

# Control of Substances Hazardous to Health (COSHH) Policy

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<b>Trust Lead:</b>	<b>Neil Smith, Health and Safety Manager</b>
<b>Board Director Lead:</b>	<b>Mike Simpson - Director of Estates, Facilities &amp; Sustainability</b>
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### REVIEW DATES AND DETAILS OF CHANGES MADE DURING THE REVIEW

1. Amalgamate the Mercury and Mercury Containing Equipment Policy B15/2002 into this policy.
2. Title page – Change Board Director Lead to Mike Simpson – Director of Estates, Facilities & Sustainability.
3. Title page – Change Trust Lead to Neil Smith – Health and Safety Manager.
4. Replace all references throughout the policy to Health and Safety Services Team and Quality, Safety, Health and Environment (QSHE) Team to Health and Safety Team.
5. Point 4.2 - Change of Executive Lead to the Director of Estates, Facilities & Sustainability.
6. Remove point 4.7 and renumber all section 4. points after that.
7. Point 9.1 - removal of reference to the mercury Spillage Policy B15/2002.
8. Point 9.1 Addition of reference to the Emergency Preparedness, Resilience and Response (EPRR) Policy.
9. Addition of the Mercury Safety Management Standard and Procedural Guidance – Appendix 3

### KEY WORDS

*Control of Substances Hazardous to Health, COSHH, Carcinogen, Chemical, Exposure, Corrosive, Dangerous Substances, Hazardous Substances, Mercury, Mercury Compounds, Pathogen, Spillage, Toxic*

## 1 INTRODUCTION AND OVERVIEW

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- 1.1 The objective of the Policy is to provide guidance to ensure that all appropriate steps are taken to comply with the duty to manage substances hazardous to health within the University Hospitals of Leicester (UHL) NHS Trust and to comply with related legislation, approved codes of practice, guidance and relevant standards.
- 1.2 This document sets out the University Hospitals of Leicester (UHL) NHS Trust's Policy and Procedures for the safe use of substances hazardous to health within the Trust. This policy forms part of the Trust's arrangements for health and safety as required by the Health and Safety at Work, etc. Act 1974. The policy details the management arrangements and responsibilities for the management of risks from hazardous substances for the University Hospitals of Leicester NHS Trust hereafter referred to as 'the Trust' to secure compliance with The Control of Substances Hazardous to Health (COSHH) Regulations and other relevant regulations.

## 2 POLICY SCOPE

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- 2.1 This policy applies to all staff employed by the Trust, either directly or indirectly, and to any other person or organisation which uses Trust services or premises for any purpose and sets out the roles and responsibilities and arrangements for the management of risks associated with hazardous substances. It will also apply to bank, temporary staff, volunteers, young workers, staff working from home and contractors working on Trust business. The principles of this policy shall apply to all Trust work activities, regardless of who has or who is supplying or providing them.
- 2.2 This policy does not cover substances hazardous to health resulting from use of substances covered by other explicit legislation e.g. asbestos, lead, radioactive substances.

## 3 DEFINITIONS AND ABBREVIATIONS

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Hazardous substances	a. Substances indicated as Toxic, Carcinogen / Respiratory Sensitiser's, Corrosive, Harmful / Irritant, Environmentally Toxic
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	<p>b. Substances assigned workplace exposure limits (WEL). Published in the Health and Safety Commission EH40 publication. (a WEL is the maximum concentration of an airborne substance, averaged over a known period of time that individuals may be exposed to).</p> <p>c. Biological agents</p> <p>d. Inhalable dusts not already taken into account in a. or b. above if they are in a concentration in air equal to or greater than 10mg/m<sup>3</sup> averaged over an 8-hr time weighted reference (TWA) period</p> <p>e. Respirable dusts not covered by a. or b. above that present a concentration in air equal to or greater than 4 mg/m<sup>3</sup> averaged over an 8-hr time weighted reference (TWA) period</p> <p>f. Substances not already included in a. or b. but identified as presenting a risk to health due to the chemical or toxicological properties <u>and</u> the way it is used or present in the workplace</p>
Substance	<p>g. Substance or preparation</p> <p>h. Can be natural or artificial, solid or liquid, gas or vapour</p> <p>i. Includes micro-organisms</p>
Preparation	<p>j. Mixture or solution of two or more substances</p>
Workplace	<p>k. Premises or part of premises used for or in connection with work</p> <p>l. Any room, lobby, corridor, staircase, road or other place (i) used as a means of access or egress, or (ii) where facilities are provided for use in connection with that place of work</p> <p>m. Does not include public roads</p>
Work Exposure Limit	<p>n. Means the exposure limit approved by the Health and Safety Executive for that substance in relation to the specified reference period when calculated by a method approved by the Health and Safety Executive, as contained in the HSE publication "EH40/2005 Workplace Exposure Limits"</p>

## 4 ROLES – WHO DOES WHAT

4.1 The Trust's Health & Safety Policy sets out the roles and responsibilities for all staff. Where hazardous substances are identified, additional responsibilities for the effective management of these risks are set out below.

