importance of increasing education and awareness, training, and the use of specialized equipment in order to minimize noise exposure. Regulating onboard noise levels is necessary to avoid noise-related health problems.

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A MEDIA SURVEILLANCE ANALYSIS OF COVID-19 WORKPLACE OUTBREAKS IN CANADA AND THE UNITED STATES

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Introduction The news media is one of the most accessible sources of information regarding COVID-19 transmission in the workplace in the absence of other occupational data. Only a few public health agencies in Canada and the United States have publically reported detailed occupation information for non-health care worker COVID-19 cases.

Objective We conducted a media surveillance analysis to identify new or emerging occupational groups at risk of exposure to the SARS-CoV-2 virus ('COVID-19 exposure').

Methods We searched the Factiva database for media articles reporting COVID-19 workplace outbreaks (February 1 - December 22, 2020). Job titles were coded to the 2016 National Occupational Classification (V1.3) and industries to the 2017 North American Industry Classification System (V3.0). Occupations with COVID-19 workplace transmission identified in media articles were compared and contrasted with the same occupation in the Vancouver School of Economics (VSE) COVID Risk Tool by risk rating (seven categories between very high to very low).

Results We identified 1,111 unique COVID-19 workplace outbreaks in the media. After nurse aides, orderlies and patient service associates, industrial butchers and meat cutters, poultry preparers and related workers had the most workplace outbreaks reported in the media (n=79) but were rated as medium risk occupations for COVID-19 transmission in the VSE COVID Risk Tool. Outbreaks were also reported in the media among material handlers (n=61) and general farm workers (n=28) but were rated medium-low risk and low risk, respectively. Outbreaks reported in the media among food and beverage services (n=72) and cashiers (n=60) were identified as high risk occupations in the VSE COVID Risk Tool.

Conclusion Media surveillance can identify COVID-19 workplace outbreaks and indicate transmission risk. Our results point to key determinants of health that compound the risk of COVID-19 exposure in the workplace, and highlight the importance of collecting occupation data during a pandemic.

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INVESTIGATING HEALTH AND OTHER CHARACTERISTICS OF MILITARY VETERANS AUTHORIZED TO RECEIVE MEDICINAL CANNABIS IN CANADA

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Introduction Veterans Affairs Canada (VAC) has reimbursed cannabis for medical purposes (CMP) since 2008. However, to date little is known about the characteristics of Veterans authorized for CMP, and whether these differ by authorization amount.

Objectives To descriptively summarize social, health, and other characteristics of Canadian Regular Force Veterans authorized to receive CMP from Veterans Affairs Canada.

Methods A linked database of CMP authorizations was developed using VAC reimbursement files, VAC client records, and military personnel data. Analyses were limited to 13,173 Regular Force Veterans residing in Canada with an active authorization as of December 31, 2020. CMP authorization amounts (mean and categorical) were summarized by sociodemographic factors, pensionable conditions and benefits, and military service characteristics.

Results Overall, the average amount of a CMP authorization among Canadian Veterans was 3.6 grams/day. For sociodemographic characteristics, the highest average amounts were observed among Veterans who were aged 30 to 39 years (4.2g/day), male (3.7g/day), separated/divorced/widowed (3.8g/day), and residing in the provinces of New Brunswick (4.7g/day), Newfoundland and Labrador (4.1g/day) and Manitoba (4.1g/day). For conditions documented as part of the VAC benefit process, the highest average amounts were observed among Veterans with mental health (3.9g/day) and hearing loss conditions (3.7g/day). For military service characteristics (sub-sample of 9,200 Veterans) the highest average amounts were observed among Veterans with a more recent release year, peaking in 2016 (4.2g/day); and among those who were Junior Non-Commissioned Members (4.0g/day), had served in the army (4.0g/day), and released from the military involuntarily (4.8g/day).

Conclusion This descriptive epidemiology provides new insights on the characteristics of a large population of veterans with medical cannabis authorizations in Canada. This will be used to inform further research on associations between CMP authorizations and wellness outcomes among military veterans.

P-314

ESTABLISHING A EUROPEAN-AMERICAN POOLED COHORT OF STYRENE EXPOSED REINFORCED PLASTICS WORKERS

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Introduction Styrene is genotoxic, an animal carcinogen, associated with lymphohematopoietic malignancies in humans, and classified as a group 2A carcinogen by the IARC.

Objective To combine and harmonize existing cohorts of reinforced plastics industry workers with the aim to study exposure-response relations for styrene and subtypes of lymphohematopoietic and other malignancies as well as non-malignant diseases.

