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**March 30, 2018**

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***Jung YL, Tompa E, Longo C, Kalcevich C, Kim J, Song C, and Demers P. The economic burden of bladder cancer due to occupational exposure. Journal of Occupational & Environmental Medicine. 2018; 60(3):217-225.**
**http://dx.doi.org/10.1097/JOM.0000000000001242**
Abstract: OBJECTIVE: To estimate the economic burden of bladder cancer due to occupational exposures. METHODS: Using a societal perspective, we estimate the lifetime costs of newly diagnosed cases of bladder cancer in Canada that is associated with occupational exposure for the calendar year 2011. The three major categories we consider are direct, indirect, and quality of life costs. RESULTS: There were 199 newly identified cases of bladder cancer. The estimated total cost of bladder cancer for new cases in 2011 was $131 million and an average per-case cost of $658,055 CAD (2011 dollars). Of the total costs, direct costs accounted for 6%, indirect costs 29%, and health-related quality of life costs 65%. CONCLUSIONS: The per-case economic burden of bladder cancer due to occupational exposure is substantial which suggests the importance and value of exposure reduction

**Avendano M and Panico L. Do flexible work policies improve parents' health? A natural experiment based on the UK Millennium Cohort Study. Journal of Epidemiology & Community Health. 2018; 72(3):244-251.**
**http://dx.doi.org/10.1136/jech-2017-209847**
Abstract: BACKGROUND: There is limited evidence of the impact of policies to promote work-family balance on family health. Exploiting the introduction of the UK Flexible Working Act (2003), we examined whether a policy that grants parents the right to request flexible work influences their health and well-being. METHODS: Using the UK Millennium Cohort Study, we focus on 6424 mothers

employed in 2001-2002, when the cohort child was 9 months old, until their child's seventh birthday. We used a difference-in-differences (DiD) approach to compare changes in outcomes before and after the policy among mothers most likely to benefit and mothers unlikely to benefit from the policy. RESULTS: Flexible working increased in a small group of mothers (n=548) whose employer did not offer work flexibility before the reform (treatment group). By contrast, among mothers whose employer already offered flexible work before the reform (control group, n=5810), there was little change or a slight decline in flexible working. DiD estimates suggest that the policy was associated with an increase in flexible working (37.5 percentage points, 95% CI 32.9 to 41.6), but it had no impact on self-rated health (-1.6 percentage points, 95% CI -4.4 to 1.1), long-term illness (-1.87 percentage points, 95% CI -4.3 to 0.5) or life satisfaction scores (beta=0.04, 95% CI -0.08 to 0.16). CONCLUSION: The Flexible Working Act increased flexible working only among a small group of mothers who had not yet the right to request work flexibility, but it had no impact on their health and well-being. Policies promoting work flexibility may require stronger incentives for both parents and employers

**Buchbinder R, van Tulder M, Oberg B, Costa LM, Woolf A, Schoene M, and Croft P. Low back pain: a call for action. Lancet. 2018; [Epub ahead of print].**
**http://dx.doi.org/10.1016/S0140-6736(18)30488-4**
Abstract: Low back pain is the leading worldwide cause of years lost to disability and its burden is growing alongside the increasing and ageing population.(1) Because these population shifts are more rapid in low-income and middle-income countries, where adequate resources to address the problem might not exist, the effects will probably be more extreme in these regions. Most low back pain is unrelated to specific identifiable spinal abnormalities, and our Viewpoint, the third paper in this Lancet Series,(2,3) is a call for action on this global problem of low back pain

**Busch H, Bjork Bramberg E, Hagberg J, Bodin L, and Jensen I. The effects of multimodal rehabilitation on pain-related sickness absence: an observational study. Disability and Rehabilitation. 2018; 40(14):1646-1653.**
**http://dx.doi.org/10.1080/09638288.2017.1305456**
Abstract: PURPOSE: The aim of the current study was to examine the effects on sickness absence of multimodal rehabilitation delivered within the framework of a national implementation of evidence based rehabilitation, the rehabilitation guarantee for nonspecific musculoskeletal pain. METHOD: This was an observational matched controlled study of all persons receiving multimodal rehabilitation from the last quarter of 2009 until the end of 2010. The matching was based on age, sex, sickness absence the quarter before intervention start and pain-related diagnosis. The participants were followed by register data for 6 or 12 months. The matched controls received rehabilitation in accordance with treatment-as-usual. RESULTS: Of the participants, 54% (N = 3636) were on

