Occupational disease reporting

Reliable data on occupational disease (OD) incidence is needed to plan interventions and allocate resources; however, underreporting remains a problem. This Cochrane systematic review, which included seven randomised controlled trials and five controlled before-and-after studies, analysed evidence on ways to improve reporting among physicians. Educational materials, such as a personally addressed newsletter, neither increase the number of physicians reporting ODs (moderate quality evidence) nor the rate of reporting (low quality). There is very low quality evidence that educational meetings increase the number of physicians reporting ODs compared with no intervention, but do not increase the rate of reporting. Where there is a legal requirement to report an OD sending a reminder about this, rather than one simply describing the benefits of reporting, significantly increases the number of physicians reporting ODs (risk ratio = 1.32; 95% confidence interval (CI) 1.05–1.66; moderate quality evidence).

- *Cochrane Database of Systematic Reviews 2015; 3: CD010305. doi: 10.1002/14651858.CD010305.pub2*
- *http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD010305.pub2/abstract*

Cardiac patients returning to work

Patients returning to work after coronary angioplasty or cardiac surgery were significantly more likely to report high job satisfaction if they returned on reduced hours or with modified/reduced tasks ($p < 0.01$). The study included 90 consecutive employed cardiac patients (average age 49 years, 91% male) followed up for 12 months after discharge from hospital. The following factors were independently predictive of a satisfying return to work: job satisfaction before the surgery ($p < 0.001$); not having depression ($p < 0.01$); and ambition ($p = 0.04$). Socio-demographic or medical factors were not predictive of job satisfaction on return to work. Early assessment of patients' psychosocial work environment and depressive symptoms is recommended.

- *International Journal of Occupational Medicine and Environmental Health 2015; online first: doi: 10.2478/s13382-014-0313-5*
- *http://link.springer.com/article/10.2478%2Fs13382-014-0313-5*

Stress raises risk of recurrent heart disease

Occupational stress significantly increases the risk of a subsequent coronary heart disease (CHD) event – such as a myocardial infarction or angina – in workers who have already suffered such an event, this systematic review and meta-analysis concludes. The meta-analysis evaluated data from four prospective studies conducted either in Sweden or Canada. Work stress was assessed using validated instruments, based either on the demand–control or effort–reward imbalance (ERI) models. There was a 65% raised risk of recurrent CHD events associated with work stress (hazard ratio (HR) = 1.65; CI 1.23–2.22, $p = 0.001$). Both high work demand (HR = 1.42; CI 1.02–1.99) and low job control (HR = 1.44; CI 1.04–1.99) contributed to the risk in the demand–control model. For ERI, only low reward (HR 1.77; CI 1.16–2.71) had a significant effect.

- *International Journal of Occupational Medicine and Environmental Health 2015; 28(1); 8–19. doi: 10.2478/s13382-014-0303-7*
- *http://ijomeh.eu/Work-stress-and-the-risk-of-recurrent-coronary-heart-disease-events-a-systematic-review-and-meta-analysis,1925,0,2.html*

Weight predicts absence

Being overweight, obese, and gaining or losing weight are each associated with increased sickness absence in middle-age female employees, this large-scale prospective study reveals. It examined 4,164 municipal employees (83% female) who were aged 40–60 years at the study baseline in 2000–2002 and who were still employed in 2007. Participants' personal data, including weight, height and weight change, were linked to the employer's sickness absence registers. For women, the greatest risks of short-term absence (one to three days) were in those who were obese at baseline and had gained weight (age-adjusted relative risk (RR) = 1.66; CI 1.41–1.96) or who were obese weight-maintainers (RR = 1.55; CI 1.32–1.82). The risk was also significantly increased for overweight weight maintainers, as well as weight losers irrespective of baseline body mass index (RR = 1.30; CI 1.14–1.49). Intermediate (four–14 days) and long-term absence (more than 14 days) in women were associated with overweight and obese weight maintainers, overweight and obese weight gainers, and weight losers. There were comparatively few significant associations for male employees, though overweight weight gainers (RR = 1.76; CI 1.20–2.58) and obese weight maintainers (RR = 2.17; CI 1.36–3.48) were at greater risk of intermediate absence. Early occupational health intervention to support those at greatest risk of sickness absence due to their weight or weight gain is suggested.

- *European Journal of Public Health 2015; 25(2): 263–267. doi: 10.1093/eurpub/cku087*
- *http://eurpub.oxfordjournals.org/content/25/2/263*

Indoor air pollutants and asthma risk

There is only weak evidence on whether or not volatile organic compounds (VOCs) present inside buildings contribute to the development or exacerbation of asthma and allergy in adults (or indeed in children) this systematic review of 53 published papers reveals. VOCs such as benzene, toluene, xylene and formaldehyde can be produced at room temperature from paints, wood, fabrics, cleaning agents, air fresheners, cosmetics, furnishings and floor and wall coverings. There are as many papers showing no detrimental effect of indoor VOCs as there are studies finding raised risks of developing or exacerbating asthma and allergies. Two-thirds (33) of the papers were assessed as having a high risk of bias due to poor methodology.