## **4.2 Executive Lead (Director of Estates, Facilities & Sustainability)**

4.2.1 To act as the Executive lead and has the responsibility, accountability and ownership for this policy together with its implementation.

## **4.3 CMG Head of Operations**

CMG Head of Operations are responsible for:

4.3.1 Insuring that the services in their area of responsibility implement and comply with this policy and that all reasonable steps are taken to maintain and where necessary, improve health and safety standards.

4.3.2 Ensuring adequate resources are made available to meet that requirement.

## **4.4 Line Managers/Supervisors**

Line Managers are responsible for:

4.4.1 The implementation of this Policy within their area of control and to ensure that all reasonable steps are taken to maintain and where necessary, improve health and safety standards.

4.4.2 Identifying all hazardous substances used or present in the workplace. This information should be available on the work activity risk assessments.

4.4.3 Ensuring that COSHH assessments for hazardous substances have been completed and that they are appropriately / regularly reviewed.

4.4.4 Provide suitable work equipment and materials.

4.4.5 Ensure all staff are suitably trained (see section 6).

4.4.6 Act upon risk control measures.

## **4.5 Employees – All Staff Must:**

4.5.1 Familiarise themselves with this policy and co-operate with the arrangements put in place locally by reading local risk assessments and signing that they agree to abide by the controls therein.

4.5.2 Bring to the attention of their immediate line manager any health and safety concerns or emergency procedures adopted when using hazardous substances.

4.5.3 Bring to the attention of their immediate line manager any encounters with any unknown substance and seek further advice before handling the substance.

4.5.4 When required, must make themselves available for any health checks and must co-operate in the monitoring of exposure levels.

4.5.5 Any case of ill health which staff believe could be linked to hazardous substances in the workplace, must be reported immediately to their line manager.

4.5.6 Report incidents, accidents and near misses using the 'Datix web' incident reporting system.

4.5.7 Attend appropriate training sessions held by the Health and Safety Team.

## **4.6 Health and Safety Team**

- 4.6.1 Provide advice, guidance and information concerning all aspects of the use, handling, storage, transportation and disposal of substances that fall within the COSHH Regulations.
- 4.6.2 Facilitate appropriate health and safety training to support the work of managers and staff implementing this policy.

## **4.7 Occupational Health Department**

- 4.7.1 Provide advice on health and medical surveillance issues.
- 4.7.2 Provide regular and suitable health surveillance to appropriate staff groups identified by management.

## **4.8 Laboratories**

- 4.8.1 Due to the range and complexities of chemical and microbiological substances used in laboratories, they have their own separate COSHH management arrangements and operating procedures.

## **4.9 Estates & Facilities**

- 4.9.1 Estates and Facilities will support with the disposal of any waste materials in accordance with the Trust's Waste Management Policy.

## **4.10 Responsibilities of and communication with stakeholders**

- 4.10.1 All key stakeholders Directors/Managers and supervisors must be provided with information on the Trust's arrangements for the Control of Substances Hazardous to Health.
- 4.10.2 Key stakeholders carrying out activities on Trust premises have a duty to inform the Trust of any foreseeable risks of injury or illness specific to their activities, so that additional measures can be provided where necessary.

## **5. POLICY IMPLEMENTATION AND ASSOCIATED DOCUMENTS**

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- 5.1 This policy is supported by the processes/procedures/standards found in the associated documents as detailed below, and which must be used in conjunction with this policy.
  - Health & Safety at Work etc, Act 1974
  - The Management of Health and Safety at Work Regulations 1999
  - The Control of Substances Hazardous to Health Regulations 2002 (as amended) and Approved Code of Practice and related regulatory good practice guidance.
  - Regulation (EC) No 1272/2008 of the European Parliament and Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006. This is more commonly referred to as CLP or CLP Regulation.
  - Workplace health and safety standards (Revised July 2013) – The NHS Staff Council Health, Safety and Wellbeing Partnership Group.

## 6 EDUCATION AND TRAINING REQUIREMENTS

- 6.1 The Trust has a duty under the Health & Safety at Work, etc. Act to provide staff with information, instruction and training appropriate to their role. Line Managers must identify the training needs for their staff group. It is important that staff receive the correct type and amount of information, instruction and training to ensure competence for the duties undertaken.
- 6.2 Information, instruction and training must be delivered in such a way that it is received and understood by the person receiving it and should include theoretical and practical elements.
- 6.3 Staff tasked to complete COSHH risk assessments should have attended the COSHH risk assessment training available for booking on HELM prior to carrying out any assessments. This training is facilitated by the Health and Safety Team on a regular basis. The Health and Safety Team will support managers to identify what training is needed/undertaken.

## 7 PROCESS FOR MONITORING COMPLIANCE

- 7.1 The standards for monitoring this policy are shown in the Policy Monitoring table set out below.