registered sickness absence at baseline and the quarter before rehabilitation. The average difference in number of days of sickness absence between the participants who received multimodal rehabilitation and the matched controls was to the advantage of the matched controls, 14.7 days (CI 11.7; 17.7, p </= 0.001) at 6-month follow-up and 9.5 days (CI 6.7; 12.3, p </= 0.001) at 12-month follow-up. A significant difference in newly granted disability pensions was found in favor of the intervention. CONCLUSIONS: When implemented nationwide, multimodal rehabilitation appears not to reduce sickness absence compared to treatment-as-usual. Implications for Rehabilitation A nationwide implementation of multimodal rehabilitation was not effective in reducing sickness absence compared to treatment-as-usual for persons with nonspecific musculoskeletal pain. Multimodal rehabilitation was effective in reducing the risk of future disability pension for persons with nonspecific musculoskeletal pain compared to treatment-as-usual. To be effective in reducing sick leave multimodal rehabilitation must be started within 60 days of sick leave. The evidence for positive effect of multimodal rehabilitation is mainly for sick listed patients. Prevention of sick leave for persons not being on sick leave should not be extrapolated from evidence for multimodal rehabilitation

**Callander EJ. Youth labour force absence and chronic health conditions in Australia. Occupational Medicine. 2018; 8(2):135-145.**
**http://dx.doi.org/10.1093/occmed/kqy011**
Abstract: Background: Among older workers, chronic disease is known to be a key reason for early retirement. Aims: To determine whether chronic health conditions act as a barrier to young Australians (aged 15-29) participating in the labour force. Methods: Multiple logistic regression analysis to assess the adjusted odds ratio of people with different chronic health conditions being out of the labour force compared to those with no chronic conditions. Negative binomial regression models to predict the number of years people with different chronic health conditions would remain out of the labour force for. Results: Of the 550000 people aged 15-29 who were not in the labour force, 20% cited ill-health as the reason, reducing Australia's gross domestic product by around $3.7 billion per annum. When adjusted for age and education attainment, males with mental and behavioural disorders had 5.95 times the odds (95% confidence interval [CI] 3.90-9.08) of being out of the labour force, and females with development/intellectual disorders had 2.90 times the odds (95% CI 1.47-2.51), compared to those with no chronic health conditions. Males and females with development/intellectual disorders who were out of the labour force were estimated to spend an additional 2.7 and 3.5 years out of the labour force over the next 5 years. Conclusions: Prevention of chronic health conditions may help more younger Australians participate in the labour force, reducing the known long-term health and social problems associated with labour force absence

**Carr E, Fleischmann M, Goldberg M, Kuh D, Murray ET, Stafford M, Stansfeld S, Vahtera J, Xue B, Zaninotto P, Zins M, and Head J.**

**Occupational and educational inequalities in exit from employment at older ages: evidence from seven prospective cohorts. Occupational and Environmental Medicine. 2018; [Epub ahead of print].**
**http://dx.doi.org/10.1136/oemed-2017-104619 [open access]**
Abstract: OBJECTIVES: Past studies have identified socioeconomic inequalities in the timing and route of labour market exit at older ages. However, few studies have compared these trends cross-nationally and existing evidence focuses on specific institutional outcomes (such as disability pension and sickness absence) in Nordic countries. We examined differences by education level and occupational grade in the risks of work exit and health-related work exit. METHODS: Prospective longitudinal data were drawn from seven studies (n=99 164). Participants were in paid work at least once around age 50. Labour market exit was derived based on reductions in working hours, changes in self-reported employment status or from administrative records. Health-related exit was ascertained by receipt of health-related benefit or pension or from the reported reason for stopping work. Cox regression models were estimated for each study, adjusted for baseline self-rated health and birth cohort. RESULTS: There were 50 003 work exits during follow-up, of which an average of 14% (range 2-32%) were health related. Low level education and low occupational grade were associated with increased risks of health-related exit in most studies. Low level education and occupational grade were also associated with an increased risk of any exit from work, although with less consistency across studies. CONCLUSIONS: Workers with low socioeconomic position have an increased risk of health-related exit from employment. Policies that extend working life may disadvantage such workers disproportionally, especially where institutional support for those exiting due to poor health is minimal

