

# To measure or not to measure? – a question for hygienists

Occupational hygienists have been encouraged to engage in the HSE's Disease Reduction Programme, which emphasises generic risk assessment, rather than routine measurement of exposures.

## KEY POINTS

- Hard data on occupational exposures is becoming too expensive to collect routinely.
- Risk assessment should be based more on targeted studies.
- Culture and attitudes in high-risk sectors need to change if hazards are to be properly controlled.

John Cherrie, president-elect of the British Occupational Hygiene Society (BOHS) and research director at the Institute of Occupational Medicine (IOM) in Edinburgh, told a recent BOHS meeting in Manchester of the need to "refocus hygienists on measurement". This is a theme that he intends to pursue during his presidency. Cherrie believes that occupational exposure limits (OELs) are a necessary part of occupational hygiene and are required for risk assessment. But he showed a graph illustrating how the number of measurements entered into the Health and Safety Executive's (HSE) national exposure database (NEDB) had declined from a peak in the late 1980s to the present day. In recent years, the HSE has increasingly used modelling to predict exposures, rather than carrying out measurements in real workplaces.

The reason for this trend appears to be the cost of undertaking such reliable measurements. The IOM has developed its own exposure model, which has been validated to give good correlation with field measurements (it must be noted that "good correlation" in this context means that the predicted exposure is generally within plus or minus three times the actual exposure).

In addition, the IOM carried out a research contract for the HSE to examine exposure trends over time using the legacy data on the NEDB. As an example, Cherrie presented a graph showing that toluene exposures in a number of quite diverse industries had all declined steadily between the mid-1980s and 2000. Without the measurements, we simply would not know about such exposure trends, Cherrie pointed out.

## HSE's Disease Reduction Programme

The second speaker was Rob Turner, head of occupational hygiene at the HSE, who described the occupational hygiene aspects of the Disease Reduction Programme (DRP), which is part of the HSE's Fit 3 strategic programme and interacts with the Health, Work and Wellbeing strategy. The programme focuses on three diseases: skin disease; respiratory disease in the form of occupational asthma and chronic obstructive pulmonary disease (COPD); and cancer.

In addition, there is a general project to improve engineering controls, in particular local exhaust ventilation (LEV). Turner reminded the meeting of the continuing significance of the priority diseases.

Turner outlined the intended outcomes of the DRP, and how the HSE is planning to implement it by collecting information about the nature and incidence of the priority diseases, and putting this together with information about exposures and control measures. The HSE will supplement its own data with information from industry, academic studies and the occupational hygiene community.

The NEDB consists of around 15,000 visit reports and includes around 100,000 exposure data points. Turner agreed with Cherrie's view that the number of measurements being input each year had reduced in recent years because collection of exposure measurements by the HSE has been much more targeted than in the past. The exposure and control evidence in the NEDB would be augmented by professional judgment and targeted studies.

A skin project under the DRP is concentrating on the following areas – wet work (for example hairdressing and beauty salons), printing, engineering, catering and cleaning industries and construction industry. Turner said there was a need for culture and attitudes to change in some of these industries.

The asthma project was looking at isocyanates (particularly in vehicle paint spraying), flour dust (in baking), metalworking fluids (in engineering), wood dust and solder flux fume. In relation to COPD, exposure to dust and/or fumes from crystalline silica, welding and certain agricultural processes will be investigated in the future.

The cancer project will focus on exposure to asbestos in building maintenance and repair, as well as exposure to other chemical carcinogens.

Concluding, Turner said that, while it is important to optimise the quality and the availability of hygiene data (on exposure, control and working practices), the challenge for hygienists is to engage in the DRP and to help the HSE both in identifying bad practice and in communicating and promulgating best practices to improve performance. ■

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