Bulletin. 2023; 66(4):274-282.



https://doi.org/10.1177/00343552221146164 [open access]

Abstract: While the 2017 version of the Commission on Rehabilitation Counselor Certification (CRCC) Code of Ethics engrained diversity considerations across the 12 main sections of professional practice, more explicit ethical expectations related to multicultural competence are needed to govern the future of rehabilitation counseling practice. The 2023 revised CRCC Code of Ethics will include a newly added unit labeled, Section D: Multicultural Considerations, which seeks to reduce bias, minimize discrimination, and prevent harm in practice. This section infuses cultural competencies introduced to the profession and tenets of advocacy as more than just aspirational directives but also as enforceable tenets of conduct. This article provides an overview of the changes made to Section C: Advocacy and Accessibility and explains the significance of Section D across the principles that instruct professional behavior. The authors will describe best practices for operationalizing the ethics code to ensure that services are comprehensive, equitable, and inclusive. Finally, we will present strategies for becoming a culturally competent and ethically conscientious Rehabilitation Counselor.

Kim J, Kim H, Park EC, and Jang SI. Effect of on-site first aid for industrial injuries on healthcare utilization after medical treatment: a 4-year retrospective longitudinal study. Journal of Occupational Medicine and Toxicology. 2023; 18(1):12.

https://doi.org/10.1186/s12995-023-00380-8 [open access]

Abstract: Background: The number of industrially injured workers (IIW) is increasing in Korea. However, little research has been conducted on whether first aid is performed at industrial sites or on the association between first aid for industrial injuries and the prognosis of IIW, including healthcare utilization. Methods: A total of 3,092 participants (2,562 males and 530 females) were analyzed during the 4-year study period, which contributed to 11,167 observations. Healthcare utilization was evaluated based on the number of outpatient visits, hospitalizations, and duration of hospitalization using a generalized estimating equation Poisson regression. Several time-varying socioeconomic characteristics and information about the injury were adjusted, and transfer time to the medical institutions was also considered. Results: During 4-year after the termination of medical treatment, participants who had not receive first aid visited outpatient clinics 15.243 times per year, and those who had visited 13.928 times per year, which is 16.16% less (adjusted relative risk [aRR]: 0.838, 95% CI = 0.740-0.950). Participants who had received on-site first aid with less than a 0.5hour transfer time to the medical institutions visited outpatient clinics 14.87% less per year than those who had not received first aid (aRR: 0.851, 95% CI = 0.750-0.966). Conclusion: To reduce the long-term outpatient utilization rate for IIW after medical treatment, on-site first aid must be provided in a timely manner. Employee education and first aid training are also necessary.

Kyung M, Lee SJ, Dancu C, and Hong O. Underreporting of workers' injuries or illnesses and contributing factors: a systematic review. BMC Public Health. 2023; 23(1):558.



https://doi.org/10.1186/s12889-023-15487-0 [open access]

Abstract: Background: Accurate identification of work-related health problems is important to understand workplace safety issues and develop appropriate interventions. Although workers' reporting of work-related injuries or illnesses is the very first step of the reporting process, many workers may encounter challenges in reporting them to their management or workers' compensation (WC) programs. This systematic review aimed to identify the level of workers' underreporting of work-related injuries and illnesses and the contributing factors and reasons for underreporting among US workers. Methods: This study searched PubMed (Medline), PsycINFO (ProQuest), CINAHL (EBSCOhost), EMBASE (Embase.com), and Social Science Citation Index (Web of Science) using search terms related to underreporting of work-related injury or illness. Results: Twenty studies (17 quantitative and three mixed methods studies) were identified. The studies investigated reporting to management (n = 12), WC programs (n = 6), multiple organizations (n = 1), and not specified (n = 1). The timeframe used to measure reporting prevalence varied from three months to entire careers of workers, with the most common timeframe of 12 months. This review indicated that 20-91% of workers did not report their injuries or illnesses to management or WC programs. From quantitative studies, contributing factors for injury or illness underreporting were categorized as follows: injury type and severity, sociodemographic factors (e.g., age, gender, education, and race/ethnicity), general health and functioning, worker's knowledge on reporting, job and employment characteristics (e.g., work hour, job tenure, work shift, type of occupation, and physical demand), psychosocial work environment (e.g., supervisor support, coworker support, and safety climate), and health care provider factors. From the review of qualitative studies, the reasons for underreporting included the following: fear or concern, cumbersome time and effort in the reporting process, lack of knowledge regarding reporting, perceptions of injuries as not severe or part of the job, and distrust of reporting consequences. Conclusions: The review findings indicated that low wage earners, racial/ethnic minority workers, and workers who perceive a poor psychosocial work environment encounter more barriers to reporting a work-related injury or illness. This review also identified variations in the measurement of work-related injury reporting across studies and a lack of standardized measurement. Trial registration: The review was registered in the PROSPERO, an international database of prospectively registered systematic reviews in health and social care (CRD42021284685).

