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ADVISORY COMMITTEE ON TOXIC SUBSTANCES

Advice on priorities that the Health and Safety System should address during 2008-2011

A Paper by Lydia Harrison

Cleared by Steve Coldrick on 2nd May 2007

Issue

1. The Disease Reduction Programme's (DRP's) current targets for reducing occupational disease caused by toxic substances have a deadline of the end of the financial year 2007-08. This paper reports the views of a number of stakeholders who have been asked for their opinions on plans and priorities for the period April 2008 – March 2011.

Timing

2. A decision is required at this meeting, since the paper will be presented for consideration by the HSC shortly, with a report of the Committee's views.

Recommendation

3. The Committee is asked to advise on the relative priorities of the disease areas identified.

Background

4. The DRP's current targets for reducing occupational disease caused by toxic substances have a deadline of the end of the financial year 2007-08. It is important to identify now what needs to be done to reduce disease from April 2008 onwards, whether this is taken forward by a discrete DRP or some other working arrangement, since the form and extent of the resource available within HSE has not been finalised at this stage. One consideration is the extent to which we can be sure that intervention can and will be effective. Although certain groups may now be experiencing occupational disease, some of this may have resulted from industries which no longer exist or exposures which have since been radically reduced. Conversely, intervention by the health and safety system may be warranted where workers continue to be exposed, or where new populations are at risk because of changing work activities.

5. Views on priorities for reducing occupational disease caused by toxic substances have been sought from a range of stakeholders. Their key points are set out in Table 1, with fuller details provided in the summaries at Annexes I-VIII. Replies from a number of Local Authorities are presented individually, since the Local Authorities Co-ordinators of Regulatory Services (LACoRS) and the Chartered Institute for Environment and Health (CIEH) /Welsh CIEH asked their Members to contact HSE directly. The Royal Environmental Health Institute of Scotland (REHIS), the Scottish Trades Union Congress and TUC Cymru (TUCC) have also been contacted. It has not yet been possible to arrange to meet the STUC, REHIS is considering the matter and the TUCC has not yet responded. A meeting with the campaigning group 'Hazards' is scheduled for 4 May and the outcome will be reported to ACTS Members.

6. Members may wish to note that WATCH has recently considered a paper summarising a study in British coalminers, conducted by the Institute of Occupational Medicine (IOM); together with an IOM position paper suggesting that coalmine dust could be used as a benchmark for other "low toxicity" dusts. WATCH asked that ACTS be provided with a clear picture of the dose-response for the effects of exposure to coal mine dust on the respiratory tract; together with its observations and recommendations in relation to the issue of exposure to, and control of, dusts in general. This information is set out at Annex IX, as a contribution to the debate on priority-setting.

Argument

7. A reasonable consensus on some core points appears to be emerging. There is a general acknowledgement that work on dusts/fume/particulates should be taken forward. This would be likely to have the greatest impact on asthma and COPD. Opinions on the importance of COPD vary but there is an ongoing 'Revitalising Health and Safety' target for reduction in the incidence of asthma by 2011 and work to maintain the downward trend will be important. Reducing exposure via inhalation may of course also impact on other diseases, including cancer. This is another area where most agree that work should continue and should include some activity to ensure appropriate behaviour with respect to asbestos-containing materials.

8. There is some support for further work on dermatitis and a few stakeholders have identified solvent exposure and reproductive health as two issues of concern. Cleaners have been highlighted as a particularly vulnerable group and this perhaps could be taken into account when taking forward work in specific disease areas.

9. Two issues have been highlighted for integration into the programme as a whole. Firstly, the TUC Gender and Occupational Safety and Health Working Party is particularly concerned to ensure that gender sensitivity is integrated into the programme (Annex VI refers). This does have some support from other groups. Secondly, there is a general desire that the programme increases efforts and finds novel ways to improve communication with workers and employers, particularly those in small and micro- businesses and/or whose first language may not be English.

10. No previously unknown areas of disease have been identified and in fact, most of the priorities suggested form part of the current Disease Reduction Programme (2005-2007). The high degree of overlap does provide some reassurance that the original

Table 1. Summary of stakeholders' views on priorities for chemically-related occupational disease, 2008-11

Stakeholders	Priority	Comments
TUC ACTS Members	Dust/Fume (COPD+asthma) Cancer Asthma/allergies generally (eg alveolitis); including those caused by biological agents	A need for gender sensitivity to be addressed in all cases. Communication with itinerant/migrant workers is important in certain sectors.
CBI ACTS Members	Dusts/fume/particulates Cancer Solvents	A need to improve communications with small businesses in particular
Independent ACTS Members	Cancer Asthma reinforcement, COPD (if dust/particulates are a factor) Dermatitis (certain sectors); Asbestos - maintenance activity	A need to improve communications with workers and supervisors/employers. Solvents were a lower priority.
Independent epidemiologists	Asbestos Dermatitis Asthma	Need to work to change culture to manage expectations – raising awareness increases expectations and reporting. Further research on gender and also ageing needed
Dr Ray Agius of The Health and Occupational Reporting Network (THOR)	Asthma Dermatitis COPD maintenance activity for asbestos	Current awareness of asbestos and a number of carcinogens and how to manage them is reassuring.
TUC Gender and Occupational Safety and Health Working Party	Gender mainstreaming/gender-sensitivity across the whole programme, with the further development of good practice in the treatment of gender in occupational health research and practice, risk assessment and OSH management Reproductive health (male/female, all ages/stages of development, not just pregnancy-related) Hazardous exposures in cleaning (broadly defined)	A number of papers have been provided and HSE has made these available to HSL and the Fit3 Science Co-ordinator.