**Celeste RK and Fritzell J. Do socioeconomic inequalities in pain, psychological distress and oral health increase or decrease over the life course? Evidence from Sweden over 43 years of follow-up. Journal of Epidemiology & Community Health. 2018; 72(2):160-167.**
**http://dx.doi.org/10.1136/jech-2017-209123 [open access]**
Abstract: BACKGROUND: Inequalities over the life course may increase due to accumulation of disadvantage or may decrease because ageing can work as a leveller. We report how absolute and relative socioeconomic inequalities in musculoskeletal pain, oral health and psychological distress evolve with ageing. METHODS: Data were combined from two nationally representative Swedish panel studies: the Swedish Level-of-Living Survey and the Swedish Panel Study of Living Conditions of the Oldest Old. Individuals were followed up to 43 years in six waves (1968, 1974, 1981, 1991/1992, 2000/2002, 2010/2011) from five cohorts: 1906-1915 (n=899), 1925-1934 (n=906), 1944-1953 (n=1154), 1957-1966 (n=923) and 1970-1981 (n=1199). The participants were 15-62 years at baseline. Three self-reported outcomes were measured as dichotomous variables: teeth not in good conditions, psychological distress and musculoskeletal pain. The fixed-income groups were: (A) never poor and (B)

poor at least once in life. The relationship between ageing and the outcomes was smoothed with locally weighted ordinary least squares, and the relative and absolute gaps were calculated with Poisson regression using generalised estimating equations. RESULTS: All outcomes were associated with ageing, birth cohort, sex and being poor at least once in live. Absolute inequalities increased up to the age of 45-64 years, and then they decreased. Relative inequalities were large already in individuals aged 15-25 years, showing a declining trend over the life course. Selective mortality did not change the results. The socioeconomic gap was larger for current poverty than for being poor at least once in life. CONCLUSION: Inequalities persist into very old age, though they are more salient in midlife for all three outcomes observed

**Gayed A, Milligan-Saville JS, Nicholas J, Bryan BT, LaMontagne AD, Milner A, Madan I, Calvo RA, Christensen H, Mykletun A, Glozier N, and Harvey SB. Effectiveness of training workplace managers to understand and support the mental health needs of employees: a systematic review and meta-analysis. Occupational and Environmental Medicine. 2018; [Epub ahead of print].**
http://dx.doi.org/10.1136/oemed-2017-104789
Abstract: Managers are in an influential position to make decisions that can impact on the mental health and well-being of their employees. As a result, there is an increasing trend for organisations to provide managers with training in how to reduce work-based mental health risk factors for their employees. A systematic search of the literature was conducted to identify workplace interventions for managers with an emphasis on the mental health of employees reporting directing to them. A meta-analysis was performed to calculate pooled effect sizes using the random effects model for both manager and employee outcomes. Ten controlled trials were identified as relevant for this review. Outcomes evaluating managers' mental health knowledge (standardised mean difference (SMD)=0.73; 95% CI 0.43 to 1.03; p<0.001), non-stigmatising attitudes towards mental health (SMD=0.36; 95% CI 0.18 to 0.53; p<0.001) and improving behaviour in supporting employees experiencing mental health problems (SMD=0.59; 95% CI 0.14 to 1.03; p=0.01) were found to have significant pooled effect sizes favouring the intervention. A significant pooled effect was not found for the small number of studies evaluating psychological symptoms in employees (p=0.28). Our meta-analysis indicates that training managers in workplace mental health can improve their knowledge, attitudes and self-reported behaviour in supporting employees experiencing mental health problems. At present, any findings regarding the impact of manager training on levels of psychological distress among employees remain preliminary as only a very limited amount of research evaluating employee outcomes is available. Our review suggests that in order to understand the effectiveness of manager training on employees, an increase in collection of employee level data is required