### POLICY MONITORING TABLE

Element to be monitored	Lead	Tool	Frequency	Reporting arrangements
Staff are following the arrangements	Line Manager	<ul style="list-style-type: none"> <li>- Observations</li> <li>- Ensure that COSHH risk assessments are in place and regularly reviewed</li> <li>- Inspection of staff training records</li> </ul>	As set by local manager. This may be influenced by concerns or incidents reported	<ul style="list-style-type: none"> <li>- Notify any concerns to individual staff member / team.</li> <li>- Report concerns with CMG Head of Operations</li> <li>- On-going concerns to be reported to Health &amp; Safety Team</li> </ul>
Policy arrangements are in place, applied and are effective	Line Manager	<ul style="list-style-type: none"> <li>- Investigation of concerns, incidents and near-miss events</li> </ul>	As required	<ul style="list-style-type: none"> <li>- Report on Datix.</li> <li>- Report concerns to CMG Head of Operations</li> <li>- On-going concerns to be reported to Health &amp; Safety Team</li> </ul>
	Health & Safety Team	<ul style="list-style-type: none"> <li>- Investigation of RIDDOR Reportable events.</li> </ul>	As required	<ul style="list-style-type: none"> <li>- Report RIDDORs to HSE as required</li> </ul>
		<ul style="list-style-type: none"> <li>- Review the policy at the required time period.</li> <li>- Spot check inspection / audit</li> <li>- Inspection of staff training records</li> </ul>	Ongoing	<ul style="list-style-type: none"> <li>- Local Health and Safety Committee</li> <li>- UHL Health and Safety Committee</li> <li>- Appropriate</li> </ul>

				Board Level Committee
Skin checks	Line Manager	<ul style="list-style-type: none"> <li>- Appraisal paperwork</li> <li>- Skin check form</li> <li>- Refer to Occupational Health</li> </ul>	Annual	<ul style="list-style-type: none"> <li>- Report on Datix.</li> <li>- Report concerns to CMG Head of Operations</li> <li>- On-going concerns to be reported to Health &amp; Safety Team</li> <li>- Quarterly reports to the Local Health &amp; Safety Group, Estates Health and Safety Group</li> <li>- Quarterly reports to the UHL Health and Safety Committee</li> <li>- Report RIDDORs to HSE as required</li> </ul>
	Occupational Health		Quarterly	
	Health & Safety Team	<ul style="list-style-type: none"> <li>- Investigation of RIDDOR reportable events</li> </ul>	As required	
Health Screening	Line Manager	<ul style="list-style-type: none"> <li>- Identify staff at risk via risk assessment and notify Occupational Health of staff exposed</li> </ul>	At intervals of not more than 12 months	<ul style="list-style-type: none"> <li>- Report on Datix.</li> <li>- Report concerns to CMG Head of Operations</li> <li>- On-going concerns to be reported to Health &amp; Safety Team</li> <li>- Report RIDDORs to HSE as required</li> </ul>
	Health & Safety Team	<ul style="list-style-type: none"> <li>- Investigation of RIDDOR reportable events</li> </ul>	As required	

## 8 EQUALITY IMPACT ASSESSMENT

- 8.1 The Trust recognises the diversity of the local community it serves. Our aim therefore is to provide a safe environment free from discrimination and treat all individuals fairly with dignity and appropriately according to their needs.
- 8.2 As part of its development, this policy and its impact on equality have been reviewed and no detriment was identified.

## 9 SUPPORTING REFERENCES, EVIDENCE BASE AND RELATED POLICIES

- 9.1 This policy is supported by the processes/procedures/standards found in the associated documents as detailed below, and which must be used in conjunction with this policy

Cleaning and Decontamination for Infection Prevention Policy B5/2006



Emergency preparedness, Resilience and Response (EPRR) Policy	B25/2018
First Aid Policy	B23/2004
Health and Safety Policy	A17/2002
Incident and Accident Reporting Policy (including the investigation of serious, RIDDOR and security incidents and the maternity risk management policy)	A10/2002
Infection Prevention Policy	B4/2005
Latex - Allergy in Patients and Staff Policy	B29/2005
Managing the Health, Safety and Welfare of Contractors Policy	B24/2004
Personal Protective Equipment at Work Policy	B9/2004
Policy for Statutory and Mandatory Training	B21/2005
Sharps Safety Policy	B8/2013
Waste Management Policy	A15/2002
Workplace (Site) Transport Policy	B28/2006
Work Equipment Policy	B8/2004

## **10 PROCESS FOR VERSION CONTROL, DOCUMENT ARCHIVING AND REVIEW**

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- 10.1 This document will be uploaded onto SharePoint and available for access by Staff through INsite. It will be stored and archived through this system.
- 10.2 The UHL Health and Safety Committee through the Health and Safety Team are responsible for keeping this policy up to date.

## COSHH Safety Management Standard and Procedural Guidance

### 1. INTRODUCTION

This document contains standards and guidance on the management of risks arising from substances hazardous to health.

