

Committee on the Medical Effects of Air Pollutants (COMEAP)

1. COMEAP continues its work on the following major reports:

- **Quantification of the Effects of Air Pollution on Health**

A COMEAP sub-group has been updating the 2001 report on the quantification of the health effects of long-term exposure to air pollution in the UK since June 2005. Work has focused on the effects on mortality of long-term exposure to air pollution. An interim statement on this issue has been available on its website since January 2006 (www.advisorybodies.doh.gov.uk/comeap/pdfs/interimlongtermeffects2006.pdf). The draft report of the Committee's work on mortality will be published for comments on the DH website in May 2007.

Work on calculating the health impact on mortality and life expectancy resulting from changes in air pollution will be presented as a supplementary paper to this report. Please note that this will not include the evaluation of specific policy interventions.

In December 2006 another COMEAP subgroup began work on quantifying the health effects on morbidity of long-term exposure to air pollution. This work will be published separate to the work on mortality mentioned above. Further updates regarding the progress of this subgroup will be provided.

2. Buncefield fire (11th December 2005)

After considering this issue at its June 2006 meeting, the Committee produced a statement of its views on the DH website (<http://www.advisorybodies.doh.gov.uk/comeap/statementsreports/dec05buncefieldfire.pdf>). The Committee thought it unlikely that there would have been any significant increase in health effects due to air pollution from the fire.

COMEAP considered the recent report from the Meteorological Office on the Buncefield Oil Depot Incident at its meeting on 23 February 2007 (http://www.metoffice.gov.uk/research/hadleycentre/pubs/HCTN/HCTN_69.pdf?bcsi_scan_22F071C7F07ABBC7=DpGPsy5WYdz3bID7HMuVjz8AAADAJFUL&bcsi_scan_filename=HCTN_69.pdf). This report documents the modelling conducted by the Met Office of worst case scenarios, including adverse weather conditions. The Secretariat presented the Committee with calculations of the impact on health due to air pollution resulting from the worst case scenarios presented in the report. The Committee requested that further work be done to develop the calculations and also made suggestions as to how this could be done.

A brief update was given from the Chemical Hazards and Poisons Division, London (Health Protection Agency) on their work on the Buncefield Incident. They are currently undertaking work on the health effects resulting from the fire in collaboration with other government departments and universities. A further update of their work will be made at COMEAP's June 2007 meeting.

3. Prominent publications

COMEAP discussed the following publications, which were widely reported in the press, at its recent meeting (23 February 2007):

- Gauderman *et al*, 2007: Effect of exposure to traffic on lung development from 10 to 18 years of age: a cohort study. *Lancet* 369: 535 - 7.

The results of this study are based on a cohort of children from Southern California from which there have been other publications. This study suggested that living close to motorways in addition to exposure to regional pollution were associated with deficits in lung growth. The Committee thought this a noteworthy result, but indicated that it should not be considered in isolation of the wider body of evidence in this area. Amongst other issues discussed, the Committee flagged up the health effects found with distances from the road and queried how these related to knowledge on the decline of air pollution concentrations with increasing distance from a road.

- Miller *et al*, 2007: Long-term exposure to air pollution and incidence of cardiovascular events in women. *New England Journal of Medicine* 2007; 356: 447-458.

This study was considered by the Committee as it reported a considerably higher increase in risk of death from cardiovascular disease for a 10 $\mu\text{g}/\text{m}^3$ increase in $\text{PM}_{2.5}$ than has been previously suggested by other studies. The Committee found no major fault with this study and focused their discussion on possible explanations for the large difference in the magnitude of risk reported by this study and the key publications in the existing literature. They queried whether this study honed in on what the 'true' risk of death, from cardiovascular disease for increases in $\text{PM}_{2.5}$, was likely to be.

Several actions arose from the meeting to explore some suggested explanations for the large risk suggested by this study. The Committee considered this an important publication and thought it necessary to follow-through on the actions which arose.

4. The Annual Air Pollution Research Meeting will be held at the Institute for Environment and Health at Cranfield, Bedfordshire, 1-2 May 2007.

5. Swimming pools and asthma was discussed at the recent COMEAP meeting on 23 February, 2007.

A statement on this issue was produced by the Committee in 2003 (<http://www.advisorybodies.doh.gov.uk/comeap/statementsreports/swimasthma.htm>). Since then, many publications suggesting an association between chlorine and chlorine-reaction products and asthma in children have been produced and brought to the attention of the Secretariat (and Chairman). The Committee discussed several aspects of these studies and will agree a statement on this issue at its June 2007 meeting. The final statement will be made available thereafter.

Representatives from the Pool Water Treatment Advisor Group and the Department for Education and Skills were present for this discussion.

**Department of Health and Health Protection Agency
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