Stakeholders	Priority	Comments
CIEH and LACoRS Members	A range of views: Skin disease (florists, spray tanning) Respiratory disease (MVR, nail/hair salons, fibreglass and mineral fibres, silica) Recycling (hand sorting) Skin cancer (UV tanning and outdoor work) Asbestos Internet purchase of chemicals Ozone from photocopiers Legionnaires' disease Testicular cancer from mineral oil (hand washing)	One LA comments that if it is to be aware of occupational disease locally, there needs to be a system for local feedback, agreed by NHS/HPA/ LAs/HSE. Another (not in annex) suggests that not replacing the lids of solvent containers is a significant issue.
British Occupational Hygiene Society	Cancer Respiratory disease Skin disease	COSHH - much simpler and stepwise examples needed. The construction industry is consistently a major concern. It is important to improve communication with itinerant/migrant workers. Should microbiological disease be included?
Hazards	Meeting 4 May	

areas selected were indeed appropriate. There may be advantages in retaining a degree of commonality, in that this would provide continuity for all stakeholders and allow time to learn from the evidence and intelligence collected and the evaluation of earlier activities. Such an approach could increase the likelihood of embedding sustained behavioural change in the workplace.

11. Members are asked to consider the stakeholders' views presented and advise on the relative priorities which should be given to the occupational diseases identified. HSC/E will then consider this paper and ACTS' views and agree a final 'priority order'.

12. Once this priority order has been agreed, the DRP team will then hold further discussions with those stakeholders likely to be closely involved in the delivery of interventions, to agree the number of diseases on which work can be taken forward. It is hoped that a consensus can be reached on disease reduction partnership work in 2008 and beyond but it may not be possible to progress work on all of the priority areas. This will depend on several factors:

- The capability, capacity and commitment of the health and safety system; that is, what the system realistically can deliver
- The impact of REACH
- The need to maximise impact
- The fact that there will always be limitations in the information available, such that a degree of 'best judgement' may be necessary.

13. The DRP team will report to ACTS on the outcomes of HSC/E decision and the content of the programme in the context of what the health and safety system has committed to deliver.

Link to HSC Strategy

14. This is an important issue in relation to the future direction of the DRP and for HSC/E's strategy to reduce occupational disease generally.

Communication Plan

15. Once a priority order has been established, there will be further discussions with stakeholders to agree the number of areas in which work can be taken forward.

Evaluation Plan

16. Not applicable at this stage

Consultation

Views have been sought from a range of stakeholders as discussed above (para. 5); primarily those who can provide intelligence and best contribute to the priority-setting process.

Costs and Benefits

17. Not applicable at this stage

Financial/Resource Implications for HSE

18. Any future programme of work is subject to resources being available.

Environmental implications

19. None

European implications

20. There is no direct relationship with ongoing European activity.

Other implications

21. None identified

Action

22. ACTS is invited to consider this paper and advise on the relative priorities of the disease areas identified.

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Annex I: Outcome of meeting with TUC ACTS Members

Overall priorities were considered to be:

Dust/fume (COPD and asthma);
Cancer
Asthma/allergies generally, including those caused by biological agents;

with a need for gender sensitivity to be addressed in all cases.

i) Dust/fume

Exposure to dust and fume is a concern. A general initiative to control inhalation exposure could reduce cancer (where applicable) as well as asthma and COPD. However, there is a need for practicality in controls and work with specific example sectors/substances – eg silica and asbestos, may be important.

ii) Cancer

Current cancer statistics were felt to reflect the male industries and did not include areas where women formed a high proportion of the workforce, or consider 'female' cancers. There are no data on the past exposure of women to carcinogens at work and over 2008-11 it would be desirable to collect data on exposure in relevant sectors, to inform subsequent work. There are other gender-specific issues such as prostate cancer in the rubber industry. It is considered important not to lose sight of novel industries where new concerns might arise, eg the use of anticancer drugs by NHS workers (many women).

iii) Asthma

There was caution about the figures suggesting a reduction in the incidence of asthma – pre-employment screens to exclude atopics and workers disguising skin problems are known to occur. Also there is believed to be a high degree of under-reporting. The group is also concerned about biological agents - the occupational asthma/alveolitis caused by the growth of mould in a metalworking fluid was cited - the incidence rate had been 4000/100,000 for employees, compared with 93/100,000 for paint sprayers

iv) Gender

There is a concern that any interventions and/or research should be gender–sensitive. There may be gender differences in relation to ways of working and consequent risk; and in the most appropriate form of communication to achieve behaviour change. This is a challenge that all programmes need to try to address.

v) Other issues

Many agricultural workers are expected to provide their own PPE and language barriers (migrant workers are increasing in many sectors) often make communication difficult. Itinerant workers cannot be followed up.

