Occupational asthma

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Another fresh start in the UK

To the uninitiated occupational asthma, accompanied as it usually is by lists of obscure agents and processes, appears a rather exotic disease. In public health terms it shares a surprising number of features with another exotic disease: imported malaria. In temperate countries both are rare but represent subsets of commonly presenting conditions—non-occupational asthma and fever. Their incidence rates in the UK are also about the same and, more significantly, show a marked reluctance to drop. That of occupational asthma has remained broadly constant throughout the past 10 years—allowing for under-reporting, between 1500 and 3000 cases per year. For both diseases, interventions at a number of stages in their natural history are required if serious developments are to be prevented.

There are common problems of education, complacency, and timely recognition. Once the correct diagnosis has been arrived at (and it is the recognition of the possibility rather than the diagnosis itself which causes the crucial delay), the management of both conditions is relatively straightforward and those tragic outcomes—complicated malaria, usually leading to death, and irreversible asthma, whatever the occupational cause—can be averted. The analogy ends here.

THE POSITION PRE-2000

The regulatory position concerning occupational asthma in the UK is clear: the Control of Substances Hazardous to Health (COSHH) Regulations¹ apply, along with a general COSHH Approved Code of Practice (AcoP).² Maximum exposure limits have been set for a number of substances that cause occupational asthma, and the main causes are given in the Health and Safety Executive (HSE) publication *Asthmagen? Critical assessments of the evidence for agents implicated in occupational asthma*.³

There have been previous attempts in Britain by way of improved guidance and regulation, to reduce occupational asthma. In 1992 the Health and Safety Commission (HSC) deferred the introduction of an ACoP to control respiratory sensitizers in order to see

the effect of improved guidance which was published in April 1994⁴ and was followed by two campaigns in that and the following year entitled *Breathe freely*⁵ and *Good health is good business*.⁶ Evaluation of those elements of the campaigns which dealt with asthma showed that it was the converted who were being preached to and the message was probably not reaching the small and medium sized enterprises where anecdotal information suggests an increasing proportion of people with occupational asthma are employed.⁷ It is against this background that the HSC asked HSE to develop a range of options, which could contribute to reducing the toll of occupational asthma for inclusion in a consultative document, alongside a draft ACoP.

A STRATEGY FOR REDUCING OCCUPATIONAL ASTHMA

A consultative document containing a draft strategy and the proposed ACoP was published in November 2000.⁸ The strategy contained possible actions for each of the five key programmes identified in *Securing health together*,⁹ the HSC's long term (10 years) occupational health strategy for Great Britain published in July 2000.

The key programmes in *Securing health together* set out to:

- (1) Improve occupational health law and compliance with it
- (2) Create an environment where all involved can work together to improve occupational health
- (3) Obtain essential knowledge about occupational health
- (4) Ensure that all relevant persons have the necessary competence and skills
- (5) Ensure that the appropriate mechanisms are in place to deliver information, advice, support, and occupational health services.

The reduction of occupational asthma is a political as well as a public health priority for Great Britain and this approach using these headings is being deployed to drive the preventive strategy.

Some examples of the kinds of interventions proposed will suffice to show

how the five programmes are being developed. This will be in collaboration with employers, employees, professionals, and others. Details will emerge in due course.

Programme 1 (compliance)

- Action point: Enforcement activity will focus on the eight substances and related occupations with the highest rate of occupational asthma—these account for about half of all new cases of occupational asthma in the UK. The substances and related occupations are:
 - isocyanates: spray painters, vehicle manufacture, plastics
 - flour and grain: bakers, farmers, etc
 - wood dust
 - glutaraldehyde: health care and radiographers
 - solder/colophony: electronic assemblers
 - laboratory animals: technicians and scientists
 - resins and glues: many processes
 - latex: nurses, dentists, etc.
- Action point: A code of practice on handling substances that cause occupational asthma is to be proceeded with (see below).

Programme 2 (continuous improvement)

- Action point: Better supply chain management will be encouraged.

Programme 3 (knowledge)

- Action point: The surveillance of work related occupational respiratory diseases (SWORD) and other schemes are being extended and will be improved on.
- Action point: In a research project the development of occupational asthma in individual sufferers is to be tracked. Why and how did it develop?

Programme 4 (skills)

- Action point: Activities to promote improved diagnosis of occupational asthma and better awareness among health professionals, workers, and safety representatives are planned. General practice nurses and medical practitioners, both specialists and generalists are to be specifically targeted.

