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

***Du BB, Rezvani S, Bigelow P, Nowrouzi-Kia B, Boscart VM, Yung M, et al. Synthesis of evidence to support EMS personnel's mental health during disease outbreaks: a scoping review. *Safety and Health at Work*. 2022; 13(4):379-386.**

<https://doi.org/10.1016/j.shaw.2022.08.006> [open access]

Abstract: Emergency medical services (EMS) personnel are at high risk for adverse mental health outcomes during disease outbreaks. To support the development of evidence-informed mitigation strategies, we conducted a scoping review to identify the extent of research pertaining to EMS personnel's mental health during disease outbreaks and summarized key factors associated with mental health outcomes. We systematically searched three databases for articles containing keywords within three concepts: EMS personnel, disease outbreaks, and mental health. We screened and retained original peer-reviewed articles that discussed, in English, EMS personnel's mental health during disease outbreaks. Where inferential statistics were reported, the associations between individual and work-related factors and mental health outcomes were synthesized. Twenty-five articles were eligible for data extraction. Our findings suggest that many of the contributing factors for adverse mental health outcomes are related to inadequacies in fulfilling EMS personnel's basic safety and informational needs. In preparation for future disease outbreaks, resources should be prioritized toward ensuring adequate provisions of personal protective equipment and infection prevention and control training. This scoping review serves as a launching pad for further research and intervention development

***Lau J, Zimmermann C, Selby P, and Furlan AD. Opioid disposal practices of patients with life-limiting cancers in an outpatient palliative care clinic: a cross-sectional study. *Journal of Palliative Medicine*. 2023; [epub ahead of print].**

<https://doi.org/10.1089/jpm.2022.0355>

Abstract: Background: Patients with life-limiting cancers are commonly prescribed opioids to manage pain, dyspnea, and cough. Proper prescription opioid disposal is essential to prevent poisonings and deaths. Objective: We examined opioid disposal practices of patients referred to a Canadian outpatient palliative care clinic (OPCC). The primary objective was to determine the prevalence of OPCC patients who did not routinely dispose their opioids. The secondary objectives were to examine their methods of opioid disposal and to identify patient characteristics associated with routine disposal of opioids. Design and Setting: This cross-sectional study involved a retrospective chart review of new, adult patients who were seen in a Canadian OPCC (September 2018-August 2019) and completed a survey about opioid-related constructs: source of prescriptions, use, storage, disposal, and knowledge about associated harms. Results: Among the 122 study participants, half (58/111, 52.3%) reported that they did not routinely dispose their opioids. The most common method of disposal was by giving them to pharmacists (69/88, 78.4%). Cannabis use (odds ratio [OR]: 3.7, 95% confidence interval [CI]: 1.1-11.8) and neuropathic medication use (OR: 3.0, 95% CI: 1.2-7.2) were positively associated with routine disposal of opioids. Conversely, reports of an increased amount of opioid use in the past six months were negatively associated with routine disposal of opioids (OR: 0.38, 95% CI: 0.16-0.88). Conclusion: The high prevalence of people with life-limiting illnesses who do not routinely dispose their opioids requires increased attention. Interventions, such as education, are needed to reduce medication waste and opioid-related harms

Alqaidoom Z, Nguyen PY, Awadh M, and Page MJ. Impact of searching clinical trials registers in systematic reviews of pharmaceutical and non-pharmaceutical interventions: reanalysis of meta-analyses. *Research Synthesis Methods*. 2023; 14(1):52-67.

<https://doi.org/10.1002/jrsm.1583>

Abstract: Systematic reviewers are advised to search trials registers to minimise risk of reporting biases. However, there has been little research on the impact of searching trials registers on the results of meta-analyses. We aimed to evaluate the impact of searching clinical trials registers for systematic reviews of pharmaceutical or non-pharmaceutical interventions. We searched PubMed, Scopus, Science Citation Index and Social Sciences Citation Index, and Education Collection for systematic reviews with meta-analyses indexed from 2 November to 2 December 2020. A random sample of systematic reviews was initially drawn, and for reviews which considered randomised trials eligible for inclusion, which had not searched a trials register, we searched ClinicalTrials.gov, EudraCT, ANZCTR, and the WHO ICTRP search portal for eligible trials. We compared meta-analytic effect estimates before and after including results from additional trials identified. We found additional trials for 63% (63/101) of eligible reviews; however, trials with results that could contribute to a meta-

analysis were identified for only 20% (20/101) of the reviews. On average, there was no difference in the meta-analytic effect estimates before versus after adding the new trials. In summary, searching clinical trial registers led to identification of additional trials for many reviews; however, very few trials had results available for inclusion in meta-analyses. Including results from the new trials led to no change in the meta-analytic estimates, on average. Trials registers would be even more valuable to systematic reviewers if more trialists made use of them (i.e., registered their trials and posted results in a timely manner)

Chiarotto A, Gerger H, van Rijn RM, Elbers RG, Sogaard K, Macri EM, et al. Physical and psychosocial work-related exposures and the occurrence of disorders of the elbow: a systematic review. *Applied Ergonomics*. 2023; 108:103952.

