

Advisory Committee on Toxic Substances		ACTS/25/2006	
Meeting date:	30 November 2006	Open Govt. Status:	Fully Open
Type of paper:	Below the Line	Paper File Ref:	
Exemptions:	None		

ADVISORY COMMITTEE ON TOXIC SUBSTANCES

Development of work place COPD strategy and position on health surveillance

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Issue

1. The development of a strategy for tackling work related COPD.

Timing

2. Routine.

Recommendation

- 3 That ACTS note the work done so far, offer comments on the planned approach and consider how members can help with its development and implementation.

Background

COPD and the scale of work related COPD

- 4 Chronic Obstructive Pulmonary Disease (COPD) is a lung condition that encompasses chronic bronchitis and emphysema. Symptoms include cough, excess sputum production, wheeze and breathlessness. The disease is characterised by impaired flow of air from the lungs and is not fully reversible
- 5 COPD has been identified as a priority for HSE. There are approximately 30,000 deaths each year from the disease in the UK (NICE 2004). Smoking is the main cause, but evidence suggests that the combination of smoking and occupational exposures, to fumes, chemicals and dusts, accounts for 15% of the burden of COPD (that is approximately 4000 deaths annually in the UK). People can get COPD without smoking but this is uncommon. Additionally, 44% of people with COPD are below retirement age, 24% of these can't work and 11% have a limited work capacity. This year, for the first time, HSE has published statistics on work related COPD (www.hse.gov.uk/statistics).

ACTS and WATCH involvement

6. In 2004 HSE convened a COPD workshop in Manchester. Two approaches to tackling this issue were put forward; a 'broad brush' strategy, which would promote exposure control/reduction across all potentially relevant industry sectors and/or a 'focused' strategy, which would seek to identify and target specific industries whose workers were deemed to be at risk of developing work-related COPD. HSE acknowledged that in order to follow the focused approach a robust method would need to be established in order to determine where to target efforts and resources and suggested the development of a 'prioritisation matrix'.
7. HSE gave a presentation of its planned work for COPD to ACTS in March 2004. At the WATCH meeting in October 2005, WATCH endorsed the focused approach as an appropriate strategy for reducing the occurrence of work-related COPD and agreed that the prioritisation matrix would be a suitable starting point. WATCH recommended the set of column headings for the prioritisation table.

Current Initiatives

8. HSE is already involved in a number of interventions in industries that information suggests are at greatest risk of COPD, including agriculture, welding and those exposed to stone dust (currently focused on those exposed to respirable crystalline silica). Some other industries identified on the matrix are already being targeted under HSE's occupational asthma (OA) strategy, including interventions in the flour industry. The aim of the current work is to raise awareness of the health risks and good practice by working in partnership with stakeholders.
9. HSE is also developing a cross cutting initiative to improve engineering controls, particularly the effectiveness of local exhaust ventilation (LEV), in the workplace. This will apply to a wide range of industry sectors and tackle all causes of respiratory disease, including COPD and OA. New guidance on the design of engineering controls is being written in partnership with the main professional group and stakeholders. In addition, simple concise guidance to help purchasers of engineering controls including LEV get what they need and then effectively check and maintain what's installed, is being prepared. With this guidance and working with the key stakeholders we will seek to raise awareness amongst employers of the importance of checking and maintaining engineering controls (including, for example, the COSHH requirement for a 14 month inspection) and provide information on how to select the appropriate engineering controls.
10. We are also developing a COPD website for employers, employees and health professionals. The site will raise awareness of the disease

and provide clear and accessible good practice advice and will ask for help in developing the work-related COPD evidence base.

Argument

Development of the Prioritisation Matrix

11. Based on earlier thinking and the recommendations of WATCH, HSE is currently developing a prioritisation matrix as the basis for its programme of work to tackle occupational COPD. The matrix tabulates the industries where COPD has been associated, the causative agents, the numbers of workers exposed and any exposure information that is available. It comprises information from a range of sources including peer-reviewed evidence from the scientific literature and anecdotal evidence from HSE experts. HSE decided to take a broad view when reviewing the evidence for COPD and has included studies relating to chronic bronchitis (with or without lung function tests) and emphysema as well as those reporting on decline in lung function. The matrix is a starting point to identify areas that need further investigation.
12. In order to summarise and profile the information in the matrix we used the prioritisation criteria illustrated in the checklist flow chart (annex 1) and outlined below;
 - Priority 1 was assigned to industries in which evidence of COPD was identified and where approximately 100 000 or more workers are potentially exposed to dusts, gases and/or fumes.
 - Priority 2 was assigned to industries in which evidence of COPD was identified but where less than 100 000 workers are potentially exposed to dusts, gases and/or fumes.
 - Priority 3 was assigned to industries where only very limited evidence of COPD had been identified.
13. The data in the matrix was subjected to the criteria outlined in the flow chart and a COPD priority table was produced (annex 2). All industries in priority groups 1 and 2 will be examined in more detail; the key differences in approach are likely to relate to the type and extent of the intervention.
14. There are a number of assumptions and other caveats that should be noted when considering the priority table. For the majority of industries it was necessary to use SIC/SOC codes to give an indication of the size of the workforce. In most cases this is likely to produce a significant overestimate of the number of exposed workers.
15. Improvements in good practice and raised awareness will be used as surrogate measures of success. This is because COPD takes many years to develop and a decline in the number of cases cannot be measured over a reasonable time scale.