COSHH Essentials sheets were considered very useful as much more targeted to specific sectors. The requirement for Good Control Practice was also welcomed.

There is a wish to ensure that any emerging issues identified by ACTS after 2008 are considered for incorporation into any 2008-11 DRP if appropriate.

Annex II: Outcome of meeting with CBI ACTS Members

Overall priorities were considered to be:

Dusts/fume/particulates;
Cancer
Solvents,

with a need to improve communications with small businesses in particular.

i) Dust/fume/particulates

Dust and fume is important - 'particulates' is a better word than dusts to convey seriousness. Industrial processes are always changing and there is a need to think carefully about where there is exposure to particulates eg stone cutting, high-pressure jet cleaning/spraying and other processes such as sanding. However the risk depends on particle size and the dustiest trades need to be identified – the building trades are of concern. Welding fume also remains an issue – widespread use, young people, a wide range of controls and little monitoring.

ii) Cancer

Work should continue but should not be based solely on the classification and labelling R phrase system. Asbestos and other cancers (excluding that related to smoking) should be taken forward. The TU side has particular concerns for women and breast cancer and it is very important to get the gender balance right. It's also important that work on reproductive effects should not just focus on women.

iii) Solvents

Peripheral neuropathy caused by solvents has been observed in professional decorators and in the printing industry. However, there is a need to consider whether it will remain an issue. There is an ongoing pressure to reduce solvent use, owing to environmental legislation. Information on usage intentions would help to identify sectors involved and the extent of remaining use.

iv) Communications

Communication with small and micro firms needs to improve. In general, large companies have a greater understanding of controlling chemicals and so effort should concentrate on establishing good practice in small companies. Ideally DRP should work in schools to embed messages before people reach the workplace.

v) Other issues

In the first 1-2 years of REACH, companies are likely to reduce substances used and substitute Cat I carcinogens/mutagens/reprotoxins. Already, suppliers are taking substances off the market and it would be useful to be aware of these before the carcinogens workshop in June '07.

People don't understand how to comply with COSHH and this is a big challenge. Sectors need targeted advice - eCOSHH Essentials are useful but there is a need for follow up to establish what worked and why.

It would be helpful to integrate work with that of other government departments and the EU. Inclusion of reprotoxins into the Carcinogens Directive is being debated in 2007 and there

may be other relevant activity.

‘Indicators of performance’ within industry are very important. RIDDOR does not meet the needs of DRP and confidence in SWORD is not very high. When ACTS approves a guidance sheet, for example, on dry-cleaning, it would be helpful to hear whether it has been successful.

Compliance with limits does not automatically indicate a reduction in disease.

Annex III: Outcome of meeting with independent ACTS Members

Views on priorities diverged but overall were considered to be:

Cancer (specific substances/sectors);
Asthma reinforcement, particularly for isocyanates;
COPD (if dust/particulates are a factor and we can identify where people are exposed)
Dermatitis (maintenance except for metal working fluids and NHS use of alcohol based gels);

with a need to improve communications with workers and supervisors/employers. Solvents were a lower priority and maintenance activity on Asbestos was recommended.

i) Cancer

There were some reservations about the ability of the ongoing research to deliver reliable results. However the group acknowledged the need to take work on chemical carcinogens forward. Asbestos would also need further activity to ensure that any improvements did not tail off.

ii) Asthma

There was general concern that improvements would be lost if all activity ceased, particularly in sectors with a high staff turnover. Asthma would need some work to maintain good practice. The group was not convinced that the isocyanate work had made much impact on asthma levels.

iii) Dust/fume

There was not complete agreement over COPD and how much could be attributed to 'chemicals' in the absence of smoking. Recent work in the USA suggested that there was an issue (unclear whether the dust levels measured compared with current UK levels). This COPD was probably from dust and fume and would be relevant to a number of sectors eg mining, quarrying, construction, work with grain/flour and farming. A general initiative to keep dust and fume down, with perhaps one or two specifically-targeted sectors, would be supported. Raising awareness of dust and fume that cannot be seen and changing behaviour was considered very important.

iv) Dermatitis

Dermatitis in the NHS was considered likely to increase, owing to the use of alcohol sprays and gels. NHS is one of the biggest employers so this could affect large numbers of people.

v) Solvents

The neurological effects of solvents (an example was increased mortality and dementia in printers) was considered a lower priority.

vi) Other issues

The group felt it would be useful to see a table of ill health incidence according to agent and occupation – they felt HSE statisticians should have this sort of information.

Work areas with a high staff turnover, itinerant workers and those with a poor command of English were identified as challenges for communication. Product stewardship initiatives were considered worth exploring – and the possibility of developing an 'atmospheric alarm'.

Annex IV: Outcome of meeting with independent epidemiologists, Prof. David Coggon and Dr Keith Palmer, MRC Epidemiology Unit, Southampton

Overall priorities were considered to be:

Asbestos
Dermatitis
Asthma

with a need for research into the effects of i) gender and ii) an ageing workforce.

i) Asbestos and other cancers.

