WATCH COMMITTEE

The risks of mesothelioma and lung cancer in relation to relatively low-level exposures to different forms of asbestos

What statements can reliably be made about risk at different exposure levels?

Issue
1. Continued exploration of what is known of the dose-response relationships for lung cancer and mesothelioma caused by exposure to different forms of asbestos.

Timing Considerations
2. No particular timing issues.

Recommendation
3. WATCH is invited to consider the proposals in this cover paper and to respond to the action in paragraph 13.

Background
4. At the last three consecutive meetings WATCH considered the risks of mesothelioma and lung cancer in relation to relatively low-level exposures to different forms of asbestos. At the most recent meeting in June 2008, WATCH discussed at length a reappraisal of the original Hodgson and Darnton (2000) analysis [HD2000] in light of recently published studies and consideration of the overall robustness of the available data.

5. The key question for WATCH to consider was, and is, how to make predictions about the level of health risk posed by different degrees of exposure to different forms of asbestos in different sets of circumstances. Acknowledging that the data from the available cohort studies might be limited, in terms of the reliability of the exposure information (a reflection of the circumstances under which the data were gathered), the general issue for WATCH to address is whether the existing data can be used to make predictions for other circumstances and scenarios. Is it possible to make reliable extrapolations of risk from one set of asbestos exposure circumstances to another, given the number of variable factors involved?
6. At the June meeting three options emerged for positions that might be taken on the prediction of risks associated with low level exposures to asbestos, based on the available body of evidence:

   i. Risks associated with low-level exposures to asbestos cannot be predicted using the existing evidence base (ie no estimates).

   ii. Reliable absolute predictions about risks associated with low-level exposures to asbestos cannot be made using the HD2000 dose-response model, but it can be used to make predictions about the level of risk of one situation relative to another, in order to prioritise exposure control needs and risk management options (ie relative estimates).

   iii. The HD2000 linear dose-response relationship is considered to be valid, based on the consideration of the existing evidence-based, and can be used to make reliable predictions of risk for low-level exposures (ie absolute estimates).

7. In the time available at the WATCH meeting in June it was not possible to reach agreement on conclusions from the discussion. Hence, an action was placed on the secretariat to try to progress the issue by correspondence with WATCH in the period leading up to the October WATCH meeting.

**Argument**

8. To address the action placed on the WATCH secretariat a paper (Annex 1) and the resultant comments from members (Annex 2) were circulated to members in September / October.

9. Some WATCH members were able to respond to the correspondence exercise, but others were not. One member also set out additional considerations that were first raised earlier in the process. At the October meeting HSE will reflect back to members what seems, from the comments received, to be a possible emerging committee position and test this against plausible exposure scenarios. HSE will also facilitate discussion of the additional considerations that a member has raised. Three ad hoc members will attend the meeting (Prof Peto, Dr Cowie, Mr Howie).

**Link to HSC Strategy**

10. This work relates directly to HSC/E’s statutory responsibilities in relation to asbestos; it also has potential relevance for the asbestos strand of the Cancer Project within HSE’s Disease Reduction Programme.

**Consultation**

11. There has been no external consultation of this paper.

**European Context**

12. The regulatory framework for asbestos is EU-wide and it is possible that the output of this work might have some EU applicability.
Action

13. At the October 2008 meeting WATCH will be asked to derive its position on the issue under consideration.

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Attachments

Annex 1 - A pre-meeting paper:
The risks of mesothelioma and lung cancer in relation to relatively low-level exposures to different forms of asbestos - What statements can reliably be made about risk at different exposure levels?

Annex 2 - Comments from WATCH Members of the above Annex 1 paper