<https://doi.org/10.1016/j.apergo.2022.103952> [open access]

Abstract: This systematic review updates a previous systematic review on work-related physical and psychosocial risk factors for elbow disorders. Medline, Embase, Web of Science, Cochrane Central and PsycINFO were searched for studies on associations between work-related physical or psychosocial risk factors and the occurrence of elbow disorders. Two independent reviewers selected eligible studies and assessed risk of bias (RoB). Results of studies were synthesized narratively. We identified 17 new studies and lateral epicondylitis was the most studied disorder (13 studies). Five studies had a prospective cohort design, eight were cross-sectional and four were case-control. Only one study had no items rated as high RoB. Combined physical exposure indicators (e.g. physical exertion combined with elbow movement) were associated with the occurrence of lateral epicondylitis. No other consistent associations were observed for other physical and psychosocial exposures. These results prevent strong conclusions regarding associations between work-related exposures, and the occurrence of elbow disorders

Clausen T, Sorensen JK, Dalsager L, Karlsen IL, and Kristiansen J. Do different job demands interact as predictors of long-term sickness absence? A register-based follow-up on 55 467 Danish workers. *Occupational and Environmental Medicine*. 2023; 80(1):7-13.

<https://doi.org/10.1136/oemed-2022-108444> [open access]

Abstract: Objectives: To assess interactions between combinations of quantitative demands, emotional demands, unclear and contradictory demands, and violence/threats of violence in the prospective association with risk of long-term sickness absence (LTSA). Methods: We included 55 467 employees from the 2012, 2014 and 2016 waves of the Work Environment and Health in Denmark (WEHD) survey. We measured the four independent variables in the WEHD survey and assessed risk of LTSA in a national register during 12 months of follow-up. Using Cox proportional hazards models, adjusted for age, sex, educational attainment and job group, we estimated risk of LTSA and assessed deviation from additivity using relative excess risk due to interaction (RERI). Results: For combinations of high emotional demands and high quantitative demands (HR 1.50; 95% CI 1.33 to 1.70; RERI 0.06; 95% CI -0.15 to 0.26) and high emotional demands and violence/threats of violence (HR 1.76; 95% CI 1.53 to 2.02; RERI 0.12;

95% CI -0.43 to 0.66) we found no indications of deviations from additive effects in predicting LTSA. For combinations of violence/threats of violence and high quantitative demands (HR 1.90; 95% CI 1.64 to 2.20; RERI 0.36; 95% CI 0.01 to 0.71) and unclear and contradictory demands and high quantitative demands (HR 1.46; 95% CI 1.31 to 1.62; RERI 0.23; 95% CI 0.04 to 0.42) the results indicated an excess risk of LTSA above additivity (ie, superadditivity). Conclusions: Participants reporting high quantitative demands combined with either violence/threats of violence or unclear and contradictory demands showed a higher risk of LTSA than expected, indicating superadditivity. Results have implications for preventing negative health effects related to adverse psychosocial working conditions.

Duroha JC and Macht GA. Solar installation occupational risks: a systematic review. Safety Science. 2023; 160:106048.

<https://doi.org/10.1016/j.ssci.2022.106048>

van Elk F, Robroek SJW, Burdorf A, and Oude Hengel KM. Impact of the COVID-19 pandemic on psychosocial work factors and emotional exhaustion among workers in the healthcare sector: a longitudinal study among 1915 Dutch workers. Occupational and Environmental Medicine. 2023; 80(1):27-33.