**Lappalainen L, Liira J, Lamminpaa A, and Rokkanen T. Work disability negotiations: supervisors' view of work disability and collaboration with occupational health services. Disability and Rehabilitation. 2018; [Epub ahead of print].**
**http://dx.doi.org/10.1080/09638288.2018.1455112**
Abstract: PURPOSE: To introduce the Finnish practice of collaboration aiming to enhance work participation, to ask supervisors about its reasons and usefulness, to study supervisors' needs when they face work disability, and to compare the experiences of supervisors whose profiles differ. MATERIALS AND METHODS: An online questionnaire based on the Finnish practice of collaboration between supervisor and occupational health services (OHS) went to supervisors in six public and private organizations. A total of 254 supervisors responded, of whom, 133 (52%) had collaborated in work disability negotiations, representing a wide variety with differing professional profiles. RESULTS: In their role of managing work disability, supervisors appeared to benefit from three factors: an explicit company disability management (DM) policy, supervisors' training in DM, and collaboration with OHS. Reasons for work disability negotiations were long or repeated sick-leaves and reduced work performance. Expectations for occupational health consultations focused on finding vocational solutions and on obtaining information. Supervisors assessed the outcomes of collaboration as both vocational and medical. Supervisors with differing professional profiles prioritized slightly different aspects in collaboration. CONCLUSIONS: Collaboration with OHS is an important option for supervisors to enhance work modifications and the work participation of employees with work disability. Implications for Rehabilitation Work disability negotiation between supervisor, employee, and occupational health services (OHS) is an effective method to enhance work participation. Collaboration with occupational health can advance work modifications and also lead to medical procedures to improve work performance. Supervisor training, companies' explicit disability management policy, and collaboration with OHSs all advance employee's work participation. Collaboration with OHSs may serve as training for supervisors in their responsibility to support work participation

**Liang Q, Leung M, and Cooper C. Focus group study to explore critical factors for managing stress of construction workers. Journal of Construction Engineering and Management. 2018; 144(5):04018023.**
**http://dx.doi.org/10.1061/(ASCE)CO.1943-7862.0001477**

**Locks F, Gupta N, Hallman D, Birk Jorgensen M, Oliveira AB, and Holtermann A. Association between objectively measured static standing and low back pain: a cross-sectional study among blue-collar workers. Ergonomics. 2018; [Epub ahead of print].**
**http://dx.doi.org/10.1080/00140139.2018.1455900**
Abstract: This study aims to investigate the cross-sectional association between objectively measured total time and temporal patterns of static standing (short

bouts: 0-5 min; moderate bouts: >5-10 min; and long bouts: >10 min) during work and leisure and low back pain (LBP) among 698 blue-collar workers. Workers reported LBP on a 0-10 scale. The association between time spent on static standing and LBP was tested with linear regression. A positive association with LBP intensity was found for long bouts of static standing (beta = 0.27) during total day (work + leisure), and total static standing time at leisure (beta = 0.12). No significant associations were found for static standing during work and LBP intensity. These findings indicate that particularly long bouts of static standing over the entire day contribute to LBP in blue-collar workers. Practitioner summary The association between LBP and static standing time was investigated. This study indicates that prolonged time standing during total day and standing during leisure are positively associated with LBP among blue-collar workers. Therefore, practitioners should consider long periods of standing as a potential risk factor for LBP

**Pekkala J, Rahkonen O, Pietilainen O, Lahelma E, and Blomgren J. Sickness absence due to different musculoskeletal diagnoses by occupational class: a register-based study among 1.2 million Finnish employees. Occupational and Environmental Medicine. 2018; 75(4):296-302. http://dx.doi.org/10.1136/oemed-2017-104571**

Abstract: OBJECTIVES: Those in lower occupational classes have an increased risk of sickness absence due to musculoskeletal diseases (MSDs), but studies examining the associations simultaneously across specified diagnostic groups within MSDs are lacking. We examined occupational class differences in the occurrence and length of long-term sickness absence due to different musculoskeletal diagnoses. METHODS: A 70% random sample of employed Finns aged 25-64 years old at the end of 2013 was linked to data on sickness absence of over 10 working days obtained from The Social Insurance Institution of Finland and occupational class from Statistics Finland. Sickness absences due to MSDs initiated in 2014 were followed until the end of each episode for female (n=675 636) and male (n=604 715) upper non-manuals, lower non-manuals and manual workers. Negative binomial hurdle models were used to analyse the associations. RESULTS: Within the studied MSDs, the most common causes of absence were back disorders, particularly back pain, and shoulder disorders. Osteoarthritis, disc disorders and rheumatoid arthritis induced the longest episodes of absence. Clear hierarchical class differences were found throughout, but the magnitude of the differences varied across the diagnostic causes. The largest class differences in the occurrence were detected in shoulder disorders and back pain. The class differences in length were greatest in rheumatoid arthritis, disc disorders and, among men, also in hip osteoarthritis. CONCLUSIONS: Hierarchical occupational class differences were found across different MSDs, with large differences in back and shoulder disorders. Occupational class and diagnosis should be considered when attempting to reduce sickness absence due to MSDs

