

### Junior doctors' working hours

A systematic review finds that in the US reducing junior doctors' working hours to less than 80 a week had no impact on patient safety and only a limited effect on training. However, in the UK, there is insufficient evidence on the impact of capping working time at 56 or 48 hours per week. Thirty-four papers examined patient outcomes (three from the UK) and 41 considered the impact on training (14 from the UK); three papers looked at both measures. Four studies, including one high-quality randomised controlled trial, showed improved patient outcomes with reduced working hours, though most showed no effect on the standard of patient care. Studies on the impact of the European Working Time Directive on doctors' hours were of poor quality and had conflicting results.

➤ *British Medical Journal* 2011; 342: d1580.

➤ <http://goo.gl/lphtf>

### Cognitive behavioural approach to sickness absence

This randomised-controlled trial (n = 102) examined the effect of a cognitive behavioural stress management intervention directed at workers who were either returning from sick leave or at risk of going off sick. The intervention consisted of nine three-hour sessions over three months, delivered by clinical psychologists with advanced training in CBT. Self-reported absence in the intervention group (mean 27 days) was lower than in the waiting-list control group (44 days; p = 0.02) at 16 weeks' follow-up, but there was no significant difference at 32 weeks. Rate or return to work was faster in the intervention group, but the difference was not significant.

➤ *Scandinavian Journal of Work Environment & Health* 2011; 37(3): 186–195.

➤ <http://goo.gl/m5MLI>

### Functional capacity testing

Functional capacity tests (FCTs) evaluate individuals' ability to carry out work-related physical activities. This systematic review (22 studies) looked at the level of evidence for FCT factors associated with chronic non-specific low-back pain. It found high quality evidence for an association between 'lifting low' and self-reported disability and specific self-efficacy, but not pain duration. 'Lifting high' was associated with gender and specific self-efficacy, but not pain intensity or age. 'Carrying' was associated with self-reported disability but not pain duration. 'Static lifting' was associated with fear of movement. There was conflicting evidence for various other associations.

➤ *Journal of Occupational Rehabilitation* 2011; online first: doi 10.1007/s10926-011-9306-4.

➤ <http://goo.gl/yxurZ>

### Workplace interventions to tackle depression

A systematic review of interventions to reduce depression in the workplace found just one paper meeting all inclusion criteria. Twenty-seven of 28 potentially relevant studies were rejected on methodological grounds, for example, due to poor study design, because they examined a direct depression treatment rather than a workplace intervention, or because they lacked a validated depression screening instrument. The one paper meeting all inclusion criteria, a secondary prevention programme in two French utility companies – delivery of screening test results, psycho-education and a recommendation to consult a GP, psychiatrist or occupational physician – produced positive outcomes after six weeks and six months.

- *International Archives of Occupational and Environmental Health* 2011; online first: doi 10.1007/s00420-011-0634-7
- <http://goo.gl/8e6hz>

### Workers' health monitoring

A systematic review of job-specific health monitoring activities used in the ambulance, fire, police and armed services found 31 relevant papers. Twenty-one studied physical health monitoring, including task-simulation tests – such as stair climbing in fire fighters – visual acuity and cardiovascular tests, and three looked at psychological health surveillance. Seven studies (four randomised-controlled trials) addressed health monitoring to measure the impact of a health intervention, such as fitness changes following an exercise programme for ambulance personnel, trauma resilience in the police following training, and healthy lifestyle promotion in firefighters. Methodological quality varied from 41% to 76% of the maximum score.

- *International Archives of Occupational and Environmental Health* 2011; online first: doi 10.1007/s00420-011-0614-y
- <http://goo.gl/g9sAS>

### Pregnancy, work and stress

A critical evidence review on the effects of psychosocial work characteristics on pregnancy outcomes (low birth weight, preterm delivery and spontaneous abortion) found only 'modest' associations – for example between work stress and adverse outcomes. Most of the 13 included studies were case-control or cross-sectional designs; just three were prospective studies. Data in most of the studies were thus subject to recall bias – ie women with adverse pregnancy outcomes may be more likely to report occupational exposures. 'Job control' appears to be more important than 'job demand', finds the study.

- *Women & Health* 2011; 51: 279–297.
- <http://goo.gl/RFEMC>

### Ergonomic interventions need theoretical basis

All workplace ergonomics programmes rely on the notion of 'change', for example, that increased risk awareness will lead to behavioural change, which in turn will lead to fewer musculoskeletal disorders. However, more than half of the 30 studies in this systematic review were not based on any established theory or model about the change process. Thirteen were based on an explicit change model, for example: that workers are experts in their own job and should be included in the change process (participatory ergonomics); that change requires communication and interaction (in behavioural safety); or that personal factors, learned behaviour and environmental determinants interact in the change process (social cognitive theory).

- *Scandinavian Journal of Work Environment & Health* 2011; online first: doi 10.5271/sjweh.3159.
- <http://goo.gl/dMzb2>

### Treating chronic HCV infection

Adding the oral protease inhibitor boceprevir to standard therapy with peginterferon and ribavirin significantly improves viral suppression in adults with chronic hepatitis C infection genotype-1 (the most common UK genotype), according to two randomised, placebo-controlled clinical trials<sup>1,2</sup>. Current treatment regimens achieve sustained virological response (ie undetectable viral loads) of less than 50% for people with genotype-1 infection. The two studies examined people with untreated and previously treated chronic infection, respectively, with sustained virological responses of up to 68% and 75%, and significant improvements in previous non-responders. Response varied with ethnic group.

- *1 New England Journal of Medicine* 2011; 364(13): 1195–1206.
- <http://goo.gl/0lJsq>
- *2 New England Journal of Medicine* 2011; 364(13): 1207–1217.
- <http://goo.gl/DaIVj>

### Longer hours associate with poor diabetes management

A study of 369 US workers with type-2 diabetes revealed poor glycaemic control in 22% of participants and sub-optimal control in a further 58%. Working over 40 hours per week, compared with working less than 20 hours per week, was associated with sub-optimal glycaemic control (odds ratio = 5.09). Lack of time to properly manage the condition is a possible explanation. Blue- or white-collar work was not associated with sub-optimal control.

- *American Journal of Industrial Medicine* 2011; 54(5): 375–383.
- <http://goo.gl/RZfH7>

## Research Plus June/July 2011

### Nursing errors – predictive factors

A questionnaire-based study of 6,445 hospital nurses, who all worked shifts, found that various common personal and workplace factors were associated with medical errors and incidents. Four in five nurses (79%) reported that they had made a medical error (defined as non-negligent events or events without adverse side effects) or experienced a medical incident (where the error had been detected in a timely manner and/or corrective action taken). Errors and incidents were best predicted by: absence due to sickness in the previous six months (50% more accidents/incidents); currently treated for illness (20% more); and working in wards rather than outpatients (77% more).

- *Factors contributing to medical errors and incidents among hospital nurses. Industrial Health 2011; online first.*
- <http://goo.gl/xVwBH>