



# THE SCOTTISH OFFICE

Department of Health

NHS  
MEL(1999)26

NHS Management Executive  
St. Andrew's House  
Edinburgh EH1 3DG

18th March 1999

Dear Colleague

## HEALTH AND SAFETY

### Summary

1. This letter reminds General Managers and Chief Executives in the NHS in Scotland of their statutory duty for health and safety. In this respect NHS in Scotland employers have a duty to ensure that staff do not work in conditions which are harmful to health. A key element of health and safety is the need for employers to undertake appropriate risk management and assessment of tasks and activities to ensure staff are protected from unnecessary risk.

### Background

2. Senior management will be aware of the out of court settlement by Greater Glasgow Health Board with the Manufacturing Science and Finance Union (MSF) concerning longstanding claims made by some X-Ray department workers. While conditions in X-Ray department processing have undoubtedly improved since the 1980s when these claims were first made, Ministers are concerned to ensure that all reasonable precautions are taken to ensure the safety of staff working in X-Ray department processing and indeed the NHS in Scotland.

### Action

3. General Managers and Chief Executives should:

3.1 review jointly with the trade unions and professional organisations their health and safety risk management and risk assessment policy to ensure they have appropriate policies in place to ensure staff are not unnecessarily placed at risk in the workplace;



#### Addressees

##### For action:

General Managers, Health Boards

General Manager, Common Services Agency

General Manager, State Hospital

General Manager, Health Education Board for Scotland

Executive Director, Scottish Council for Postgraduate Medical and Dental Education

Chief Executives, NHS Trusts

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3.2 as a priority, to undertake a risk assessment of their X-Ray department processing areas and eliminate any unnecessary risk to staff health (Annex A to this MEL will be helpful in that respect);

3.3 in advance of the proposed Health and Safety Commission Maximum Exposure Limit on glutaraldehyde, which is expected to be issued this year, work towards meeting the revised limit of 0.05ppm (Annex B provides background information on glutaraldehyde);

3.4 move systematically towards the use of alternatives to glutaraldehyde within a set period of time;

3.5 take account of Scottish Hospital Planning Note (SHPN) 6, issued under cover of NHS MEL(1995)10, in the planning and design of radiology departments for a service where the normal range of radiological and related procedures are to be employed in general hospitals.

4. Health Boards are asked to copy this letter to general and dental practitioners to whom this letter is commended.

5. Health Boards and NHS Trusts are asked to copy this letter to their Directors of Occupational Health and to Health and Safety Advisors.

6. The MSF have a large amount of information on the use of glutaraldehyde in X-Ray departments which they are prepared to share with NHS in Scotland employers. Interested employers should contact Michael Fuller direct at MSF, 1 Woodlands Terrace, Glasgow G3 6DD.

Yours sincerely

A handwritten signature in black ink, appearing to read 'G MARR', written in a cursive style.

G MARR

**PREVENTION OF HEALTH PROBLEMS IN STAFF ASSOCIATED WITH EXPOSURE TO X-RAY FILM PROCESSING CHEMICALS**

The recent legal cases which resulted in the GGHB agreeing out of court settlements with MSF have highlighted the need for managers to ensure staff do not work in conditions which are harmful to health. As a matter of priority, General Managers and Chief Executives should undertake a risk assessment of their X-Ray department film processing areas and eliminate any unnecessary risk to staff health. The assessment should apply to both darkroom and daylight processing areas, as the chemicals used are the same. The important issue is that health problems are preventable and it is primarily a question of keeping people and chemical fumes apart. For example staff may be exposed to fumes and/or chemicals under the following conditions:

1. From the processor exist where there is hot air from the film drying process.
2. From automatic mixers (especially when they malfunction).
3. Transporting chemicals to refill tanks in processors.
4. Chemical spillage.
5. Rescuing a film from the processor.
6. Cleaning the processor.
7. When the processor is being repaired or serviced.
8. When silver recovery units malfunction, are being repaired or serviced, or when silver is being removed.
9. Spillage of bulk collected spent fix.
10. When ventilation systems malfunction, or temperatures increase.
11. When handling newly processed film.

To protect staff the following should be implemented:

1. Suitable ventilation – ensuring the number of air changes are as recommended by equipment and chemical manufacturers (a minimum of 15/hour).
2. Removal of fumes – can be determined by using smoke tests to ensure fumes do not enter breathing zones of operators or other staff.
3. Temperature – should be maintained at a recommended level (about 18-20 degrees C).
4. Humidity levels should be maintained at recommended levels (usually about 35 to 50%).
5. Processing areas should be separately ventilated.
6. Glutaraldehyde free chemistry should be used wherever possible (although all other measures should still be taken as a cocktail of toxic chemicals are still present, and there may be some Glutaraldehyde in so called Glutaraldehyde free chemistry).
7. Suitable personal protection equipment provided when contact with chemicals is inevitable.
8. Good working practices and hygiene.
9. Sufficient training of staff.
10. Replacement with Digital Imaging and Dry View Systems where possible.
11. Monitoring of health – with protection, redeployment when appropriate, and assurances of non-victimisation for staff so that they are not afraid to admit to early symptoms.
12. Arranging maintenance servicing so that as few staff are around as possible.
13. Silver recovery units should be situated in well ventilated areas away from staff (see SODoH Scottish Hospital Planning Note 6: "Radiology" Appendix 7) and bulk fix should be collected in secure containers outside the X-Ray departments.
14. Ensuring that extracted fumes do not re-enter the building.

