IWH Research Alert
September 21, 2018

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***Giummarra MJ, Black O, Smith P, Collie A, Hassani-Mahmooei B, Arnold CA, Gong J, and Gabbe BJ. A population-based study of treated mental health and persistent pain conditions after transport injury. Injury. 2018; 49:1787-1795.**
https://doi.org/10.1016/j.injury.2018.08.008
Abstract: BACKGROUND: Persistent pain and mental health conditions often co-occur after injury, cause enormous disability, reduce social and economic participation, and increase long-term healthcare costs. This study aimed to characterise the incidence, profile and healthcare cost implications for people who have a treated mental health condition, persistent pain, or both conditions, after compensable transport injury. METHODS: The study comprised a population cohort of people who sustained a transport injury (n = 74,217) between 2008 to 2013 and had an accepted claim in the no-fault transport compensation system in Victoria, Australia. Data included demographic and injury characteristics, and payments for treatment and income replacement from the Compensation Research Database. Treated conditions were identified from 3 to 24-months postinjury using payment-based criteria developed with clinical and compensation system experts. Criteria included medications for pain, anxiety, depression or psychosis, and services from physiotherapists, psychologists, psychiatrists, and pain specialists. The data were analysed with Cox Proportional Hazards regression to examine rates of treated conditions, and general linear regression to estimate 24 month healthcare costs. RESULTS: Overall, the incidence of treated mental health conditions (n = 2459, 3.3%) and persistent pain (n = 4708, 6.3%) was low, but rates were higher in those who were female,

middle aged (35-64 years), living in metropolitan areas or neighbourhoods with high socioeconomic disadvantage, and for people who had a more severe injury. Healthcare costs totalled more than $A707 M, and people with one or both conditions (7.7%) had healthcare costs up to 7-fold higher (adjusting for demographic and injury characteristics) in the first 24 months postinjury than those with neither condition. CONCLUSIONS: The incidence of treated mental health and persistent pain conditions was low, but the total healthcare costs for people with treated conditions were markedly higher than for people without either treated condition. While linkage with other public records of treatment was not possible, the true incidence of treated conditions is likely to be even higher than that found in this study. The present findings can be used to prioritise the implementation of timely access to treatment to prevent or attenuate the severity of pain and mental health conditions after transport injury

***Mofidi A, Tompa E, Spencer J, Kalcevich C, Peters CE, Kim J, Song C, Mortazavi SB, and Demers PA. The economic burden of occupational non-melanoma skin cancer due to solar radiation. Journal of Occupational and Environmental Hygiene. 2018; 15(6):481-491. https://doi.org/10.1080/15459624.2018.1447118**

Abstract: Solar ultraviolet (UV) radiation is the second most prevalent carcinogenic exposure in Canada and is similarly important in other countries with large Caucasian populations. The objective of this article was to estimate the economic burden associated with newly diagnosed non-melanoma skin cancers (NMSCs) attributable to occupational solar radiation exposure. Key cost categories considered were direct costs (healthcare costs, out-of-pocket costs (OOPCs), and informal caregiver costs); indirect costs (productivity/output costs and home production costs); and intangible costs (monetary value of the loss of health-related quality of life (HRQoL)). To generate the burden estimates, we used secondary data from multiple sources applied to computational methods developed from an extensive review of the literature. An estimated 2,846 (5.3%) of the 53,696 newly diagnosed cases of basal cell carcinoma (BCC) and 1,710 (9.2%) of the 18,549 newly diagnosed cases of squamous cell carcinoma (SCC) in 2011 in Canada were attributable to occupational solar radiation exposure. The combined total for direct and indirect costs of occupational NMSC cases is $28.9 million ($15.9 million for BCC and $13.0 million for SCC), and for intangible costs is $5.7 million ($0.6 million for BCC and $5.1 million for SCC). On a per-case basis, the total costs are $5,670 for BCC and $10,555 for SCC. The higher per-case cost for SCC is largely a result of a lower survival rate, and hence higher indirect and intangible costs. Our estimates can be used to raise awareness of occupational solar UV exposure as an important causal factor in NMSCs and can highlight the importance of occupational BCC and SCC among other occupational cancers