Asbestos is a major cause of substance-related occupational ill-health and should remain a focus for preventive efforts, with careful monitoring of trends in relevant diseases (especially mesothelioma). The burden of disease attributable to other established occupational carcinogens is smaller, although some still cause a substantial elevation of risk in a small number of highly exposed individuals (eg nasal cancer in cabinet makers). More difficult to assess are the hazards to which large numbers of workers are exposed with small but uncertain individual risks. This would apply, for example, to polycyclic aromatic hydrocarbons in diesel fume. Even small individual risks can add up to a substantial population burden of disease if large numbers of people are exposed. Management of these risks must take account of the uncertainty, but in a proportionate manner. Society often perceives cancer as more 'important' than other diseases and so this may need to be taken into account when setting priorities.

ii) Dermatitis

This continues to be a concern and it should remain a priority

iii) Asthma and COPD

Asthma remains a concern, with substantial numbers of new cases each year. In some cases it is reversible following cessation of exposure, whereas COPD is not. COPD is a well-established hazard in coal miners, but the risk from other dusts is less certain. Where the risk to any one individual is small, management is more likely to be effective if exposure is controlled at source rather than by the 'choice' of the individual (to wear PPE etc).

iv) Other issues

Research is needed to establish an evidence base for gender–related occupational ill health – this goes beyond chemical exposure to include areas such as shift work and physical activity.

The consequences of an ageing workforce need consideration and research.

There is a need to monitor emerging areas such as nanotechnology.

Some of the illnesses that are attributed to chemical exposures in the workplace (eg from sheep dip) may occur through psychological rather than toxic mechanisms. This has implications for control, since reductions in exposure may not produce the benefits that would be predicted from observational epidemiology. The same applies to some illnesses attributed to physical factors such as non-specific low back pain and non-specific arm pain, for which there is strong evidence of important psychosocial influences. COSHH has had a beneficial impact in raising general awareness of risk. However, there is a need to manage expectations carefully. Over-emphasising dangers of work may in some circumstances reinforce expectations of illness, leading to symptoms and disability that would not otherwise have occurred. In these circumstances, interventions must

be carefully assessed.

Occupational disorders related to non-chemical exposures that should be considered a priority include noise-induced deafness and osteoarthritis from physical stresses such as heavy lifting /prolonged kneeling.

Annex V: Outcome of meeting with Dr Ray Agius of The Health and Occupational Reporting Network (THOR (including SWORD/EPIDERM/OPRA))

Overall priorities were considered to be:

Asthma
Dermatitis
COPD

and maintenance activity for asbestos

i) Asthma and Dermatitis

There is a risk of complacency with respect to asthma and dermatitis generally, there being a perception that it is primarily a problem at the level of manufacturing. However the evidence is that there are significant risks to workers in a range of occupations (eg cleaning, healthcare, hairdressing). Society requires powerful cleaning/disinfecting agents and agents such as terpenes, quaternary ammonium compounds and glutaraldehyde and related compounds are known to be irritants and/or sensitisers. New agents are continually entering the market, as are other high-performance products (eg superglue, resins and paints); and these often contain substances which are difficult to degrade, a factor which increases the likelihood that they will cause harm.

ii) COPD

There should be some concern about COPD. Further research is needed but current data suggest that exposure to chemicals/substances at work might be the cause of up to 15-20 % of all COPD cases. This seems to have been masked until recently by the level of cigarette smoking. Some might consider exposure to silica as largely historical but in fact workers are now being exposed in less obvious ways (eg cutting some kitchen worktops can result in exposure to silica and resin).

iii) Chemical carcinogens

There should not be a very high level of concern here. There is good understanding of a range of carcinogens and while some less well-known (and perhaps unidentified) carcinogens may also be in use, the control of exposure to ‘as low as reasonably practicable’ (ALARP) and a general awareness of the need for caution with new substances is reassuring.

iv) Asbestos

The cause of disease is well-known. Exposures as high as those which occurred historically are unlikely to recur. Some ‘maintenance’ activity in the area is probably necessary to ensure continued compliance. There is also a need to maintain a watching brief on the asbestos substitutes which have been introduced.

Annex VI: Outcome of meeting with the TUC Gender and Occupational Safety and Health (G&OSH) Working Party

Overall priorities were considered to be:

Gender mainstreaming and gender-sensitivity across the whole programme, with the further development of good practice in the treatment of gender in occupational health research and practice, risk assessment and OSH management
Reproductive health (male/female, all ages and stages of development, and not just pregnancy-related…)
Hazardous exposures in cleaning (broadly defined)

i). Gender mainstreaming and gender-sensitivity

Mainstreaming gender and gender-sensitivity in disease reduction, including gender-sensitive occupational health research and risk assessment, taking account of women's role outside work (the 'double burden') is recommended by the European Agency, European Parliament / Commission and the WHO. There is a need to recognise the impact of gender and the gender division of labour at work and at home on occupational health, but also to recognise that this approach requires bias-free approaches, avoidance of gender stereotypes, differentiation and appropriate tools and methodologies. Acting on the recommendations on good practice in recent literature could help to target prevention more effectively and address past neglect of gender issues in occupational health.

