

# Work in Brief

Keith Palmer, *Editor*

## Measuring the impact of interventions

Many hazardous agents in the workplace are subject to controls aimed at reducing total exposure and thereby the burden of occupational disease. Armstrong and Darnton<sup>1</sup> set out to clarify how such reductions in health burden can be estimated and illustrate the methods using real data on lung cancer cases attributable to polycyclic aromatic hydrocarbons. "Moderate" extensions of standard expressions for attributable fractions appear to be the way forwards, but information is required on the distribution of exposure in the population and the shape of the exposure-response relationship. Their analysis shows that for linear threshold relations and left skewed exposure distributions, most of the burden may arise in those experiencing small relative risks, where strategies based on a exposure limit may be less effective. The methods they develop have a general application in clarifying the likely outcome of interventions.



## Health benefits of London Congestion Charging

To alleviate traffic congestion in Central London, a Congestion Charging Scheme was introduced in 2003, leading to a sustained reduction in traffic volumes. Less traffic suggests less air pollution and benefits to health, but by how much is a question of considerable interest to international policy makers watching the London experiment. In the issue, Tonne *et al*<sup>2</sup> model annual average NO<sub>2</sub> and PM<sub>10</sub> using an emission-dispersion model, and link air pollution concentrations with small area socio-economic, population and mortality data, predicting changes in life

expectancy from life table analysis and published exposure-response co-efficients. Between 2003 and 2007 concentrations of NO<sub>2</sub> and PM<sub>10</sub> fell both in wards with a charging scheme and in other wards; but by more in the zones affected by charging. These falls are predicted to have saved 183 years of life per 100,000 in wards with charging as compared with 18 years in other wards. The impact was greater in the more deprived areas, and the authors suggest that charging policies can make a contribution to reducing socio-economic inequalities related to the impact of air quality.



## H pylori infection in institutional carers

Some evidence exists that *H pylori* infection may be more of a hazard for gastroenterologists and certain categories of nursing staff, but occupational risk factors for transmission remain incompletely elucidated. In this issue De Schryver *et al*<sup>3</sup> provide evidence of likely faeco-oral transmission in staff members of institutions caring for people with intellectual disability. In the institutions studied, 86% of residents had *H pylori* antibodies. The prevalence of antibodies was higher among institutional staff members than



a control group of administrators from other organisations (41 versus 29%), and after adjusting for various potential confounders, the odds of infection were raised about two fold, and even higher in those whose duties sometimes involved assisting with the toileting of residents.

## Elsewhere in the Journal

This month's journal also includes a report on the deployment of UK armed forces personnel in Iraq and its impact on heavy drinking<sup>4</sup> and linked reports on the development of a new job-exposure matrix aimed at discriminating the effects of fibre length and width on risks of exposure to chrysotile asbestos.<sup>5,6</sup>



## REFERENCES

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3. **Schryver A De**, Cornelis K, Winckel M Van, *et al*. The occupational risk of *Helicobacter pylori* infection among workers in institutions for people with intellectual disability. *Occup Environ Med* 2008;**65**:587-91.
4. **Browne T**, Iversen I, Hull L, *et al*. How do experiences in Iraq affect alcohol use among male UK armed forces personnel? *Occup Environ Med* 2008;**65**:628-33.
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6. **Stayner L**, Kuempel E, Gilbert S, *et al*. An epidemiological study of the role of chrysotile asbestos fibre dimensions in determining respiratory disease risk in exposed workers. *Occup Environ Med* 2008;**65**:613-9.



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