



REDUCING THE OCCUPATIONAL CANCER BURDEN

Occupational cancers currently account for more than 8,000 deaths (80% are male) and more than 13,500 new cancer registrations every year in the UK. Work exposures account for 5.3% of all cancers. But is it possible to predict the future work-related cancer burden, and intervene to reduce future risk? Dr Lesley Rushton, reader in occupational health at Imperial College, London, believes it is.

Speaking at the Society of Occupational Medicine's spring meeting¹, Rushton explained that her latest research was designed not just to identify the carcinogens that would be responsible for future occupational cancers, but also to determine which cancer sites and which workplaces could be targeted to reduce the risks.

Currently, the biggest causes of new occupational cancer registrations are exposure to asbestos (31% of the total occupational cancer burden), shiftwork, which increases the risk of breast cancer (14% of the total), mineral oils (13%) and solar radiation (11%). Other important exposures include environmental tobacco smoke, respirable crystalline silica, diesel engine exhaust, paints and dioxins.

Rushton and her colleagues calculated the 'attributable fraction' (AF) – the proportion of all cancer cases due to occupational exposure – for each cancer site. For example, the AF for breast cancer in women is 4.6% (ie just under one in 20 breast cancer cases are work-related). The AF for mesothelioma is 97% in men and 82.5% in women, and for lung cancer is 21% in men and 5.3% in women. They then estimated AFs for future target years from 2020 to 2060, taking into account current and past exposures, the different cancer latency periods (10–50 years for solid tumours and 0–20 years

for leukaemia), employment turnover and changes in industry and workplace practice.

The model is able to predict what would happen to the cancer burden if one were to introduce changes, such as prohibiting certain chemicals, changing work patterns, introducing new exposure limits or implementing practical measures, such as local exhaust ventilation or personal protective equipment. It can also examine how the scene would change if compliance with these measures were improved.

For example, Rushton estimates that if the current exposure limit for crystalline silica of 0.1 mg/m³ were halved, the AF for lung cancer due to silica exposure could be reduced from the current level of just over 2% to virtually zero by 2060 if there was 90% compliance. However, with only 33% compliance at the new limit – as it is with the current limit – then the AF would be reduced to just 0.8%.

Other possible scenarios could include delaying the new limit while improving compliance by small employers and the self-employed. The forecasts demonstrate where the biggest gains would be achieved – for example, improving compliance with current standards might give a better return than implementing a stricter standard but doing nothing about compliance levels.

Rushton believes the model has huge potential to reduce occupational cancer risks, not just in the UK but internationally as well. 'We're hoping that people will take our methodology, run with it, use it and improve it,' she said.

The research is published in the *American Journal of Epidemiology*².

¹ *Working towards avoiding cancer at work. The Worshipful Society of Apothecaries lecture, SOM, 13 April 2011, London.*

² *Hutchings S, Rushton L. Toward risk reduction: predicting the future*

burden of occupational cancer. American Journal of Epidemiology 2011; 173 (9): 1069–1077, <http://goo.gl/tbzfB>

EMPLOYMENT BOOSTS HEALTH

Employment promotes health in general and mental health in particular, according to a large study of German welfare recipients, based on linked administrative data and interview-based questionnaires on health status.

The study, carried out by researchers at the Swiss Institute for Empirical Economic Research, found that transition to work results in positive, though not statistically significant, improvement in general health. However, it produced a large and significant increase on daily work capacity, as well as a significant reduction in mental health symptoms and feelings of lethargy. By contrast, participating in a welfare-to-work programme produced only 'ambiguous' results – with a weakly significant improvement in work capacity and an *increase* in mental health symptoms. 'Programme participation does, on average, not have such pronounced and unambiguously positive effects on health as [does] employment,' say the authors

The benefits of employment on health were 'mainly driven by males, suggesting that women's health is relatively inert with respect to the employment state'. Furthermore, welfare recipients in bad general health (especially among men) were more likely to benefit than those in better health.

'These findings appear to be relevant for the design of welfare policies, as a good health state is desirable for various reasons. Better health not only increases the individual wellbeing of welfare recipients, it most likely improves their productivity and future employability, reduces their

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probability to exit the labour force via disability insurance schemes, and decreases health and other social insurance costs,' the authors conclude.