There is a clear legal base for gender-sensitivity and gender mainstreaming in occupational health, not only in terms of equality legislation but also in terms of the General Principles of Prevention set out in the Management of Health and Safety at Work Regulations 1999.

We would like to see gender impact assessments made for all the strategies and activities of the DRP team and its investigators as part of the decision-making process on priorities, focus and resource allocation.

We would also like the HSE to ensure that gender and gender-sensitivity is mainstreamed in every area of the programme, in research methods, tools and techniques and in the determination of DRP priorities and budgets. For example:

- investigation of hazardous exposures in male-dominated occupations (e.g. asbestos in construction and maintenance, shipbuilding and boiler-making etc.) should not exclude women (e.g. as cleaners or family members exposed to contaminated clothing or materials)
- ensuring gender-sensitivity is not just a question of 'balancing' one priority concerning male-dominated occupations against another concerning female-dominated occupations
- impact assessments need to look at priorities in resource allocation, to see whether there is disproportionate resource allocation on disease reduction in male-dominated industries / occupations
- gender bias should be avoided in assumptions about work and work exposures in female-dominated occupations (e.g. 'light' and 'heavy' work, or 'high' and 'low' risk occupations, or assumptions about part-timers being less exposed and therefore less at risk or only having one job)
- lack of evidence may be a reason for higher prioritisation as it may reflect past neglect or underestimates of exposures and risks (e.g. neglect of both male and female reproductive health issues – most research focuses on the foetus; failure to investigate work histories of postmenopausal women with osteoporosis; failure to routinely collect sex-disaggregated data, etc.)

- differences in responses between men and women may be due to both sex and gender, to differences in the nature and type of exposures due to differences in how, when, where and for how long women and men work, even in the same job, their patterns of employment and cumulative exposures over a lifetime and any interaction with their roles, hazardous exposures and activities outside work
- gender impact assessments also need to take account of gender differences in patterns of employment, employment relationships and employment status (e.g. differences between women's and men's shift patterns, temporary, agency and precarious or casual work, work in the informal economy, home working, etc.) as well as vertical and horizontal job segregation

The gender mainstreaming agenda could be taken forward in HSE's second disease reduction programme by addressing the issues raised in "The Fairest" paper by Messing et al, the European Agency's 'Gender report' and its Factsheet on gender-sensitive risk assessment, and the recently-published WHO paper on gender and occupational health.[1]

ii) Hazardous exposures affecting reproductive health

There is general agreement that reproductive health has long-term implications for present and future generations, and very significant public health outcomes. However it remains under-researched in relation to work, and there is evidence of poor levels of competence and compliance by duty holders regarding risk assessment, risk prevention and control. There has also been little enforcement activity in this area.

We refer here to all areas of reproductive health (male and female, all stages of development and all age groups) and associated occupational risks. However this is not to confine gender issues in occupational health to biological differences or to reproductive health.

We also refer to a wide range of hazardous exposures and risk factors, making this an issue that affects not only the individual strands of the DRP but also other strands of 'FIT3'.

Key concerns relevant to the DRP are hazardous exposures and their possible interaction with working time arrangements (night work, twilight shifts, rotating shifts, long working hours, early starts etc.) working temperatures, work environments, working postures, workplace welfare facilities (or their absence), management systems and systems of work.

iii) Hazardous exposures in cleaning

This area is under-researched. It is characterised by contractors and subcontractors, casual work, 'unseen' work taking place outside 'normal' working hours, hidden hazards, informal employment relationships, female and migrant labour; and is affected by gender stereotyping that sees it as an extension of domestic work and not therefore risky. But cleaners are exposed to many hazardous substances and their work is relatively poorly observed, documented or researched.

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[1] See also:

- Moerman etc al. *Gender equality in the work of local research ethics committees in Europe: a study of practice in five countries* J Med Ethics 2007; 33: 107-12, online at http://press.psprings.co.uk/jme/february/107_me15206.pdf
- Spitzer et al. *Gender and Sex-Based Analysis in Health Research: A Guide for CIHR Peer Review Committees.* Canadian Institutes of Health Research (CIHR, 2006) online at http://www.cihr-irsc.gc.ca:80/e/32019.html (with a very useful reference list at the end)
- Doyal, L. *Sex, Gender and the 10/90 Gap in Health Research.* (Geneva: Global Forum on Health, 2002)
- Messing, K. *One-Eyed Science: Occupational Health and Women Workers.* (Philadelphia: Temple University Press, 1998)

Annex VII: The views of Local Authorities, obtained via CIEH and LACoRS

Weymouth

Our priority would be to secure the medical data of occupational ill health because we suspect we are not being made aware of the vast majority of cases.