It is the responsibility of managers to ensure that any activities or operations involving the use of substances hazardous to health are managed in line with this document, in any area under their control.

This document must be read in conjunction with the UHL Control of Substances Hazardous to Health (COSHH) Policy and any additional guidance specific to departmental issues or activities.

### 2. PROCEDURE

#### **Manager's Checklist – Hazardous Substances**

The checklist given below identifies key actions involved in managing the health and safety risks arising from the use of hazardous substances. Further information on each of these points is contained in this document.

1. Have all hazardous substances been identified?
2. Are any Departmental-specific arrangements for purchasing hazardous substances known and understood?
3. Have COSHH risk assessments been completed for all hazardous substances? (Appendix 2)
4. Is it possible to prevent exposure to hazardous substances?
5. If it is not possible to prevent exposure to hazardous substances, have appropriate controls been identified that will adequately control exposure?
6. Has any need for exposure monitoring or health surveillance been identified?
7. Have individuals who use, or are exposed to, hazardous substances been provided with adequate information, instruction and training?
8. Are there arrangements in place to monitor the use of control measures?
9. Are COSHH risk assessments regularly reviewed?
10. Has the storage, disposal of substances and waste products been taken into consideration?
11. Have the issues arising from contractors and their use of COSHH substances been considered?
12. Have emergency procedures been put into place to deal with incidents involving hazardous substances?

### 3. IDENTIFYING COSHH SUBSTANCES

Under the COSHH Regulations there are a range of substances regarded as being hazardous to health and there are a number of ways in which these can be identified:

#### **Classification, Labelling and Packaging Regulations (CLP)**

CLP is a regulatory framework for the classification and labelling of substances and mixtures in the EU. It is based on an international agreement known as the Globally Harmonised System (GHS). As in the past, the CLP Regulation requires chemicals to be classified for their hazards and their packaging labelled accordingly. Under CLP, labels are very different to those under the previous regulatory framework.

- Substances covered by CLP can be identified by a diamond shape warning symbol displayed on the packaging label. Suppliers must provide a Safety Data Sheet (SDS) if the substance is covered by CLP. Some of the most common CLP symbols are shown below.



GHS01 Explosive



GHS02 Flammable



GHS03 Oxidising



GHS04 Gases Under Pressure



GHS05 Corrosive



GHS06 Toxic



GHS07 Harmful / Irritant



GHS08 Carcinogen / Respiratory Sensitisers



GHS09 Environmentally Toxic

#### **Substances with Workplace Exposure Limits (WELs)**

- A WEL is the maximum concentration of an airborne substance, averaged over a known period of time that individuals may be exposed to. Substances with WELs are listed in the Health and Safety Executive (HSE) publication EH40 and will also be detailed on the Safety Data Sheet.

#### **Biological Agents (bacteria and other micro-organisms)**

- Biological agents are covered by COSHH if they are directly connected with work or if exposure is incidental to work.

### **Dust Concentrations**

- Any kind of dust, if its average concentration in the air exceeds the levels specified by COSHH, is considered to be hazardous to health. (10mg/m<sup>3</sup> of inhalable dust, or 4 mg/m<sup>3</sup> of respirable dust.

### **Any other substance that creates a risk to health**

- For technical reasons these may not be covered under CLP. These substances include; asphyxiants (i.e. gases such as argon and helium, while not dangerous in themselves can endanger life by reducing the amount of oxygen available to breathe), some pesticides, medicines, cosmetics and substances produced in chemical processes. Also included would be other substances that may be a cause of occupational asthma.

### **Do Different Forms of the Same Substance Present Different Hazards?**

- A substance may be hazardous in one form but not in another. For example, a piece of hardwood poses no risk in itself. However, hardwood dust created during sanding does present a hazard. Therefore, if a substance is not being used in a form that is hazardous to health and the work process does not create by-products that are hazardous to health; it does not need a COSHH assessment.

### **What Substances are NOT Covered by COSHH?**

- Not all substances are covered by the COSHH Regulations. For the vast majority of commercial chemicals the presence (or not) of either a CLP warning label will normally indicate whether the substance is covered by the COSHH Regulations. For example:

Asbestos, lead, Ionising Radiation & Non-Ionising Radiation are not covered by COSHH as there are separate Regulations which apply to these and must be followed.

### **Employees Bringing in Hazardous Substances**

- Employees are not permitted to bring in their own substances to use at work. If a substance is required for work purposes, the line manager should ensure that it is supplied and risk assessed wherever necessary.

## **4. CARRYING OUT COSHH RISK ASSESSMENTS**

After identifying the hazardous substances that employees will use (or which they and/or others will be exposed to) the next stage is to carry out a COSHH risk assessment.

Within UHL it is the responsibility of managers to ensure that COSHH risk assessments have been carried out on hazardous substances within their area of control. Managers can either carry out the COSHH risk assessments themselves, or delegate this task to individuals within their area. If a manager delegates the task of carrying out a risk assessment, they must ensure that the person(s) is competent i.e. have the relevant knowledge, skills, training and experience to carry out the assessment and take all reasonable care when doing so.