***Oldfield M, Gewurtz R, Tompa E, Harlos K, Kirsh B, Lysaght R, Macdougall A, Moll S, Rueda S, and Sultan-Taieb H. Improving workplaces to enable**

people living with mental illness to stay in their jobs. Journal of the Ontario Occupational Health Nurses Association. 2018; 37(1):46-49. [doi not available as of Sept 21, 2018]

***Weis CA, Barrett J, Tavares P, Draper C, Ngo K, Leung J, Huynh T, and Landsman V. Prevalence of low back pain, pelvic girdle pain, and combination pain in a pregnant Ontario population. Journal of Obstetrics and Gynaecology Canada. 2018; 40(8):1038-1043. https://doi.org/10.1016/j.jogc.2017.10.032**

Abstract: OBJECTIVE: The purpose of the current pilot study is to determine the point and period prevalence of site-specific back pain, low back pain (LBP), pelvic girdle pain (PGP), and combined pain (Combo Pain) in pregnant women at a large urban centre in Ontario. METHODS: Point and period prevalence for LBP, PGP, and Combo Pain were determined using a questionnaire and accompanying pain diagram. Women were included in the study if they were healthy, of child-bearing age (18-45 years), currently experiencing a singleton pregnancy (any trimester), and proficient in the English language. RESULTS: Data collected from 287 women were included in the analysis. Three-quarters of women suffered from some sort of pregnancy-related back pain. The point and period prevalences for women who were experiencing LBP, PGP, and Combo Pain were 15.7%, 17.8%, and 15.3% and 33.4%, 27.9%, and 30.7%, respectively. Secondary analyses demonstrated that increasing GA and suffering from both pains at some point prior to pregnancy (Prior Both) increased the risk of experiencing PGP and Combo Pain during pregnancy, respectively. CONCLUSION: The current study demonstrates that 76% of sampled women experienced pregnancy-related back pain and the prevalence of site-specific pain (LBP, PGP, and Combo Pain) increases with increased gestation. Risk factors include advanced GA and experiencing both types of pain prior to pregnancy (Prior Both). Furthermore, it is suggested that a standard definition of pain by location should be developed and employed so that future studies can elucidate appropriate prevention strategies and treatment options for each

Alruqi WM, Hallowell MR, and Techera U. Safety climate dimensions and their relationship to construction safety performance: a meta-analytic review. Safety Science. 2018; 109:165-173. https://doi.org/10.1016/j.ssci.2018.05.019

Bellamy LJ, Chambon M, and van Guldener V. Getting resilience into safety programs using simple tools: a research background and practical implementation. Reliability Engineering & System Safety. 2018; 172:171-184. https://doi.org/10.1016/j.ress.2017.12.005

Brendbekken R, Vaktskjold A, Harris A, and Tangen T. Predictors of return-to-work in patients with chronic musculoskeletal pain: a randomized clinical trial. Journal of Rehabilitation Medicine. 2018; 50(2):193-199.

https://doi.org/10.2340/16501977-2296 [open access]
Abstract: OBJECTIVE: To assess the predictive effect of a multidisciplinary intervention programme, pain, work-related factors and health, including anxiety/depression and beliefs, on return-to-work for patients sick-listed due to musculoskeletal pain. DESIGN: A randomized clinical study. METHODS: A total of 284 patients were randomized to either a multidisciplinary intervention programme (n = 141) or to a less resource-demanding brief intervention (n = 143). Work participation was estimated monthly from register data for 12 months. Return-to-work was defined as increased work participation in 3 consecutive months. RESULTS: In the adjusted model, return-to-work by 3 months was associated with a multidisciplinary intervention programme (odds ratio (OR) = 2.7, 95% confidence interval (95% CI) = 1.1-6.9), the factor "belief that work was cause of the pain" (OR = 2.2, 95% CI = 1.1-4.3), anxiety and depression (OR = 0.5, 95% CI = 0.2-0.98), and by an interaction between the multidisciplinary intervention and perceived support at work (OR = 0.3, 95% CI = 0.1-0.9). At 12 months, only duration of sick leave was associated with return-to-work (OR = 0.6, 95% CI = 0.5-0.8). CONCLUSION: Multidisciplinary intervention may hasten return-to-work and benefit those who perceive low support at work, but at 12 months only duration of sick leave at baseline was associated with return-to-work