The LA sector doesn't come across much in the way of occupational health disease issues because they do not deal with manufacturing, construction, quarrying, agriculture etc. In the service industries substance-derived problems are rare, at least as far as we know and therein lies the problem. It is suggested therefore, that work should be done in the programme to build a communications mechanism between the enforcers ie LAs and HSE and the NHS/HPA so that occupational ill health notifications are received from the GPs, and we need this information at a local level. It should be possible for the PCTs to have a system whereby Health Centres report cases (probably via the local HPA Health Protection Units who are currently tasked to deal with infectious diseases) who have presented to a GP with an apparently occupationally derived illness. If we could get this information we could make a real impact. We can't be sure that the reporting requirement under RIDDOR by employers is going to be adhered to but also workers may struggle on with a condition and not make their employers aware of it – dermatitis of the hands is a good example. Illness is not like having an accident as it is not obvious because it is not dramatic. It is, of course, notoriously difficult to get GPs to make reports even they are paid in some cases to do so eg for food poisoning , but that doesn't mean that we shouldn't try to get this information from where it is most pertinent and helpful – at its source. It could also be part of the programme and indeed would probably be essential to seek the training of GPs on what constitutes occupational health.

Another area where we think the programme could look is at the rising incidence of skin cancer with outside worker as climate change seems to be increasing the number of days when workers are likely to be at risk.

Another possibility for the programme is to look at the implications of the availability of buying chemicals from abroad over the internet by businesses, these chemicals not meeting EU safety requirements. An example of this has occurred in various localities over the last two years with henna tattoos being offered to members of the public by peripatetic street operators who are not using henna but a chemical substitute which can cause severe skin problems.

Finally, our thoughts went to the whole issue of employees working in the recycling industry who are engaged in physically sorting by hand containers and waste with implications for adverse chemical and biological impact to their health.

As regards evidence, the concern is that we don't have the statistics because the health profession is not working with us to give us the evidence. In all topic areas our normal range of interventions would be used to achieve improvements but again the outcome can't be effectively measured unless the medical data can be obtained except for businesses where a problem is identified, in which case evaluation becomes straightforward as we would monitor progress after intervention to see if the problem persists or not.

Chesterfield

Dermatitis (- skin problems in nail bars, skin problems amongst health care workers)

Asthma (- asthma in nail/hair salons)

Motor trade issues (- Exposure of employees in the motor trade to exhaust fumes, lung function testing (baseline assessments) etc. Dr Ruth Fletcher of HSL has been researching into diseases affecting motor trade). HSE are also looking into exposure to cellulose type paints and I understand from contacts in the motor trade that organisations such as Partco & Autosupplies may continue to supply remaining stocks of cellulose paints to customers if requested. This may affect people under our enforcements as they may use for smaller repair work.

Hearing loss (- hearing loss to employees/DJs from music in pubs/nightclubs)

WRULDs (- Work-related upper limb disorders from DSE work in office staff)

Sheffield

1) Continuation of duty to manage asbestos and focus on reduction of asbestos related diseases.
2) Reduction of risks from UV particularly UV tanning. Also research risks re spray tanning.
3) Preventitive action re use of solvents in nail bars. (Primarily inhalation)
4) Reduction of dermatitis due to florist activities.

The health and safety system should include research by competent organisations and use of topic inspection by enforcement authorities which have been adequately trialled by an enforcement authority before general use.

One suggested measure of impact re UV tanning is numbers of premises where sunbeds/tanning booths are removed.

Tower Hamlets

Fibreglass and mineral fibres
Testicular cancer in the motor trade – not washing hands contaminated with oil/grease before going to the toilet
Ozone exposure from photocopiers
Legionnaires' disease

Glamorgan

I would be most grateful if you could consider basic hand washing. It offers obvious protection against hand to mouth infections including coughs and colds etc. It is being increasingly mentioned in Public Health Pandemic Flu literature and it fits in very well with our food hygiene inspections. Much of the workforce, particularly in some sectors, seem to give it little regard.

Blaby

Skin disease – looking at specific industry and business sectors which are affected by **contact dermatitis** e.g. catering and food processing, chemicals, cleaning, construction, hairdressing/beauty care, health care, pet shops??
Respiratory – relating specifically at wood / brick / ceramics dust in builders' merchants

- An estimated average of 3200 new cases of work-related skin disease were diagnosed each year between 2003 and 2005 by specialist physicians (THOR): approximately 75% of these were contact dermatitis.
- During 2003-2005, the most common agents cited by dermatologists and occupational physicians as causes of skin disease were 'soaps and cleaners' followed by 'rubber chemicals and materials' and 'wet work'

- We have had a serious problem with brick dust in a builders' merchant in the district which had high levels well over the legal limits for respiratory silica and general respiratory dust problems – (I know that you have plans to undertake work this year with Builders' Merchants and brick cutting and that this is not a common problem in LAs – but could advice from this work possibly be disseminated down if there was felt to be a need)

The three top priorities would be

- Looking at contact dermatitis in the care sector
- Looking at contact dermatitis in catering
- Looking at contact dermatitis in hairdressing

Annex VIII: Outcome of meeting with the President, immediate past president and previous past president of the British Occupational Hygiene Society (BOHS)

The BOHS hopes to canvass its members further but, at this stage, overall priorities are considered to be:

Cancer
Respiratory Disease
Skin disease

With musculoskeletal disorders remaining a 'non-chemical' concern.

i) Cancer

The occupational cancer burden appears to be slightly higher than in the 1980s, although much of this is due to asbestos. Current work on carcinogens is identifying the main contributors to cancer in the workplace (other than asbestos) and reducing the risks to a negligible level should be achievable within the medium term. Diesel fume exposure at work (eg car ferry workers, car park attendants) is unchanged (see comment on occupational exposure limits for flour, below). Asbestos continues to be a concern and will also need further activity.

ii) Respiratory Disease

The exposure of workers to flour dust shows no sign of falling. The experience of BOHS is that occupational exposure limits in general (not just for flour) are viewed as 'numbers that are safe' – industry ignores or does not understand the message to reduce exposure so far as is reasonably practicable (SFAIRP) but instead views occupational exposure limits as acceptable standards. A social contract for exposure to silica in the workplace has been agreed between the TUC and employers but the construction industry has been excluded and this is of concern.