Larsen TP and Ilsoe A. Nordic relief packages and non-standard workers: towards expanded universalism and institutional inequalities. Nordic Journal of Working Life Studies. 2023; 13(S10):7-29.

https://doi.org/10.18291/njwls.135099 [open access]

Abstract: Has the Corona crisis triggered changes to Nordic social protection? We address this question by examining how Denmark, Finland, Norway, Finland, Iceland, and Sweden reacted to the crisis, which in many ways resembles a Litmus-test for Nordic social protection.

Analytically, we draw on historical institutionalism, welfare, and segmentation literature. We



find that although the Nordic relief packages aim to create an encompassing safety net, the reforms expose and sometimes reinforce institutionally embedded cracks in the Nordic systems around the nexus of standard and non-standard work, leading to potential layers of institutionally embedded inequalities. The Nordic countries have expanded and adjusted their existing social protection, portraying strong elements of path dependency, but with examples of novel initiatives. Their mix of universal and targeted measures appears to reflect so-called 'expanded universalism', where targeted measures supplement the 'ordinary' Nordic social protection to cover the most crisis ridden, but not necessarily the poorest, groups.

Ramond-Roquin A, Begue C, Vizzini J, Chhor S, Bouchez T, Parot-Schinkel E, et al. Effectiveness of coordinated care to reduce the risk of prolonged disability among patients suffering from subacute or recurrent acute low back pain in primary care: protocol of the CO.LOMB cluster-randomized, controlled study. Frontiers in Medicine. 2023; 10:1156482. https://doi.org/10.3389/fmed.2023.1156482 [open access]

Abstract: BACKGROUND: Low back pain (LBP) is a common musculoskeletal condition and, globally, a leading cause of years lived with disability. It leads to reduced social participation, impaired quality of life, and direct and indirect costs due to work incapacity. A coordinated approach focusing on psychosocial risk factors, active reeducation, and the early use of tools to maintain employment, may be effective for improving prognosis of patients with LBP. Primary care professionals and multidisciplinary teams, who see patients in the early stages of LBP may be in the best position to implement such a coordinated approach. We designed this study to assess a coordinated multi-faceted strategy in primary care for patients with subacute or recurrent acute LBP. METHODS: The CO.LOMB study was designed as a multicentric, cluster-randomized, controlled study. Patients aged 18-60 years, with subacute or recurrent acute LBP are eligible. Patients also need to be employed (but can be on sick leave) with access to occupational health services. The clusters of GPs will be randomized (1:1) to either the Coordinated-care group or the Usual-care group. Patients will be assigned the group allocated to their GP. The healthcare professionals (GPs and associated physiotherapists) allocated to the Coordinated-care group will perform a 2-session study training. The following interventions are planned in the Coordinated-care group: exploration and management of psychosocial factors, active reeducation with a physiotherapist, the implementing of tools to maintain employment, and a reinforced cooperation between primary healthcare professionals. The primary objective is to assess the benefit of coordinated primary care to reduce disability in LBP patients at 12 months after enrollment: measure using the validated French version of the Roland Morris Disability Questionnaire. Secondary objectives include the evaluation of pain, work status, and quality of life at various time points. The study plans to enroll 500 patients in 20 GP clusters. Patients will be followed up for 12months. DISCUSSION: This study will evaluate the benefit of a coordinated multifaceted strategy in primary care for patients with LBP. Notably whether this approach will



alleviate the associated disability, attenuate pain, and promote the maintenance or return to work. CLINICAL TRIAL REGISTRATION: NCT04826757

Sanford S and Roche B. The work experiences of people with long COVID in the GTA. Toronto, ON: Wellesley Institute; 2023.

https://www.wellesleyinstitute.com/publications/the-work-experiences-of-people-with-long-covid-in-the-gta/

Schupper AJ, Hrabarchuk EI, McCarthy L, and Hadjipanayis CG. Improving surgeon well-being: ergonomics in neurosurgery. World Neurosurgery. 2023; 175:e1220-e1225. https://doi.org/10.1016/j.wneu.2023.04.102