To assist this process, a COSHH risk assessment form is provided with this document.

COSHH risk assessment training courses are available from the Health and Safety Team. Records of training will be maintained on HELM.

COSHH risk assessments need to be completed for all products / substances using the relevant information from the safety data sheet supplied with the product. The COSHH risk assessments should be readily available for reference at all times.

## 5. PREVENTING EXPOSURE

For any hazardous substance, the first control measure that must be considered during the risk assessment is to prevent exposure. Prevention of exposure may be achieved by:

- Replacing the hazardous substance with a non or less hazardous substance.
- Changing the method of work, so that the task or operation that involves exposure is no longer necessary.
- Modifying the process to eliminate the production of hazardous by-products or waste products.

In many areas it will not be possible to eliminate hazardous substances completely. Where the use of hazardous substances is necessary, consideration must still be given to reducing the risks to employees using;

- An alternative less hazardous substance; or
- A different form of the same substance (e.g. pellets instead of powder); or
- A different work process.

The Procurement Team should be able to provide advice on non-hazardous and less hazardous alternatives that are available.

## 6. CONTROLLING EXPOSURE

If it is not reasonably practicable to prevent exposure (i.e. all the costs of preventing exposure outweigh all the potential health benefits) the exposure to the substance must be controlled to a level that will not harm health (e.g. below any relevant WEL for the substance).

Control measures appropriate to the activity should be considered and put in place, including (in order of priority) one or more of the following:

- Put appropriate work processes, systems and engineering controls in place, and provide suitable work equipment and materials. E.g. use processes that minimise the amount of substance used or produced.
- Control measures at source (e.g. local exhaust ventilation) and reduce the number of employees exposed to a minimum, the level and duration of their exposure, and the quantity of the hazardous substance used or produced.
- Provide Personal Protective Equipment (e.g. gloves, face masks, etc.) but only as a last resort and wherever possible in combination with other control measures. (Please note that there is a separate policy on Personal Protective Equipment, which should be referred to in conjunction with this policy. See also refer to the 'Ensuring control measures are used and maintained' section below.)

## **OCCUPATIONAL ASTHMA**

The COSHH Regulations require additional controls for substances that can cause occupational asthma. These substances can be identified by the information provided on the Safety Data Sheet.

## **CARCINOGENIC AND MUTAGENIC SUBSTANCES**

The COSHH Regulations require additional controls for carcinogenic and mutagenic substances. If a substance is identified as being carcinogenic and mutagenic, then elimination of the substance must be achieved if at all possible. These substances can be identified by the information provided on the Safety Data Sheet.

## 7. MONITORING EXPOSURE

Under COSHH, employers are required to measure the concentration of hazardous substances in the air, in any of the following circumstances:

- Where the failure or deterioration of controls could result in a serious health effect.
- When measurement is necessary to ensure that the WEL for the substance is not being exceeded.
- As an additional check on the effectiveness of any control measures.
- Where changes in the nature of employees' exposure could mean that existing controls are not adequate (e.g. change in work method, increase in the amount of a substance used).

## 8. HEALTH SURVEILLANCE

The Health and Safety Executive give the following definition of health surveillance:

'Health surveillance is about putting in place systemic, regular and appropriate procedures to detect early signs of work-related ill health among employees exposed to certain health risk; and acting on the results'

Under COSHH Regulations health surveillance is required where:

- Employees are exposed to a substance linked to a particular disease or adverse health effect, and there is reasonable likelihood of disease or ill health occurring.
- Or, an employee is working in certain processes that are specified in Schedule 6 of the COSHH Regulations (none of which apply to activities presently carried out by UHL).

For further advice on health surveillance contact Occupational Health.

## 9. INFORMATION, INSTRUCTION AND TRAINING

The COSHH Regulations require that employees who use or who are exposed to hazardous substances, are provided with suitable information, instruction and training. The information, instruction or training that is provided should address the following issues:

- The names of the substances and the risks to health.
- Any relevant WEL.
- The precautions to be taken by employees.
- The results of any exposure monitoring.
- The purpose and collective results of any health surveillance.
- The importance of good hygiene standards.
- Relevant information arising for risk assessment being reviewed.
- Procedures for dealing with accidents, incidents and emergencies (see 'Emergency Procedures' below).

The extent of information, instruction and training that is necessary will depend on the level of risk involved. Practical ways in which employees can be provided with information and instruction:

- Involve staff in undertaking or reviewing COSHH Risk Assessments (as long they have attended the UHL COSHH Risk Assessor training course).
- Discuss the findings of COSHH Risk Assessments at team meetings.
- Ensure copies of COSHH Assessments and relevant Safety Data Sheets are kept in a known and accessible place.
- Ensure that COSHH Risk Assessments are viewed by employees prior to a new substance being used for the first time.