<https://doi.org/10.1136/oemed-2022-108478> [open access]

Abstract: OBJECTIVES: This study aims to investigate across subgroups of healthcare workers (1) the changes in psychosocial working conditions and emotional exhaustion during the pandemic compared with the situation before, and (2) the impact of different stages of the COVID-19 pandemic in terms of hospital pressure on psychosocial working conditions and emotional exhaustion. METHODS: Five questionnaire measurements during 2 years from 1915 healthcare workers in the longitudinal study 'the Netherlands Working Conditions Survey-COVID-19' were used. At each measurement, three subgroups were defined: working with patients with COVID-19, working with other patients and not working with patients. For each measurement, hospital pressure was determined by number of hospitalisations per day. Linear mixed models were fitted to analyse differences across subgroups of healthcare workers. RESULTS: During COVID-19, psychosocial working conditions deteriorated among healthcare workers working with patients, in particular with patients with COVID-19, compared with healthcare workers not working with patients after correcting for the situation before COVID-19. No changes were observed for emotional exhaustion in any of the subgroups. An increasing hospital pressure improved job autonomy and reduced emotional demands among healthcare workers in COVID-19 wards, but had no influence on other psychosocial working conditions and emotional exhaustion. CONCLUSION: Psychosocial working conditions deteriorated for healthcare workers working with (COVID-19) patients during the pandemic, while emotional exhaustion did not change among all groups of healthcare workers

Franzsen D, de Witt P, Saohatse L, and van Niekerk M. A conceptual framework for return to work for clients with major depressive disorder. *Work*. 2023; 74(1):97-109.

<https://doi.org/10.3233/WOR-210520>

Abstract: BACKGROUND: Return to work (RTW) may be a lengthy and complex process for individuals with major depressive disorder (MDD) especially when not well managed. This increases the risk of isolation and loss of routine which negatively influences their mental health. However, for clients with MDD, a comprehensive overview of all the factors that influence RTW based on a model of occupation is lacking. OBJECTIVE: To develop a conceptual framework to guide an occupation-based process of RTW for clients with MDD, treated in the private sector in South Africa. METHODS: This paper describes the development of a conceptual framework using literature and thematic synthesis of a qualitative descriptive study based on interviews with eight participants diagnosed with MDD which were linked to constructs of Kielhofner's Model of Human Occupation (MOHO). RESULTS: Qualitative data from key informant interviews were deductively analysed according to the subsystems of MOHO for waiting to RTW and experience of RTW. The conceptual framework developed included the constructs of Person and Occupational Setting from MOHO as well as the components of Occupational Identity and Competence central to intervention to achieve successful RTW. CONCLUSION: A successful RTW process for clients with MDD is dependent on the person and the occupational setting. The role of the occupational therapist in the RTW can be facilitated by the occupation-based conceptual framework developed on MOHO

Hijdra RW, Robroek SJW, Burdorf A, and Schuring M. The influence of onset of disease on exit from paid employment among workers in The Netherlands: a longitudinal register-based study with 9 years follow-up. *Scandinavian Journal of Work, Environment & Health*. 2023; 49(1):33-42.

<https://doi.org/10.5271/sjweh.4064> [open access]

Abstract: OBJECTIVES: This study investigates the influence of onset of disease on exit from paid employment and whether this differs across diseases and sociodemographic groups. METHODS: Register data from Statistics Netherlands on medication prescription was linked to information on employment status and demographics. Persons who were employed in 2009 and 2010 and who did not use medication for the selected disease in 2009 (N=5 889 036) were followed-up over nine years. Six diseases were identified based on medication prescription in 2010 and 2011: cardiovascular diseases, inflammatory diseases, diabetes mellitus, respiratory diseases, common mental disorders, and psychotic disorders. Four pathways out of paid employment were defined: disability benefits, unemployment, no income, and early retirement. Early exit from paid employment was defined as exiting paid employment before retirement age. Cause-specific Cox proportional hazards regression analyses were performed, with interaction terms for age, sex, and migration background. RESULTS: Onset of disease increased the likelihood of exit from paid employment, with the strongest associations for psychotic disorders [hazard ratio (HR) 2.88, 95% confidence

interval (CI) 2.78-2.98] and common mental disorders (HR 2.00, 95% CI 1.97-2.03). Onset of disease was most strongly associated with disability benefits, followed by unemployment. The influence of common mental and psychotic disorders on disability increased until around middle-age, after which it decreased. The influence of mental health problems on exit from paid employment was stronger for persons with a non-native Dutch background and males. CONCLUSION: Onset of diseases, especially mental health disorders, is a risk for exiting paid employment before the retirement age. Effective interventions are needed to enhance an inclusive workforce and prevent involuntary loss of paid employment

Kim T, Autin KL, and Allan BA. An examination of psychology of working theory with immigrant workers in the United States. *Journal of Career Assessment*. 2022; 31(1):190-206.