Methods Six European cohorts included in an earlier IARC coordinated cohort and one US cohort participated. They all have been previously used in investigation of the health risks of styrene exposure. They will be updated with extended follow-up until 2019–2020 in national registries for mortality

and cancer incidence. Personal air styrene measurements and biological markers of styrene exposure from the 1960s up to the present day will be used to update the exposure assessment. Linear mixed-effects models will be applied to develop a quantitative, historical, industry-specific job-exposure matrix. Predictors available in the individual cohorts include country, occupation, employment year, product, process, and task. Some cohorts will be pooled together prior to analysis, others analyzed separately following a common protocol that will focus on different exposure metrics (cumulative, duration, mean, highest attained, peaks) and exposure time windows. The aggregated data will be synthesized by a meta-analysis.

Results A total of 96,000 workers employed between 1947–2007 in 762 companies in Finland, Italy, UK, US, and Denmark, and over 2.8 million person years will be included, and 40,000 air samples and 13,000 urinary samples are identified.

Conclusion Pooling and meta-analysis of existing cohorts are powerful tools in the search for more definite answers to the carcinogenicity of this important chemical.

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THE EFFECT OF THE ONSET OF A DISEASE ON EXIT FROM PAID EMPLOYMENT AMONG WORKERS IN THE NETHERLANDS: A LONGITUDINAL REGISTER-BASED STUDY WITH 11 YEARS FOLLOW-UP

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Introduction With increasing retirement age, employed persons are more likely to suffer from chronic diseases, such as cardiovascular diseases, diabetes, inflammatory diseases, respiratory diseases, and psychological disorders, at later stage during their working career.

Objectives This study investigates the influence of the onset of a disease on the likelihood of exit from paid employment through different pathways (unemployment, disability benefits, economic inactivity, early retirement).

Methods For this longitudinal study with 11 years of follow-up (2009–2019), 4,276,770 persons were selected, who were employed between 2009 and 2010, and used no medication for the selected diseases in 2009. Register data from Statistics Netherlands on medication use, employment status, and socio-demographic factors were used. Exit from paid employment pathways were defined as: unemployment, disability benefits, economic inactivity, and early retirement. The following six disease categories were identified based on medication: cardiovascular diseases, diabetes mellitus, respiratory illness, psychological disorders, inflammatory disorders and psychotic disorders. Descriptive statistics and Cox Proportional Hazards analyses with competing risks were performed.

Results The onset of any disease increased the likelihood of exit from paid employment, with strongest effect observed for psychological disorders (Hazard Ratio [HR]=1.37, 95% confidence interval [CI] 1.34–1.40) and psychotic disorders (HR=1.49, 95% CI 1.41–1.58). Of all pathways out of paid employment, onset of a disease had the strongest effect on disability benefits, with HRs ranging from 1.75 (inflammatory diseases) to 9.30 (psychotic disorders).

Conclusion For the working age population, the onset of common disorders, especially psychological and psychotic disorders, is a risk for maintaining paid employment. Interventions

are needed to prevent persons with these diseases from involuntary loss of paid employment.

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AGE DIFFERENCES IN WORK-DISABILITY DURATION ACROSS CANADA: EXAMINING VARIATIONS BY FOLLOW-UP TIME AND CONTEXT

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Introduction Research has examined age-related patterns in return to work and wage-replacement duration following a workplace injury. The various clinical, functional or physiological factors studied do not fully account for age differences in wage-replacement duration. One contextual factor that has been largely overlooked in research studies is the potential impact of the phase of recovery.

Objectives This study aimed to understand age differences in wage-replacement duration by focusing on variations in the relationship across different periods of follow-up time.

Methods We used administrative claims data provided by six workers' compensation systems in Canada, focusing on time-loss claims for workers aged 15–80 years with a work-related injury/illness during the 2011 to 2015 period. Survival analysis examined age-related differences in the hazard of transitioning off (versus remaining on) disability benefits, allowing for relaxed proportionality constraints on the hazard rates over time. Differences were examined on the absolute (hazard difference) and relative (hazard ratios [HR]) scales.

Results Older age groups had a lower likelihood of transitioning off wage-replacement benefits compared to younger age groups in the overall models (e.g., 55–64 vs. 15–24 years: HR 0.62). However, absolute and relative differences in age-specific hazard rates varied as a function of follow-up time. The greatest age-related differences were observed at earlier event times and were attenuated towards a null difference across later follow-up times.

Conclusion Our study provides insight into the workplace injury/illness claim and recovery processes and suggests that older age is not always strongly associated with worse disability duration outcomes at longer disability durations. The use of data from multiple jurisdictions lends external validity to our findings and demonstrates the utility of using cross-jurisdictional data extracts. Future work should examine the social and contextual determinants that operate during various recovery phases, and how these factors interact with age.

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AGE DIFFERENCES IN RETURN-TO-WORK FOLLOWING INJURY: UNDERSTANDING THE ROLE OF AGE ACROSS LONGITUDINAL FOLLOW-UP

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Introduction Older age tends to be associated with longer time to return-to-work (RTW) following a workplace injury and multiple recurrences of work absence following an initial RTW attempt. However, few studies have examined the underlying factors that are responsible for these differences.