Abstract: BACKGROUND: Musculoskeletal disorders are common among surgeons, and affect most neurosurgeons over the course of their career. Although all subspecialist neurosurgeons may be affected by physical strain, spine surgeons and skull base surgeons have a high propensity for workplace injury as a result of long procedures with repetitive movements in strained physical positions. METHODS: In this review, the prevalence of musculoskeletal disorders in neurosurgery, the state of innovation to improve ergonomics in the operating room for neurosurgeons, and potential limitations in advancing technology with the goal of maximizing neurosurgeon longevity are discussed. RESULTS: Innovations such as robotics, the exoscope, and handheld devices with more degrees of freedom have allowed surgeons to maneuver instruments without exerting excessive effort, all while maintaining neutral body positioning, avoiding joint and muscle strain. CONCLUSIONS: As new technology and innovation in the operating room develop, there has been a larger emphasis placed on maximizing surgeon comfort and neutral positioning, by minimizing force exertion and fatigue

Tilley PM, Mulla DM, and Keir PJ. Effects of sex and age on work-related upper extremity musculoskeletal disorders in Ontario, Canada. Work. 2023; 75(3):1009-1020. https://doi.org/10.3233/WOR-220175

Abstract: BACKGROUND: Effective targeting of workplace upper extremity musculoskeletal disorder (MSD) prevention strategies requires the identification of demographic groups most at risk. Workers' compensation data provides an effective means of surveillance of MSDs at the population level. OBJECTIVE: The primary purpose of this study was to identify the effects of age and sex on rates of tendon injuries of the wrist and hand, carpal tunnel syndrome (CTS), epicondylitis, and soft tissue shoulder injuries in Ontario, Canada between 2000-2019 using workers' compensation data from the Association of Workers Compensation Boards of Canada (AWCBC). METHODS: Age and sex specific rates of lost-time injury claims from the four identified injury categories as well as "non-specific" upper extremity MSDs which did not fit into the four categories were calculated by standardizing injury claim totals with "at-risk" population estimates from the Canada Labour Force Survey. A multiple regression analysis was used to analyze the effects of age and sex on rates of specific injury claims. RESULTS:



Statistically significant age and sex effects were identified for rates of claims from tendon injuries of the wrist and hand, CTS, and shoulder injuries, while only age effects were significant for epicondylitis. Between 2000-2019, rates of claims from the four injury categories studied and the magnitude of the age and sex effects declined substantially over time. CONCLUSION: Detailed surveillance of workplace ergonomic hazards in Ontario workplaces is needed to determine what is causing rates of upper extremity claims to decline

Zhang Y, Rajaram N, Lau A, Mehta K, Holness DL, Tarlo SM, et al. Silicosis, asbestosis, and pulmonary fibrosis in Ontario, Canada from 1996 to 2019. American Journal of Industrial Medicine. 2023; 66(8):670-678.

https://doi.org/10.1002/ajim.23504

Abstract: BACKGROUND: Silicosis is a fibrotic lung disease caused by exposure to respirable crystalline silica. Historically, silicosis was common among miners and other professions in the 20th century, and in recent decades has re-emerged in coal mining and appeared in new workplaces, including the manufacture of distressed jeans and artificial stone countertops. METHODS: Physician billing data for the province of Ontario between 1992 and 2019 were analyzed across six time-periods (1993-1995, 1996-2000, 2001-2005, 2006-2010, 2011-2015, and 2016-2019). The case definition was two or more billing records within 24 months with a silicosis diagnosis code (ICD-9 502, ICD-10 J62). Cases from 1993 to 1995 were excluded as prevalent cases. Crude incidence rates per 100,000 persons were calculated by time-period, age, sex, and region. Analyses were repeated in parallel for pulmonary fibrosis (PF) (ICD-9 515, ICD-10 J84) and asbestosis (ICD-9 501; ICD-10 J61). RESULTS: From 1996 to 2019, 444 cases of silicosis, 2719 cases of asbestosis and 59,228 cases of PF were identified. Silicosis rates decreased from 0.42 cases per 100,000 in 1996-2000 to 0.06 per 100,000 people in 2016-2019. A similar trend was observed for asbestosis (1.66 to 0.51 per 100,000 persons) but the incidence rate of PF increased from 11.6 to 33.9 per 100,000 persons. Incidence rates for all outcomes were higher among men and older adults. CONCLUSIONS: A decreasing incidence of silicosis was observed in this analysis. However, the incidence of PF increased, consistent with findings from other jurisdictions. While cases of silicosis have been recorded among artificial stone workers in Ontario these cases do not seem to have impacted the population rates thus far. Ongoing, periodic surveillance of occupational diseases is helpful for tracking population-level trends over time

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