Davie G and Lilley R. Financial impact of injury in older workers: use of a national retrospective e-cohort to compare income patterns over 3 years in a universal injury compensation scheme. BMJ Open. 2018; 8(4):e018995. https://doi.org/10.1136/bmjopen-2017-018995 [open access]
Abstract: OBJECTIVE: The study aims to quantify the impact of injury on the financial well-being of older workers. The hypothesis was that injured older workers have substantially reduced income from work following injury, but that New Zealand's (NZ) universal injury compensation scheme mitigates the difference for total income. DESIGN, SETTING AND PARTICIPANTS: An e-cohort of 617 722 workers aged 45-64 years old was created using de-identified linked administrative data in NZ's Integrated Data Infrastructure. Person-level data from numerous government agencies were used to compare 21 639 with an injury-related entitlement claim in 2009 with the remaining 596 133. Event date was the date of injury, or for the comparison group, a randomly selected date in 2009. PRIMARY AND SECONDARY OUTCOME MEASURES: Geometric mean ratios (GMRs) were used to compare income from work and total income from all taxable sources between those injured and the comparison group. Adjusted GMRs estimated income differences up to 36 months following the event date. RESULTS: Differences in total income increased over time. In the third year, those injured received 6.7% less (adjusted GMR 0.933 (95% CI 0.925 to 0.941)) than the comparison group, equivalent to an average loss of $NZ2628. Restricting to income from work, those injured received 29.2% less than the comparison group at 3 years (adjusted GMR 0.708 (95% CI 0.686 to 0.730)). For both men and women, those injured at 45-49 years consistently had the greatest relative income loss compared with those aged 50-54, 55-59 or 60-64 years.

CONCLUSIONS: Although the substantial impacts of injury on income were mainly mitigated by public income transfers, relative losses in income in those aged 45-64 years increased in the 3 years following injury. Policies focused on adequate compensation and reducing the time away from employment could reduce these financial impacts in older workers

Halima MAB, Koubi M, and Regaert C. The effects of the complementary compensation on sickness absence: an approach based on collective bargaining agreements in France. Labour. 2018; 32(3):353-394. https://doi.org/10.1111/labr.12123;doi: 10.1111/labr.12123

Hohnen P and Hasle P. Third party audits of the psychosocial work environment in occupational health and safety management systems. Safety Science. 2018; 109:76-85. https://doi.org/10.1016/j.ssci.2018.04.028

Hudon A, Hunt M, and Ehrmann Feldman D. Physiotherapy for injured workers in Canada: are insurers' and clinics' policies threatening good quality and equity of care? Results of a qualitative study. BMC Health Services Research. 2018; 18(1):682.
https://doi.org/10.1186/s12913-018-3491-1 [open access]
Abstract: BACKGROUND: In recent years, significant efforts have been made to improve the provision of care for compensated injured workers internationally. However, despite increasing efforts at implementing best practices in this field, some studies show that policies overseeing the organisation of care for injured workers can have perverse influences on healthcare providers' practices and can prevent workers from receiving the best care possible. The influence of these policies on physiotherapists' practices has yet to be investigated. Our objectives were thus to explore the influence of 1) workers' compensation boards' and 2) physiotherapy clinics' policies on the care physiotherapists provide to workers with musculoskeletal injuries in three large Canadian provinces. METHODS: The Interpretive Description framework, a qualitative methodological approach, guided this inquiry. Forty participants (30 physiotherapists and 10 leaders and administrators from physiotherapy professional groups and workers' compensation boards) were recruited in British Columbia, Ontario and Quebec to participate in an in-depth interview. Inductive analysis was conducted using constant comparative techniques. RESULTS: Narratives from participants show that policies of workers' compensation boards and individual physiotherapy clinics have significant impacts on physiotherapists' clinical practices. Policies found at both levels often place physiotherapists in uncomfortable positions where they cannot always do what they believe to be best for their patients. Because of these policies, treatments provided to compensated injured workers markedly differ from those provided to other patients receiving physiotherapy care at the same clinic. Workers' compensation board policies such as reimbursement rates, end points for treatment and communication mechanisms, and clinic policies such as physiotherapists' remuneration schemes and