Programme 5 (support)

- Action point: Information about occupational asthma is to be improved through a variety of media.
- Action point: The “asthma helpline” is to be actively supported.

AN APPROVED CODE OF PRACTICE (ACoP)

The consultation document issued in November 2000 proposed a new, more specific, ACoP aimed at the control of substances that cause occupational asthma. This comes under Programme 1. While the COSHH Regulations provide a comprehensive framework for managing substances that cause occupational asthma, there are distinct features associated with the way the hypersensitive state is induced and symptoms triggered which require particular emphasis to be given to some COSHH duties. The main features are:

- Induction of hypersensitivity is unpredictable and only some individuals at risk will develop asthma—typically 5–25%.
- The amount of material needed to induce the hypersensitive state varies considerably between individuals.
- The hypersensitive state is irreversible, and once established, symptoms occur at much lower levels than those which initially provoked it.
- If people are removed from exposure to asthmagens as soon as they start to develop symptoms they are likely to make a complete recovery. If exposure continues, symptoms become increasingly severe and may become irreversible.

The proposed ACoP addressed these peculiar disease/exposure attributes.

CONSULTATION

The consultation exercise attracted 106 responses, the majority from employers (32); only six were from professional bodies. The main issues in the consultative document on which HSE received comment were:

- The definition of occupational asthma: One important point made was that action also needs to be taken on asthma made worse by work, as well as asthma caused by work. This was accepted by HSE and will be included in the Strategy (but not the ACoP).
- The targets for reducing the incidence of occupational asthma: Various reduction targets were suggested—from a 20% reduction down to zero incidence. The HSC has agreed a 30% reduction target (overall targets for the reduction of occupational disease aspired to in *Revitalising health and safety*¹⁰ are 20% by 2010). For an overview of this particular exercise, see leading article and response in *OEM*, November 2001.^{11 12}
- The proposals for taking forward an Approved Code of Practice: The ACoP

will be included as Appendix 3 to the main ACoP under the COSHH Regulations 2002; and guidance will be produced for the top eight causes of occupational asthma in “COSHH Essentials” style.

- The proposals for developing an action plan based on the ideas in the Strategy.

HSC considered the responses to the consultation document and agreed the way forward to tackle occupational asthma,¹³ including the formation of a Project Board to develop the options in the Strategy, and new ideas from the consultation exercise, into an action plan. The aim is that members of the Board will work in partnership with each other and HSE to develop specific projects which will contribute to reducing occupational asthma. The Board has now been established and met in January and May 2002. An action plan was posted on HSE's website in February 2003 (www.hse.gov.uk/asthma).

ACTIVITY

Respondents to the consultation exercise suggested a variety of ideas for reducing asthma at work. For example:

- Developing the use of low cost lung function tests
- Prohibiting certain respiratory sensitisers altogether
- Managing fears over job insecurity and giving guidance on rehabilitation.

These are being considered, and in addition research is being commissioned—generally less on the aetiological and more on the exposure circumstances and behavioural aspects of the condition. As examples:

- Studies of the use and control of isocyanates
- A tracking study of routes of referral for possible cases of occupational asthma
- Studies to investigate the circumstances under which occupational asthma occurs. Do people develop asthma because:
 - management was unaware of the hazard
 - they were unaware of the hazard
 - they didn't know what controls to use
 - they used controls, but they were unsuitable or not functioning correctly.

THE RESULTS

This ambitious programme, still evolving and involving many players at

many levels, will produce positive activity aimed at reducing the incidence in the longer term. HSE expects the number of cases of reported occupational asthma to rise at first as awareness of the problem increases.

Systematic evaluation is expected to reveal where the biggest impact will be made. Will it be in specific industries? On specific asthmagens? Within primary care? Among respiratory physicians? Will increased health surveillance in the high risk sectors prevent onset? Will increased awareness within the workforce (via safety representatives) occur? Will more inspection and better enforcement be the answer? Can the rate of progression towards irreversible asthma in those who nevertheless develop the condition as a result of occupational exposure be cut as a result of better management?

This will be a strategic experiment whose results may be generalisable to the situation in other countries where different agents may be responsible and where there are different labour inspectorates and healthcare systems. Here in Great Britain we simply aspire to the targets but realise that others will be keeping an eye on the results.

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