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Exemptions:

WATCH COMMITTEE

Priorities in addressing Chronic Obstructive Pulmonary Disease (COPD)

Issue

1. The identification of priority areas for attention within the overall objective of reducing the burden of occupational chemical-induced COPD in the UK.

Timing

2. No particular timing issues.

Recommendation

3. WATCH is asked to consider this paper and to address the action points in paragraph 17.

Background

4. The Respiratory Disease Project of the Disease Reduction Programme (DRP) encompasses work aimed at reducing the occurrence of chemical-induced occupational asthma; and also activity targeted at longer-term respiratory disease.

5. On longer-term respiratory disease attention is focused on the specific issue of silicosis, caused by respirable crystalline silica, and also the more general area of chronic obstructive pulmonary disease (COPD). Maureen Meldrum (HSE) gave a presentation to WATCH at its first meeting (after reconstitution) in March 2004, covering both aspects and the thinking of HSE up to that point.

6. Subsequently, in July 2004 HSE convened a workshop in Manchester, which discussed the evidence surrounding the burden of COPD potentially caused by chemical (other than cigarette smoke) exposure in the workplace; and, if the burden is significant, in what directions to progress activity aimed at reducing this burden. In February 2005 WATCH members received (along with draft minutes of the January meeting) paper and electronic copies of the report of this workshop:

“Occupational Respiratory Diseases: review of HSE’s strategy” Health and Safety Laboratory report MU/04/01.

A photocopy is supplied here as a reminder (Annex 2).

7. The general position on COPD is that, based on population attributable fraction calculations from a number of epidemiological studies, there is a substantial ill-health problem of COPD caused by occupational chemical exposure. However, there are many substances (poorly soluble dusts, soluble irritant dusts, irritant liquids in aerosol form, gases) that have the potential to

cause long-term respiratory problems when present in workplace air in sufficient concentration and many industries and industrial processes in which such a situation could arise if adequate controls were not in place. The available ill-health data on COPD do not provide clear discrimination such that the leading substances/industries contributing to the population attributable fraction calculations can be easily identified.

8. During the last few months HSE has been further exploring how one might decide on the best means of identifying those issues, industries, substances and situations on which to focus effort, in terms of intervention activity, if the aim is to reduce the burden of work-related COPD in the UK.

Argument

9. The Manchester workshop identified two potential strategies to adopt in seeking to combat COPD caused by occupational exposure to substances (see p4 of report at Annex 2). One, described as “broad brush” would promote exposure control/reduction across all potentially relevant industrial sectors; the other, described as “focused”, would identify and target specific industries and exposures/substances. Note that these are not necessarily mutually exclusive.

10. An unpublished draft document produced by Maureen Meldrum (HSE), who was leading the HSE programme of work on COPD at that time, is attached at Annex 3. It outlines the HSE thinking as of early 2005 and concludes that there is a strong and consistent body of evidence from a number of large-scale epidemiological studies indicating that occupational exposure to dusts, gases and fumes make a substantial contribution to the population burden of COPD, with a population attributable risk estimated from other countries data to be in the region of 15%.

11. In (re)launching the “Respiratory Disease Project” in March 2005, HSE decided to ‘attack’ welding as one identified problem area in respect of long-term respiratory disease/COPD because of the well documented increases in respiratory disease and the raised hospital admissions and mortality from local pneumonia.

12. Lesley Rushton at IEH has also produced, for the Industrial Injuries Advisory Committee, a draft review for public consultation indicating which occupations appear to carry the highest individual risk of developing COPD, presumably as a result of their occupational exposures (Annex 4). Occupations of particular concern include farming (particularly those working in animal confinement or with grain), flour mill work and baking, cotton textile work and welding.

13. If the “focused approach” described above were to be followed, we firstly need to establish a robust method to allow us to determine where to focus our efforts and resource. To this end HSE decided to try to develop a “prioritisation matrix” which involves generating numerical representations of the harm produced by considering a variety of relevant factors. If it proves possible to create a sufficiently robust matrix, this would help HSE to decide

which industries to regard as priorities for action. Initial thoughts on this matrix are attached at Annex 1. Preliminary attempts to develop the matrix have demonstrated that certain columns, such as size of population and substance(s) of interest, will be straightforward to populate. However, we envisage difficulty with populating the exposure columns, primarily owing to a lack of robust exposure data.

Link to HSC Strategy

14. This work is a crucial element of the Respiratory Disease Project of the DRP, a component of HSE's Strategic "Fit3" Programme.

Consultation

15. To date there has been no consultation on this work with parties outside HSE.

European Context

16. None

Action

17. WATCH is asked to consider this paper, particularly the initial thinking exemplified in Annex 1, and to:

- i) Recommend whether or not the focused approach is appropriate for combating COPD caused by occupational exposure to substances.
- ii) If the focused-approach is recommended, can a prioritisation matrix form a robust method for determining where to focus efforts and resource? If so:
 - a) Do the suggested column headings in the current draft matrix take account of the appropriate factors?
 - b) What recommendations can be made of how best to populate the matrix ? Can members offer any assistance?
 - c) How should the differing factors be "scored" within the matrix?
- iii) If the answer to any of these questions is qualified or even "no", what are the qualifications and/or what is the (better) alternative ? What are the views of WATCH on the "broad brush" approach?

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References/Attachments

Annex 1 Prioritisation Matrix

Annex 2 Occupational Respiratory Diseases: review of HSE's strategy, Health and Safety Laboratory report MU/04/01.

Annex 3 Occupational Respiratory Diseases (other than asthma), Work-related Chronic Obstructive Pulmonary Disease (COPD). Evidence-base, intervention and evaluation plans, January 2005.

Annex 4 Institute for Environment and Health. Review of literature on chronic bronchitis and emphysema and occupational exposure. January 2005