## 10. ENSURING CONTROL MEASURES ARE USED AND MAINTAINED

COSHH requires that employees make proper use of control measures and report any defects. It is the responsibility of managers and supervisors to take all reasonable steps to ensure that they do. For example, if an employee is not using PPE provided, the reason for it not being worn should be discussed with the employee and a remedy found (e.g. providing a different size if it is too small or too large). If improper use or defects of PPE are noted this must be reported using the 'Datix web' incident reporting system.

If engineering controls are used, e.g. local exhaust ventilation (LEV) the equipment must be regularly inspected, tested and maintained. Regular testing of equipment such as LEV is especially important, as it is the only way to ensure that the equipment is working properly.

NOTE: All non-disposable types of PPE have a limited lifespan. For example, respiratory protective equipment should be examined and tested at regular intervals. The manufacturer or supplier will have provided information about the examination, testing and replacement of PPE.

## 11. REVIEWING COSHH RISK ASSESSMENTS

The risk assessor needs to decide how often a risk assessment should be reviewed. Review does not necessarily mean carrying out a new risk assessment, but checking over the existing risk assessment to ensure it is still valid and that any changes are documented on the risk assessment. However, it is recommended good practice that risk assessments are reviewed at least every 12 months unless:

- There is evidence that it is no longer valid e.g. due to a change in substance used.
- Where there has been a change to the work activity such as, change of process or method of work, the volume of substance(s) used, change of equipment or change to or of environment.
- As a result of an accident or incident occurring.
- As a result of monitoring exposure, from results of health surveillance, where the WEL has changed.

Risk assessment reviews should always re-consider if it is practicable to prevent exposure or use a less hazardous substance, reviews should also reconsider the control measures that are in place and whether they can be improved.

## 12. CONTRACTORS AND COSHH

Like any employer, contractors are required to ensure that their use of hazardous substances does not harm their employees or other people who may be exposed (e.g. UHL staff, patients, visitors if the substances are being used on UHL premises or areas under UHL control).

Managers in control of UHL premises and/or specific areas therein, should ensure that they are aware of any COSHH substances that contractors will be using on the premises or may produce as a result of their work activity, so that they:

- Are satisfied that the contractors' control measures will protect UHL employees, patients, visitors, etc. (Contractors must supply copies of their COSHH risk assessments).
- Can provide UHL employees with information about any hazardous substances being used by contractors.
- Can reassure UHL employees, patients, visitors, etc. that any exposure to hazardous substances and any risks to their health are being properly controlled.

If a manager is concerned that a contractor is working in an unsafe manner, they should:

- Raise their concerns as soon as possible with the contractor's representative on site.
- Raise their concerns to Estates and Facilities on the Customer Service line ext. 17888 or by email [facilitieshelpdesk@uhl-tr.nhs.uk](mailto:facilitieshelpdesk@uhl-tr.nhs.uk)
- Report the incident using the 'Datix web' incident reporting system.


















### 13. **EMERGENCY PROCEDURES**










The COSHH Regulations require that formal emergency procedures are developed when incidents involving hazardous substances could lead to exposure well beyond the normal day-to-day levels. Examples of events that would need formal emergency procedures are:

- Serious process fires that could give rise to serious risk to health (i.e. fires in any workplace in connection with the work process that is being carried out (including the storage of articles, substances and materials relating to that work process))
- Serious spillages of corrosive agents liable to make contact with employees' skin, even if they are wearing the appropriate PPE.
- Any acute process failure that could lead to a sudden release of chemicals.
- Any significant over-exposure to a substance with a WEL e.g. as a result of failure of an LEV system or other controls.

Information on the above can be found in the Trust's Emergency Preparedness, Resilience and Response (EPRR) Policy.