<https://doi.org/10.1177/10690727221105023>

Kurth L, Mazurek JM, and Blackley DJ. Malignant mesothelioma among US Medicare beneficiaries: incidence, prevalence and therapy, 2016-2019. *Occupational and Environmental Medicine*. 2023; 80(2):86-92.

<https://doi.org/10.1136/oemed-2022-108706>

Abstract: Objectives: Mesothelioma is a rare, aggressive cancer caused by exposure to asbestos fibres. Mesothelioma patients who receive trimodal therapy (chemotherapy, surgical resection and radiation) survive longer than those who receive two or fewer therapy modalities. This study analyses the 2016-2019 Medicare claims data to estimate the burden of malignant mesothelioma and describe therapy patterns (when available) among continuously enrolled fee-for-service (FFS; Medicare parts A and B) beneficiaries. Methods: We analysed claims and enrolment information from 42 529 117 FFS Medicare beneficiaries using three mesothelioma case definitions (broad, intermediate and narrow) with varying levels of diagnostic requirements. Results are presented as ranges of values for the three definitions. Results: Among FFS beneficiaries, 8213-19 036 beneficiaries with mesothelioma were identified depending on the case definition. The annual prevalence per 100 000 beneficiaries ranged from 8.8 in 2016 (narrow) to 31.3 in 2019 (broad) and annual incidence per 100 000 beneficiaries ranged from 4.5 in 2019 (narrow) to 12.6 in 2017 (broad). Depending on the mesothelioma case definition, 41.8%-81.5% had available therapy claim information indicating that 7.6%-11.3% received chemotherapy alone, 1.3%-1.5% received radiation alone, and 14.3%-27.0% underwent surgery only, with 4.6%-10.5% receiving all three therapy modalities. Conclusions: Mesothelioma was a prevalent disease among FFS Medicare beneficiaries during 2016-2019, and a limited proportion of beneficiaries received all three therapy modalities. Medicare data build on findings from cancer registry data to enhance our understanding of the mesothelioma burden and therapy patterns.

Lin YJ, Shih TS, Wu WT, and Guo YL. The association of job fatigue with mental disorders among bus drivers. *Scandinavian Journal of Work, Environment & Health*. 2023; 49(1):75-83.

<https://doi.org/10.5271/sjweh.4065> [open access]

Abstract: OBJECTIVE: Mental disorders are a global problem with growing importance. However, the contribution of work factors to the development of mental disorders is inconclusive. This study aimed to assess the impact of fatigue and job stress on mental disorders in a prospective cohort of bus drivers. METHODS: The Taiwan Bus Driver Cohort Study (TBDCS) recruited 1652 bus drivers from a bus company in 2005. Participants self-completed a structured questionnaire in 2007, which included the Demand-Control-Support (DCS) model questions and the Swedish Occupational Fatigue Inventory-Chinese (SOFI-C). Psychiatric care visits and admissions were obtained from the National Health Insurance Research Dataset (NHIRD) from 2003 to 2016 for as a proxy for psychiatric diagnoses. Drivers with a history of psychiatric disorders before the questionnaire survey time were excluded (N=69). During the follow-up period, a new diagnosis with a psychiatric disorder was defined as an event. Cox proportional hazards model was used to estimate the hazard ratio (HR) for new one-set psychiatric disorders, adjusting for age, body mass index, marital status, education, alcohol consumption, smoking, exercise, bus driving experience, shift work, and chronic diseases. RESULTS: Among the 896 bus drivers retained for analysis, 85 were newly diagnosed with a psychiatric disorders. DCS score was not associated with the risk of developing a psychiatric disorders, but bus drivers with high SOFI-C scores (≥ 5) had an elevated risk for anxiety or mood disorders (HR 3.35, 95% confidence interval 1.23-9.09). CONCLUSIONS: Among bus drivers, occupational fatigue, as indicated by high a SOFI-C score, might result in an elevated risk of anxiety or mood disorders. Health service organizations should provide recommendations and guidance for drivers with high fatigue levels to avoid anxiety or mood disorders

Minozzi S, Gonzalez-Lorenzo M, Cinquini M, Berardinelli D, Cagnazzo C, Ciardullo S, et al. Adherence of systematic reviews to Cochrane RoB2 guidance was frequently poor: a meta epidemiological study. *Journal of Clinical Epidemiology*. 2022; 152:47-55.