Next steps

16. We have not undertaken detailed reviews on every key industry sectors and the need for any more detailed assessments of risk will form part of

our next steps. HSE has already completed some work, including a review of evidence for chronic respiratory ill health in construction workers¹ that was considered by WATCH earlier this year and a set of conclusions was agreed. We have also commissioned IOM research on coalmine dust and other poorly soluble dusts², ill health in agriculture³ and trends in inhalation exposure⁴.

17. Further work will now be carried out in order to generate more realistic estimates for the number of workers at risk of developing COPD as a result of current work practices. Exposure information was also sought from HSE experts within the field. However it would appear that there is little data that links historic exposures to COPD reported in the literature.
18. Therefore we need to gather more information on exposure patterns and current work practices for industries (particularly where there may have been significant changes from those that could have given rise to disease in the past).
19. Specifically, HSE would welcome input from stakeholders on;
 - evidence of COPD in particular industries;
 - assessment of exposures that may have given rise to this;
 - any emerging new risks (perhaps where possible causative agents are being used more widely or in different processes that may give rise to high exposures).
20. We will also engage with other key stakeholders to take forward the work and continue to develop specific interventions to improve good practice in high priority industry sectors.

Health Surveillance

21. HSE is also discussing further work on the clinical aspects of COPD with the GORDS (Group of Occupational Respiratory Disease Specialists) network.
22. During the development of the welding and silica Control of Substances Hazardous to Health (COSHH) Essential sheets the question arose of whether statutory health surveillance could be required. The key issue is whether there is enough evidence that COPD is caused by a

¹ Review of the evidence for chronic respiratory ill health in construction workers WATCH 2006/3

² Coal mine dust as a benchmark for standards for other poorly soluble dusts (RR470) www.hse.gov.uk/research/rrhtm/rr470.htm

³ Baseline incidence of ill health in agriculture in Great Britain (RR370) www.hse.gov.uk/research/rrpdf/rr370.pdf

⁴ Trends in inhalation exposure Mid 1980s till present (RR460) www.hse.gov.uk/research/rrhtm/rr460.htm

particular substance to require health surveillance as defined in regulation 11 of COSHH (annex 3 sets out the key requirements from COSHH for ease of reference). HSE has reached the conclusion that where a substance definitely causes COPD in the workplace, health surveillance would be *required* for compliance with COSHH. However, where the evidence of a link with COPD is less certain then HSE would *recommend* health monitoring as good practice.

23. The requirements for health surveillance and health monitoring are the same. The COSHH Essentials sheet on health monitoring is attached at annex 4 for information. Briefly, health surveillance or monitoring involves an assessment of individuals' fitness for work at the start of employment by means of symptom enquiry and lung function testing and then regular testing that could involve further questionnaires and lung function tests. Information arising from health surveillance and monitoring can help assess whether controls in the workplace are adequate.

24. Some substances that cause COPD also cause OA and silicosis. Any occupation where there is a risk of these conditions requires regular health surveillance.

Communication Plan

25. HSE aims to work in partnership with key stakeholders to raise awareness of COPD and improve good practice advice. We plan to launch the COPD website on World COPD Day (16th November 2006) which will offer clear and accessible advice on COPD to employees, employers and health professionals.

Evaluation Plan

26. The impact of the industry specific interventions will be evaluated as part of the assessment of the impact of the Disease Reduction Programme. FIT3 employee and employer surveys will give a broad brush overview of changes in awareness and control practices.

Consultation

27. External stakeholders will be consulted as part of the development of a specific intervention strategy

Cost and Benefits

28. Not applicable.

Financial/Resource Implications for HSE

29. Current work is included under the existing DRP resources.

Environmental implications

30. None.

European implications

31. None.

Other implications

32. In tackling COPD, HSE will be contributing to the government's Health, Work and Wellbeing - Caring for our Future strategy, aimed at working age people.

Actions

33. ACTS members are asked to:

- note the development of the plan, HSE's position on health surveillance and monitoring and the new website.
- consider how they could help identify:
 - evidence of disease in a particularly industry;
 - exposures that may have given rise to disease; and
 - emerging new risks.
- Let HSE know if ACTS members would like to be contacted individually to discuss the above issues further.

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