- *European Respiratory Review 2015; 24: 92–101. doi: 10.1183/09059180.00000714*
- *http://err.ersjournals.com/content/24/135/92.abstract*

Onsite physical activity programmes

Onsite workplace physical activity programmes designed to improve health do not reduce sickness absence, according to this systematic review, and there is only inconsistent evidence that such programmes have any impact on productivity. Only studies published between 2000 and 2015 were included – eight studies met the criteria, three of high and five of moderate quality. Programmes varied from exercise regimes targeting cardiovascular fitness, strength and flexibility, to walking and yoga, mostly completed during work hours. None of the programmes had any impact on sickness absence (based on six studies). Six studies examined the impact of physical activity programmes on productivity, using measures such as the Work Ability Index (WAI) and Work Limitations Questionnaire (WLQ). One high- and one moderate-quality study found improved WAI and WLQ scores, respectively, following the interventions; while the others studies did not find any benefits. None of the studies found any deleterious effects of the onsite activity programmes. The data were not suitable for meta-analysis.

- *Occupational and Environmental Medicine 2015; online first: doi: 10.1136/oemed-2014-102678*
- *http://oem.bmj.com/content/early/2015/03/16/oemed-2014-102678.abstract*

Addressing teachers' stress

Can changes to teachers' work organisation improve their health and wellbeing? Yes, according to this Cochrane systematic review, though the supporting evidence is of low quality. Just four studies met inclusion criteria – three were cluster randomised controlled trials and one was a 'stepped wedge' randomised trial. The four trials, which together included 2,199 teachers, investigated: task-based organisational change plus stress management; training and coaching (two studies); and a multicomponent intervention comprising performance bonus, job promotion opportunities and mentoring. Changing task characteristics resulted in reduced stress and improved work ability. There was no impact of changing organisational characteristics on burnout, emotional ability, job-related anxiety and job-related depression. The multicomponent intervention improved teacher retention rates at one, two and three years' follow-up. Better-designed, large-scale studies are needed.

- *Cochrane Database of Systematic Reviews 2015; 4: CD010306. doi: 10.1002/14651858.CD010306.pub2*
- *http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD010306.pub2/abstract*

Musculoskeletal conditions – intermediate care

Most musculoskeletal (MSK) conditions can be managed with intermediate care – including by physiotherapist-led triage and treatment – without the need for referral to orthopaedic services, this systematic review finds. The NHS MSK Clinical Assessment Treatment Service (MSK CATS) is designed to reduce the reliance on secondary care interventions and reduce waiting times. It is typically delivered by physiotherapists and GPs with a special interest in MSK medicine, and provides rapid assessment and treatment, with secondary referrals only when necessary. Twenty-three papers are included, 14 exploring MSK CATS, and nine examining referral pathways in intermediate care. Between 72% and 97% of MSK patients were managed entirely by intermediate care, leading to a 20%–60% reduction in orthopaedic referrals. Clinical decisions and referral accuracy by physiotherapists was comparable to those of doctors in 68%–96% of cases. Reduced waiting times and patient satisfaction is reported. A limitation of the review, however, is the generally low quality of the studies – only one was a randomised controlled trial.

- *Physiotherapy 2015; 101(1): 13–24. doi: 10.1016/j.physio.2014.08.004*
- *http://www.physiotherapyjournal.com/article/S0031-9406(14)00087-X/abstract*

Psychosocial factors in work-related injuries

Work-related stress at least doubles the risk of lost-time work-related injuries, this large-scale prospective study of nearly 7,000 workers in Norway suggests. The sample was drawn from a general population survey, with workers followed up for three years. In total, 112 workers reported having had a work-related injury leading to time off work within the previous 12 months. After adjustment for sex, age, occupation, shiftwork and heavy work, significant predictors ($p < 0.01$) of injury were: high job strain (odds ratio (OR) = 2.38; CI 1.24–4.58); high role conflict (OR = 2.09; CI 1.18–3.72), and high emotional demands (OR = 2.22; CI 1.36–3.62) measured at the beginning of the study. The same three factors were also significantly predictive ($p < 0.01$) of injury when measured (and averaged) across the three years. The authors estimate the population attributable risk due for each factor at 11% for job strain and 14% both for role conflict and emotional demands.

- *American Journal of Industrial Medicine 2015; 58: 561–567. doi: 10.1002/ajim.22431*
- *http://onlinelibrary.wiley.com/doi/10.1002/ajim.22431/abstract*

Traumatic brain injuries

Male workers in the construction industry, and particularly those in the youngest and oldest age groups, are the most likely to sustain a work-related traumatic brain injury (TBI), this systematic review of 98 English-language papers finds. Evidence quality of the included papers is variable, though four are of high quality. More than 70% of hospitalised cases are mild (based on two studies); however, 4%–11% of cases are fatal (based on nine studies). Males account for 87%–100% of hospitalised or fatal cases. Mean age at injury is 36–41 years, with incidence peaking for the youngest and oldest age groups. Falls are the most common cause of TBIs, and 80% of these are falls from height. Motor vehicle collisions (MVCs) and being struck by or against objects are the other two leading causes of injury. MVC injuries are more common among younger workers and are the leading cause of fatal TBIs in those aged under 55. TBIs account for around 20%–30% of all fatal work-related injuries and 10%–20% of all non-fatal injuries. Construction accounts for 25%–39% of TBIs, with manufacturing accounting for 12%–26%. The mortality rate from RBIs is highest in agriculture, forestry and mining, followed by construction and transportation.

- *American Journal of Industrial Medicine 2015; 58: 353–377. doi: 10.1002/ajim.22418*
- *http://onlinelibrary.wiley.com/doi/10.1002/ajim.22418/abstract*