restrictions on the choice of professionals had negative influences on care. Policies that were viewed as positive were board policies that recognize, promote and support physiotherapists' duties and clinics that provide organisational support for administrative tasks. CONCLUSION: In Canada, workers' compensation play a significant role in financing physiotherapy care for people injured at work. Despite the best intentions in promoting evidence-based guidelines and procedures regarding rehabilitation care for injured workers, complex policy factors currently limit the application of these recommendations in practice. Research that targets these policies could contribute to significant changes in clinical settings

Neumark D and Savych B. The effects of provider choice policies on workers' compensation costs. Health Services Research. 2018; [epub ahead of print].
https://doi.org/10.1111/1475-6773.13045
Abstract: OBJECTIVE: To examine the effects of provider choice policies on workers' compensation medical and indemnity costs. DATA SOURCES/STUDY SETTING: Pooled cross-sectional analysis of administrative claims records for workers with work-related injuries primarily in 2007-2010 across 25 states (n = 4,489,729). STUDY DESIGN: We used linear and quantile regression analyses to evaluate differences in claim costs (medical and indemnity) based on whether policies give employers or injured workers control over the choice of provider. PRINCIPAL FINDINGS: We find no difference in average medical costs by provider choice policies, although a distributional analysis indicates higher developed medical costs for the costliest back injury cases in states where workers control provider choice. The evidence for indemnity costs is similar, although the point estimates also indicate (statistically insignificantly) higher average costs when policies give workers more control of the choice of provider. CONCLUSIONS: Our nuanced evidence suggests that policymakers seeking to reduce workers' compensation costs may need to focus on the highest cost cases in states where policy gives workers more control over the choice of provider, rather than the simpler and broader issue of whether policy gives workers or employers more control

Saunders D and Hazel M. Students in the labour market: beyond the recession [Labour statistics: research papers]. Ottawa, ON: Statistics Canada; 2018.

Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA extension for scoping reviews (PRISMA-ScR): checklist and explanation. Annals of Internal Medicine. 2018; [epub ahead of print].
https://doi.org/10.7326/M18-0850
Abstract: Scoping reviews, a type of knowledge synthesis, follow a systematic approach to map evidence on a topic and identify main concepts, theories, sources, and knowledge gaps. Although more scoping reviews are being done, their methodological and reporting quality need improvement. This document

presents the PRISMA-ScR (Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews) checklist and explanation. The checklist was developed by a 24-member expert panel and 2 research leads following published guidance from the EQUATOR (Enhancing the QUAlity and Transparency Of health Research) Network. The final checklist contains 20 essential reporting items and 2 optional items. The authors provide a rationale and an example of good reporting for each item. The intent of the PRISMA-ScR is to help readers (including researchers, publishers, commissioners, policymakers, health care providers, guideline developers, and patients or consumers) develop a greater understanding of relevant terminology, core concepts, and key items to report for scoping reviews

Tricco AC, Moore JE, Beben N, Brownson RC, Chambers DA, Dolovich LR, et al. Sustaining knowledge translation interventions for chronic disease management in older adults: protocol for a systematic review and network meta-analysis. Systematic Reviews. 2018; 7(1):140. https://doi.org/10.1186/s13643-018-0808-4 [open access]
Abstract: Failure to sustain knowledge translation (KT) interventions impacts patients and health systems, diminishing confidence in future implementation. Sustaining KT interventions used to implement chronic disease management (CDM) interventions is of critical importance given the proportion of older adults with chronic diseases and their need for ongoing care. Our objectives are to (1) complete a systematic review and network meta-analysis of the effectiveness and cost-effectiveness of sustainability of KT interventions that target CDM for end-users including older patients, clinicians, public health officials, health services managers and policy-makers on health care outcomes beyond 1-áyear after implementation or the termination of initial project funding and (2) use the results of this review to complete an economic analysis of the interventions identified to be effective

*IWH authored publications.