	 <b>University Hospitals of Leicester</b> <small>NHS Trust</small>		<b>Clinical Management Group</b>				
			<b>Department</b>				
			<b>Site</b>				
			<b>Ref No</b>				
<b>COSHH Assessment</b>							
<b>Name of Assessor</b>				<b>Date</b>			
<b>Hazardous Substance(s)</b>				<b>Latest Safety Data Sheet (SDS) attached?</b> Yes / No Version/Date:			
<b>Describe the Work activity or method of use.</b>							
<b>Documented procedure for safe use and handling available?</b>							
<b>Duration of Activity</b>		<b>Frequency</b>		<b>No of persons in vicinity</b>			
<b>Location of process being carried out?</b>							
<b>Quantity of substances used:</b>		Small <i>(grams or mltrs)</i> <input type="checkbox"/>	Medium <i>(kgs or ltrs)</i> <input type="checkbox"/>	Large <i>(tonnes or m3)</i> <input type="checkbox"/>			
<b>Identify the persons at risk:</b>		Employee <i>(including trainees)</i> <input type="checkbox"/>	Personnel in the vicinity <input type="checkbox"/>	Public <i>(including patients)</i> <input type="checkbox"/>			
<b>Classification (state the category of danger)</b>							
<input type="checkbox"/>  Very Toxic		<input type="checkbox"/>  Irritant		<input type="checkbox"/>  Compressed gas			
<input type="checkbox"/>  Toxic <small>(if inhaled, swallowed and in contact with skin)</small>		<input type="checkbox"/>  Sensitising		<input type="checkbox"/>  Highly Flammable			
<input type="checkbox"/>  Corrosive		<input type="checkbox"/>  Biological		<input type="checkbox"/>  Flammable			
<input type="checkbox"/>  Harmful		<input type="checkbox"/>  Oxidising		<input type="checkbox"/>  Environmental			
<input type="checkbox"/>  Aspiration, Long term Health Hazards		<input type="checkbox"/>  Carcinogenic/ Mutagenic		<input type="checkbox"/>  Explosives			
<b>Hazard Type</b>							
<input type="checkbox"/> Gas	<input type="checkbox"/> Vapour	<input type="checkbox"/> Mist	<input type="checkbox"/> Fume	<input type="checkbox"/> Dust	<input type="checkbox"/> Liquid	<input type="checkbox"/> Solid	<input type="checkbox"/> Other (State)
<b>Route of Exposure</b>							
Eye Contact <input type="checkbox"/>	Skin Absorption <input type="checkbox"/>	Inhalation <input type="checkbox"/>	Injection <input type="checkbox"/>	Ingestion <input type="checkbox"/>			
<b>Risks to Health</b>							
HSE Work Exposure Limits (WEL)? Yes <input type="checkbox"/> No <input type="checkbox"/>				STEL			
State				LTEL			

<b>Control Measures</b>			
Can the substance be eliminated or substituted by a less hazardous substance? Yes <input type="checkbox"/> No <input type="checkbox"/>			
Existing Control Measures (for example extraction, ventilation, training, supervision).			
Monitoring or Health surveillance required? Yes <input type="checkbox"/> No <input type="checkbox"/> (State)			
<b>Personal Protective Equipment (state type and standard)</b>			
 Dust mask	 Visor		
 Respirator	 Goggles		
 Gloves	 Overalls		
 Footwear	 Other		
 Apron	PPE regularly checked and maintained? Yes <input type="checkbox"/> No <input type="checkbox"/>		
<b>Emergency Arrangements</b>			
First Aid Measures	Eye Contact		
	Skin Contact		
	Inhalation		
	Ingestion		
Spillage Procedure			
Fire Fighting Measures			
<b>Storage and Handling Requirements</b>			
<b>Disposal of Substances &amp; Contaminated Containers</b>			
Hazardous Waste <input type="checkbox"/> Domestic Waste <input type="checkbox"/> Return to Supplier <input type="checkbox"/> Other <input type="checkbox"/>			
If <b>Other</b> , detail here:			
<b>Risk Rating Following Control Measures</b>			
Consequence	(Score) refer to risk matrix.	Likelihood	(Score) refer to risk matrix.
<b>Risk Rating: (Score) refer to risk matrix.</b>			
Manager's Signature : <b>Add Signature</b>		Review Date: <b>Add Date of next review</b>	



# COSHH RISK ASSESSMENT FORM

## SEVERITY

## LIKELIHOOD

1	2	3	4	5
2	4	6	8	10
3	6	9	12	15
4	8	12	16	20
5	10	15	20	25

<p><b>RATING LIKELIHOOD</b></p> <p>1 Rare</p> <p>2 Unlikely</p> <p>3 Possible</p> <p>4 Likely</p> <p>5 Almost Certain</p>	<p><b>RATING SEVERITY</b></p> <p>1 Discomfort / no time off work</p> <p>2 Minor harm – first aid treatment &lt;7days</p> <p>3 Moderate harm – requiring time off work 7 – 14 days(RIDDOR) reportable</p> <p>4 Severe harm – requiring time off work 7 – 14 days RIDDOR reportable</p> <p>5 Fatality, Permanent harm or irreversible health effects</p>
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<b>LIKELIHOOD x SEVERITY</b>	<b>RISK</b>	<b>RESIDUAL RISK</b>
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	LOW	1 TO 6	<p>The <b>RISK</b> is considered: Tolerable when measured against the consequences of an incident, Low level of control measures required: adequate supervision, training and information. Often, no additional controls are needed. <b>WORK CAN PROCEED</b></p>	<p><b>The Residual Risk is considered:</b> Tolerable when measured against the consequences of an incident, the assessment must be reviewed regularly to ensure that the conditions remain the same and the risk does not increase <b>WORK CAN PROCEED</b></p>
	Med	8 TO 12	<p><b>WORK MUST NOT PROCEED</b> –until the hazards identified are removed or adequate controls implemented which have reduced the residual risk to as low as possible. Moderate control measures must be in place: adequate training, supervision and information are needed as well as emergency procedures, safety barriers and PPE are place together with safe operating procedures.</p>	<p>Action is required to control risks. Review to review to assess whether the risk can be reduced: Ensure competence levels for safe working and equipment operation and procedures when task is altered or new employees introduced.</p> <p><b>WORK CAN PROCEED UNDER MANAGEMENT CONTROL REVIEW ASSESSMENT REGULARLY</b></p>
	High	15 TO 25	<p><b>WORK MUST NOT PROCEED</b> –until the hazards have been removed or adequate controls have been implemented which have reduced the risk to at least MEDIUM. This level of risk is unacceptable as there is a high probability of a major injury occurring. Highest level of controls required. Permits to work specialist equipment trained personnel and strict supervision.</p>	<p><b>WORK MUST NOT PROCEED</b></p> <p>Alternative methods must be used to eliminate the risk or to reduce it to a MEDIUM or LOW level</p>