- 15 Processors fitted with an internal exhaust system should have sufficient extract assistance relative to the length of the exhaust pipe. Advice may be sought from the processor manufacturer.

## GLUTARALDEHYDE

### Summary

Glutaraldehyde is commonly used for disinfecting endoscopes and other instruments and has been shown to cause respiratory and other health problems in staff. In consequence a new, legally enforceable Maximum Exposure Limit (MEL) is expected to be introduced in early 1999 which will significantly tighten the standard for the maximum permissible concentration of glutaraldehyde in the air. The date the new MEL comes into force will be notified to the service by a Health and Safety Commission press release.

In October 1997 the Health and Safety Executive (HSE) issued *Chemical Hazard Alert Notice 7 (CHAN 7)* on glutaraldehyde to NHS Trusts in England, Wales and Scotland about the prospect of the new MEL and advising on good practice for suppliers and users.

### Action

In preparation for the introduction of the new MEL, Trusts should review - with the trade unions and professional organisations - the steps they are taking to comply with the Control of Substances Hazardous to Health Regulations. The HSE's *Chemical Hazard Alert Notice 7(Revised)* and the Health Service's Advisory Committee leaflet, *Glutaraldehyde and You*, give advice on the action required. Trusts should carry out regular air monitoring in areas where glutaraldehyde is used to assess whether existing control systems are adequate or whether they need to be improved or replaced. Trusts should also explore the cost effectiveness of alternative decontamination regimens (see *Alternatives to glutaraldehyde* below) and/or implement enhanced joint monitoring arrangements.

Trusts that decide jointly with the trade unions and professional organisations to continue using glutaraldehyde and whose systems and/or equipment cannot currently meet the MEL should:

- i put revised procedures in place by early 1999, where the MEL can be met through improved operational management;
- ii plan to complete modification of current control systems, eg ventilation, by early 1999, where the MEL can be met by these means;
- iii replace current arrangements with an effective washer/disinfector by early 1999, where the MEL cannot be met in either of the above ways.

Where assessments indicate that action will be necessary which will have a significant impact on service procedures and delivery and/or equipment costs, the matter must be drawn to the attention of commissioning authorities. A financial plan may need to be agreed with the Trust to enable the implementation of the required action.

Health Boards should draw the new standard to the attention of dental practitioners; to GPs undertaking endoscopic procedures, and to expert advisory panels.

## **Background and Other Information**

### **Glutaraldehyde Occupational Exposure Limits**

Until January 1998, exposure to glutaraldehyde was controlled to an Occupational Exposure Standard (OES) of 0.2ppm expressed as a 15 minute reference period. Despite this, and also perhaps owing to poor compliance, sensitisation and occupational asthma still occur. Moreover, no safe level of exposure has been identified. Therefore the Health and Safety Commission is recommending to the Government that exposure to glutaraldehyde should be controlled to a Maximum Exposure Limit (MEL) of 0.05ppm. It is anticipated that amended Control of Substances Hazardous to Health (COSHH) regulations will come into force early in 1999, which will then make the MEL legally binding. Reaching the limit is a significant reduction against current practice. However, a MEL requires employers to reduce exposure to as far below the limit as is reasonably practicable.

### **In the Interim**

COSHH requires that employers should first aim to prevent exposure. If this is not feasible, then they should control exposure to as low a level as possible: the number of people exposed, and the duration of their exposure, should be minimised. (The HSE has recently consulted on proposals to amend COSHH in the document *Proposals for New Replacement Control of Substances Hazardous to Health Regulations and amendments to the Approved Code of Practice: Control of Substances Hazardous to Health*.) The list of MELs, together with the approved methods for averaging over the specified reference periods, will be published in the HSE publication *EH 40/99 Occupational Exposure Limits*.

### **Monitoring Glutaraldehyde Levels**

Where assessment shows that air monitoring is required to ensure that the MEL is not exceeded, it should be carried out at least once every 12 months. However the precise interval will be determined by an appropriate local risk assessment.

### **Measuring Glutaraldehyde Levels in the Air**

Reference should be made to local occupational health departments. The HSE does not consider current hand-held equipment adequate for measuring airborne glutaraldehyde levels down to the requirements of the new MEL. A number of laboratories have the capacity and expertise to carry out these measurements. The HSE review of glutaraldehyde in 1996 recommended a modified version of OSHA 64. Occupational health departments should, if necessary, seek advice from a consultant occupational hygienist.

### **Alternatives to Glutaraldehyde**

Alternatives to glutaraldehyde may be more expensive, slower acting and less convenient. However, they will not be associated with serious occupational health problems and therefore offer cost-effective ways of meeting the MEL. Employers considering the use of alternative decontamination regimens should refer to Safety Notice MDA SN9619, *compatibility of medical Devices and their Accessories and processing Units with Cleaning, disinfecting and Sterilising Agents*. The publication *Cleaning and Disinfection of Equipment for Gastrointestinal Endoscopy* is also useful as it addresses ways of eliminating or minimising exposure to glutaraldehyde by reviewing alternative disinfectants and the use of automated washer/disinfectors.