The recent BOHS conference has acknowledged the importance of addressing work-related COPD and the banning of smoking in the workplace may well result in chemical exposure being highlighted specifically as a cause.

iii) Skin Disease

This remains a general concern and activity should continue.

iv) Other issues

COSHH - Industry seems to understand the risk assessment process for safety issues but not for chemicals. COSHH Essentials are useful to someone who has been trained and can use the general principles of the exemplars presented to interpret and tailor advice for the individual workplace. However, much simpler and stepwise examples would be needed for a wider readership.

The construction industry is consistently a major concern for disease and ill health generally, including workplace cancer.

The increasing number of workers whose first language is not English and who may sometimes accept a higher degree of risk is a challenge for communication activities. Further work is needed to determine how to change the behaviour of small firms.

The remit of DRP to address microbiological disease, eg food hygiene, pandemic 'flu in the NHS, legionnaires' disease, hygiene related to work with refuse etc. should be clarified.

The Scottish Executive's 'Healthy Working Lives' Initiative provides free initial advice to workplaces but uptake has not been heavy.

Research into nanotechnology needs to continue and the evidence base developed.

More will be achieved by integrating work with that of other groups and government departments.

Annex IX: The potential long-term respiratory effects and current regulatory position surrounding the inhalation of "low toxicity/low solubility" dusts in general

A view from WATCH

1. At the November 2006 meeting of WATCH, within a session focussing on "new and emerging issues", WATCH considered that a number of issues pertaining to what have historically been termed "nuisance dusts" needed to be examined. These issues were progressed as an agenda item at the February 2007 meeting of WATCH. For this agenda item, HSE provided a paper summarising a study in British coalminers conducted by the Institute of Occupational Medicine (IOM). This study was selected because it represents the most comprehensive and large-scale study available on the respiratory effects of dust. An IOM position paper was also presented to WATCH that compared coalmine dust to a small number of other dusts; the authors of this paper considered that coalmine dust could be used as a benchmark for other "low toxicity" dusts.

2. The draft conclusions of WATCH from the February 2007 meeting are:

i. with some qualifiers (presentationally, a little more could be done to clarify the health effects of exposure to the dusts studied; and only a limited number of dusts had been included in the IOM research), the IOM research, particularly that related to the effects of coalmine dust, represented a thorough, robust analysis and WATCH agreed with the IOM/HSE assessment of the findings;

ii. it recommended characterising the best dose-response position that can be extracted from the data on the effects on the respiratory tract of exposure to coalmine dust ; and then to make the most defensible statements justified by the data for the other dusts included in the IOM analysis;

iii. the dose-response data indicated that the effect on the respiratory tract of exposure to coalmine dust, within the exposure range studied, occurred as a continuum, with no clear threshold appearing;

iv. the term 'nuisance dust' was not being used in HSE documentation; WATCH recommended that any generic term used in the future should be a fall-back term that clarifies its exclusion of specified entities (e.g. 'dust not otherwise characterised', which would exclude, for example, 'chalk dust');

v. it recommended consideration of some work to better guide duty holders as to what category of dust they might be dealing with and hence, if specific guidance or control standards for that dust were not available, which benchmark or reference would need to be adhered to;

vi. it recommended reconsideration of the wording of some of the statements in the COSHH ACOP and in EH40 in the context of the discussion that had taken place;