**van Schaaijk A, Nieuwenhuijsen K, Frings-Dresen MHW, and Sluiter JK. Reproducibility of work ability and work functioning instruments. Occupational Medicine. 2018; 68(2):116-119.**
http://dx.doi.org/10.1093/occmed/kqy010

Abstract: Background: Work ability (WA) and work functioning (WF) instruments can be useful in occupational health practice. The reproducibility of both instruments is important to their relevance for daily practice. Clinimetrics concerns the methodological and statistical quality of instruments and their performance in practice. Aims: To assess the reproducibility of WA and WF instruments. Methods: Dutch workers completed a questionnaire containing WA questions and the WF questionnaire twice with a 7-day interval between. The questionnaire included an appraisal of current general, physical and mental/emotional WA (0-10) and the composite WF questionnaire of 49 items (0-100). We measured reproducibility, reliability and agreement by calculating the intraclass correlation coefficient (ICC), the standard error of measurement (SEM) and the smallest detectable change (SDC). Results: The answers of 104 respondents were available for analysis. General, physical and mental/emotional WA had ICC values of 0.52, 0.69 and 0.56, respectively. For WF, the ICC value was 0.85. For general WA, the SEM was 0.71. For physical and mental/emotional WA, the SEMs were 0.75 and 0.74, respectively. For general, physical and mental/emotional WA, the SDC was 1.98, 2.09 and 2.05 respectively. The SEM of the WF score was 4.78, and the SDC was 13.25. Conclusions: The WA questions showed moderate reliability, while the WF instrument showed good reliability. Occupational health professionals can use the SDCs of the instruments to monitor changes in WA and WF in workers over time

**Tanaka A, Shipley MJ, Welch CA, Groce NE, Marmot MG, Kivimaki M, Singh-Manoux A, and Brunner EJ. Socioeconomic inequality in recovery from poor physical and mental health in mid-life and early old age: prospective Whitehall II cohort study. Journal of Epidemiology & Community Health. 2018; 72(4):309-313.**
http://dx.doi.org/10.1136/jech-2017-209584

Abstract: BACKGROUND: Few studies have examined the influence of socioeconomic status on recovery from poor physical and mental health. METHODS: Prospective study with four consecutive periods of follow-up (1991-2011) of 7564 civil servants (2228 women) recruited while working in London. Health was measured by the Short-Form 36 questionnaire physical and mental component scores assessed at beginning and end of each of four rounds. Poor health was defined by a score in the lowest 20% of the age-sex-specific distribution. Recovery was defined as changing from a low score at the beginning to a normal score at the end of the round. The analysis took account of retirement status, health behaviours, body mass index and prevalent chronic disease. RESULTS: Of 24 001 person-observations in the age range 39-83, a total of 8105 identified poor physical or mental health. Lower grade of

employment was strongly associated with slower recovery from poor physical health (OR 0.73 (95% CI 0.59 to 0.91); trend P=0.002) in age, sex and ethnicity-adjusted analyses. The association was halved after further adjustment for health behaviours, adiposity, systolic blood pressure (SBP) and serum cholesterol (OR 0.85 (0.68 to 1.07)). In contrast, slower recovery from poor mental health was associated robustly with low employment grade even after multiple adjustment (OR 0.74 (0.59 to 0.93); trend P=0.02). CONCLUSIONS: Socioeconomic inequalities in recovery from poor physical health were explained to a considerable extent by health behaviours, adiposity, SBP and serum cholesterol. These risk factors explained only part of the gradient in recovery for poor mental health

*IWH authored publication.