Huber M, Lechner M, Wunsch C. Does leaving welfare improve health? Evidence for Germany. *Health Economics* 2011; 20(4): 484–504. <http://goo.gl/tLEPd>

DRIVEN TO DEATH

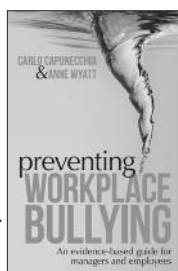
Around one-quarter of all occupational fatalities in the United States are from road transport deaths, according to data from the US Centers for Disease Control.

A total of 8,173 workers died from road transportation incidents during the six-year period 2003–2008, accounting for 24% of all fatal occupational injuries for the period, giving an annual fatal injury rate of 0.9 deaths per 100,000 workers. The rate was highest in the trucking (road haulage) industry – 19.6 deaths per 100,000 workers – accounting for 2,320 deaths over the data period. The figures include fatalities to drivers or passengers, but exclude deaths to pedestrians or workers commuting to, or from, work.

Road-traffic accidents are not reportable under the UK *Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995*. However, the safety charity RoSPA estimates that around one-third of all road traffic deaths in the UK involve someone who is at work at the time, accounting for more than 740 deaths each year. The charity recently marked 15 years of its Managing Occupational Road Risk (MORR) campaign and urges businesses to do more to address the issue.

Occupational Highway Transportation Deaths – United States, 2003–2008. Morbidity and Mortality Weekly Report 2011; 60(16): 497–502, <http://goo.gl/rHLtI>

Caponecchia C, Wyatt A. *Preventing workplace bullying: an evidence-based guide for managers and employers*. ISBN: 978 0 415 66881 1. Price £14.99. 168 pages, paperback. Hove: Routledge, 2011.

**WORKPLACE BULLYING**

This excellent book offers good practical advice on developing organisational approaches to workplace bullying. Caponecchia and Wyatt avoid using individualised terminology – such as ‘bully’ and ‘victim’ – pointing out that it is too easy to blame individuals without considering the systemic factors that can allow a culture of bullying to persist. Instead they discuss ‘unacceptable behaviours’ and recommend using risk-management principles to address them.

Difficult issues are discussed, including how to deal with ‘false positives’ – where someone reports bullying that has not occurred, perhaps vindictively – and reasons why bullying may not be reported, including ‘professional suicide’, workplace culture, embarrassment, fear, not knowing what to do, and ‘the boss is part of the problem’.

The authors examine the factors that influence bullying, which can be individual (the ‘target’, the bystander and the person who does the bullying) organisational (culture, job content, work environment) and socio-cultural. They described bullying as an ‘escalating drama spiral’, with various players and roles – rather than a simple case of ‘X bullies Y’ – and propose a ‘time-course’ management model that maps the elements of prevention, management and recovery.

Preventing workplace bullying includes a methodology for estimating the cost of bullying to the organisation, as well as advice on designing and implementing a

workplace policy, and a complaints procedure. It discusses various interventions, including group work, training, employee assistance programmes and counselling, but sounds a note of caution on the use of ‘resilience’ training, which, it says, can imply that the individual is part of the problem or can encourage a false sense of security. Ultimately, the book describes how an organisation can move forward to the point where workplace bullying is seen as culturally unacceptable.

Workplace violence and harassment: a European picture. European Risk Observatory Report. ISBN 978 92 9191 268 1, 160 pages, paperback. Free to download. Bilbao: European Agency for Safety and Health at Work, 2011.

**VIOLENCE AND HARASSMENT AT WORK**

This European Agency report scrutinises differences in the incidence of various forms of violence and harassment at work across the EU, using key statistics from international and national sources. It also examines the cultural differences – definitions and norms – related to violence and harassment, as well as the methodologies and data sources used in member states to assess the risk, prevalence and consequences of workplace violence and harassment.

Drawing on the fourth *European Working Conditions Survey*, the report notes that 6% of workers from the EU-27 have been exposed to threats of physical violence, either from fellow workers (2%) or from others (4%). The report also examines the risk factors and antecedents of work-related violence and concludes that risk factors for third-party violence emerge mainly from features of the work environment but also from a wider context as well as particular situations.