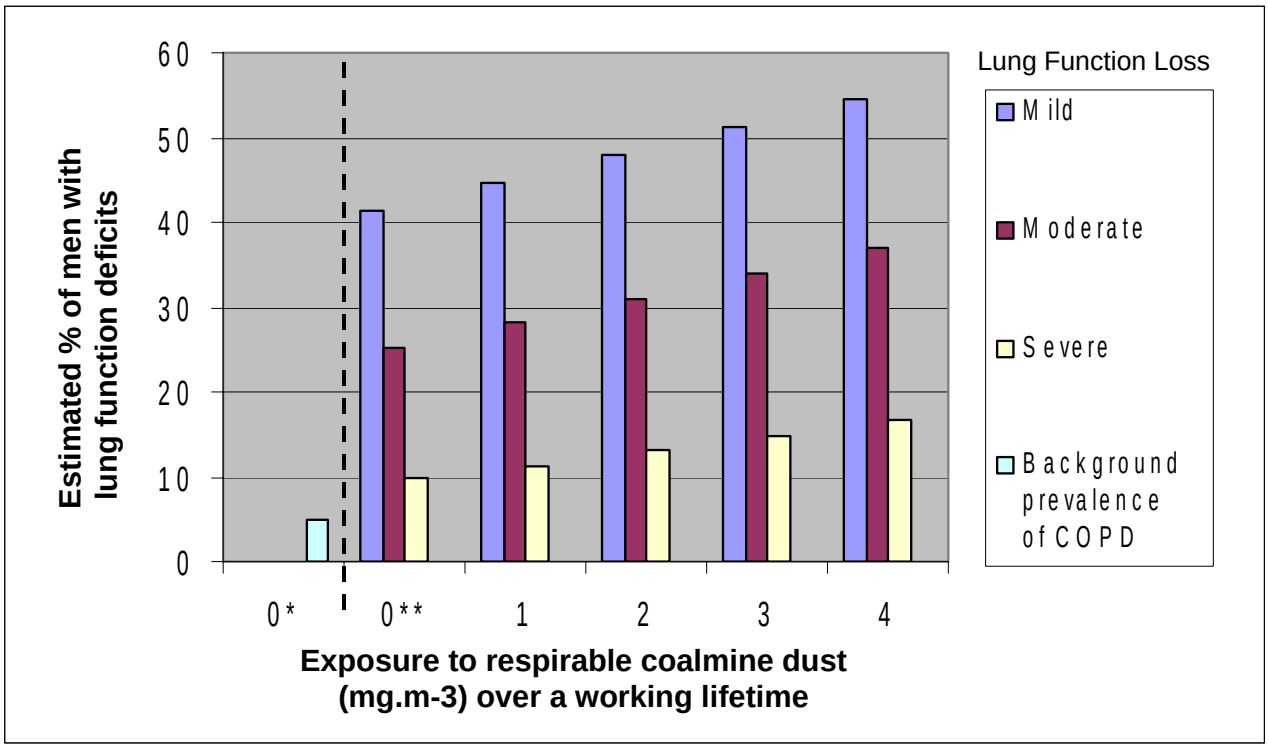
vii. that the next ACTS meeting (in May 2007), at which there will be consideration of priorities for future years of the Disease Reduction Programme, would be a suitable destination for the distillation of the dose-response curve for coalmine dust and for any associated observations and recommendations from WATCH, in relation to the issue of exposure to, and control of, dusts in general.

3. In the context of ACTS considering potential priorities for future work under the Disease Reduction Programme, this Annex presents an HSE/WATCH attempt to provide a clear picture of the dose-response relationship for the effects on lung function of inhaled respirable coalmine dust – see WATCH conclusions (i), (ii), (iii) and (vii) above.

4. This dose-response relationship is shown as a bar chart (Figure 1). The data to the right of the vertical dotted line in the bar chart refer to results in non-smoking coalminers aged 60. The bar

chart indicates three categories of lung function impairment that could result from a working lifetime of exposure to coalmine dust at respirable dust concentrations of 0 to 4 $mg.m^{-3}$. These three categories of lung function impairments are degrees of defined losses in FEV_1 (the amount of air that can be breathed out in 1 second); "mild" (a loss of 367 ml); "moderate" (627 ml); and "severe" (993 ml). These losses are over-and-above the normal age-related losses. To put these findings in context, the FEV_1 in adults normally decreases by 25-30 ml per year i.e. up to 1200 ml over 40 years. The "severe" category would be almost certainly consistent with a diagnosis of Chronic Obstructive Pulmonary Disease (COPD)[2], and those with this category of loss had a 3-fold increase in the frequency of reporting breathlessness. The "moderate" category is also likely to be consistent with a diagnosis of COPD.

Figure 1. Effect of coalmine dust on lung function in non-smoking males



- * General population (non-smoking males aged 60)
- ** Surface coalminers (used as control in IOM study)

Data adapted from Cowie *et al* 2006 (Table 4) plus HSE review of background level of COPD

5. The bar chart shows that with increasing levels of coalmine dust exposure, there is a gradual increase in the percentage of workers with each of the three defined deficits in lung function, and no clear threshold is observable for the coalmine dust-related effect. The bar chart also indicates that even in the study reference group of workers in the same industry said to be "non-dust exposed", 10% showed severe deficits in lung function consistent with COPD. These "unexposed" workers in the IOM study were surface workers at coalmines; it could be that these workers would have had some exposure to dust. In 2004 HSE undertook a review of the literature to identify the background prevalence of COPD in non-smoking, non-dust exposed males aged 60. It was difficult to specify a precise background prevalence of COPD in the population because of the different criteria used to diagnose COPD; however the 2004 HSE review concluded that an average

[2] COPD is diagnosed on the basis of a reduction in $FEV_1 \geq 20\%$ of predicted, together with a reduction in the ratio of FEV_1/FVC to ≤ 0.7. For a man aged 60, height 170 cm, a normal FEV_1 would be 3.05 L and a 20% loss would be 610 ml.

background prevalence of COPD in never-smoking, non-dust exposed males aged 60 is likely to be about 5%. This 5% average has been included as a point of reference on the bar chart (Figure 1), to the left of the vertical dotted line.

6. WATCH wishes to bring to the attention of ACTS the dose-response data for coalmine dust shown in Figure 1. As yet, no further work has been done in relation to how representative these data might be for a more generic group of dusts.

WATCH Secretariat
April 2007