<https://doi.org/10.1016/j.jclinepi.2022.09.003> [open access]

Abstract: OBJECTIVES: To assess whether the use of the revised Cochrane risk of bias tool for randomized trials (RoB2) in systematic reviews (SRs) adheres to RoB2 guidance. METHODS: We searched MEDLINE, Embase, Cochrane Library from 2019 to May 2021 to identify SRs using RoB2. We analyzed methods and results sections to see whether risk of bias was assessed at outcome measure level and applied to primary outcomes of the SR as per RoB2 guidance. The relation between SR characteristics and adequacy of RoB2 use was examined by logistic regression analysis. RESULTS: Two hundred-eight SRs were included. We could assess adherence in 137 SRs as 12 declared using RoB2 but actually used RoB1 and 59 did not report the number of primary outcomes. The tool usage was adherent in 69.3% SRs. Considering SRs with multiple primary outcomes, adherence dropped to 28.8%. We found a

positive association between RoB2 guidance adherence and the methodological quality of the reviews assessed by AMSTAR2 (p-for-trend 0.007). Multivariable regression analysis suggested journal impact factor [first quartile vs. other quartiles] was associated with RoB2 adherence (OR 0.34; 95% CI: 0.16-0.72). CONCLUSIONS: Many SRs did not adhere to RoB2 guidance as they applied the tool at the study level rather than at the outcome measure level. Lack of adherence was more likely among low and very low quality reviews

Nakatsuka K, Oka T, Tsuboi Y, Saeki K, Tezuka M, and Ono R. Association between pain intensity in the neck and components of a workstation: a cross-sectional study on Japanese office workers. *International Journal of Industrial Ergonomics*. 2023; 93:103385.

<https://doi.org/10.1016/j.ergon.2022.103385>

Schutz MA, Schwartzman B, Awsumb JM, Burgess L, Carter EW, and Taylor JL. Pathways to paid work for youth with severe disabilities: perspectives on strategies for success. *Journal of Vocational Rehabilitation*. 2023; 58(1):11-26.

<https://doi.org/10.3233/JVR-221221>

Slettebak MH and Rye JF. Social (im) mobility in low-skilled and low-wage immigrant niches. *Nordic Journal of Working Life Studies*. 2022; 12(4):23-47.

<https://doi.org/10.18291/njwls.132265> [open access]

Abstract: In the last two decades, many labor migrants have arrived in the Nordic countries where they concentrate in certain low-wage and low-skilled jobs – immigrant niches. The article analyzes the scope of social (im)mobility in terms of occupational careers, income change, and job stability for native and foreign-born workers in immigrant niches in the low-skilled and low-wage section of the labor market. The case study is Norway's fish processing industry, where labor immigrants from Central and Eastern Europe have largely replaced Norwegian-born workers in manual jobs since 2004 and now dominate the workplace alongside a smaller number of non-Western immigrant workers. The article uses full population register data (n = 4164, Microdata.no) to analyze differences in workers' social trajectories between 2009 and 2018. Results show significant variation between workers: Norwegian-born (non-immigrant) workers appear to have greater upward social mobility than EU11 immigrant workers, who in turn do better than non-Western immigrant workers.

Tansey TN, Bishop M, Iwanaga K, Zhou K, and Chan F. Vocational rehabilitation service delivery: technical assistance needs of vocational rehabilitation professionals. *Journal of Vocational Rehabilitation*. 2023; 58(1):49-62.

<https://doi.org/10.3233/JVR-221224> [open access]

Abstract: BACKGROUND: Americans with disabilities have historically faced substantial barriers to employment participation. The state-federal vocational rehabilitation (VR) program has played an important role in increasing the employment opportunities of Americans with disabilities through the provision of services and supports designed to lead to

high-quality employment, independence, self-sufficiency, and full integration into the community. **OBJECTIVE:** The Vocational Rehabilitation Technical Assistance Center for Quality Employment (VRTAC–QE) was designed to bring together the broad range of existing quality employment strategies and supporting practices, identify and implement new ones, and incorporate them into an integrated training and technical assistance plan, consistent with the circumstances and priorities of each State VR agency that requests technical assistance. **METHOD:** In the present paper, we present the results of a needs assessment survey conducted among State VR rehabilitation counselors and professionals in cooperating rehabilitation agencies and services. **RESULTS:** The purpose of the present study was to determine technical assistance and training needs of State VR counselors in four practice domains: (a) outreach services, (b) pre-employment transition services, (c) vocational rehabilitation services, and (d) employment services. **CONCLUSION:** Implications and future directions are also discussed.

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