Note: COSHH risk assessments do not need to be entered onto Datix.

## Principles in Prevention

In deciding which preventative and proactive measures to take, the following principles of prevention should be applied.

1. If possible avoid a risk altogether, e.g. do the work a different way, with different equipment or in a different location, taking care not to introduce more hazards.
2. Evaluate risks that cannot be avoided by carrying out a risk assessment.
3. Combat risks at source, rather than taking measures to cover them over. So, if the steps are slippery, treating or replacing them is better than displaying a warning.
4. Adapt work to the requirements of the individual. Consult those who will be affected when designing workplaces, selecting work / personal protective equipment, drawing up working / safety procedures and method statements. Aim to alleviate repetitive monotonous work and increase the control that individuals have over work they are responsible for.
5. Take advantage of technology and technical progress, which offers opportunities for improving working methods and making them safer.
6. Implement risk control measures that follow a coherent approach so that they complement each other. This will progressively reduce the risks that cannot be prevented or avoided altogether, and will take account of the way work is organised, the working conditions, the environment and any relevant social factors.
7. Give priority to those measures which protect the whole workplace and everyone who works there, and so give the greatest benefit(i.e. give collective protective measures priority over individual measures);
8. Ensure that workers, whether employees, contractors or self-employed understand what they must do.
9. A positive health and safety culture should exist within an organisation. That means the avoidance; prevention and reduction of risks at work must be accepted as part of the organisations approach and attitude to all its activities. It should be recognised at all levels of the organisation.

## Hierarchy of Controls

### ERICP

1. **ELIMINATE** (elimination of the hazardous substance)
2. **REDUCE** (modification of the substance, process and/or workplace)
3. **ISOLATE** (applying controls to the process e.g. enclosures, slashguards, LEV)
4. **CONTROL** (working in ways that minimise exposure, e.g. safe working distance)
5. **PPE** (equipment, devices or clothing worn by individual staff exposed to hazardous substances)

# Mercury Safety Management Standard and Procedural Guidance



University Hospitals  
of Leicester  
NHS Trust

Health & Safety Team  
October 2023

## 1. INTRODUCTION

This document contains standards and guidance on the management of risks arising from mercury and applies to all mercury-containing equipment used by the Trust for its normal activities, whether clinical or otherwise, and all liquid mercury or mercury salts.

It is the responsibility of managers to ensure that any activities or operations involving the use of mercury are managed in line with this document, in any area under their control.

This document must be read in conjunction with the UHL Control of Substances Hazardous to Health (COSHH) Policy and any additional guidance specific to departmental issues or activities.

Mercury is present in the following main areas within the healthcare setting:

- Dental Amalgam
- Thermometers and sphygmomanometers
- Florescent discharge lamps
- Electrical switches and batteries
- Laboratories
- Estates Department

## 2. PROCEDURE

### **Guidance for the safe use, handling, storage and disposal of Mercury**

The main protection against mercury vapour is the prompt use of Mercury Spillage procedures. Mercury spillages should immediately be reported to your local manager, pharmacy and the Health & Safety Team.

All tasks involving the use of mercury must be risk assessed and have a standard operating procedure / guidance in place for staff to follow.

Staff must be familiar with your emergency arrangements before they use mercury.

### **Use**

Assess the quantity required for each activity. Keep the quantity of mercury in use to a minimum at all times.

Containers of mercury should be kept on trays which have a smooth impervious surface to avoid spillage of mercury over a wide area of floor or workbench.

Mercury should be handled on a smooth impervious surface with a ledge. This surface should ideally slope away from the operator.

Good ventilation should be provided where large quantities of mercury are handled e.g. when filling sphygmomanometer tubes, a fume cabinet with appropriate airflow should be used.

### Skin Protection

As mercury can be absorbed through the skin, contact with the skin should be avoided and Personal Protective Equipment (PPE) must be worn if this is likely.

- Suitable gloves must be worn (one pair of PVC / rubber or two pairs of disposable nitrile)
- Face mask (as specified within the risk assessment)
- Disposable shoe coverings

### Risk Situations

Breakages of equipment containing mercury cause spillage. Unless such spillages are dealt with quickly and efficiently, contamination of the floor and fabrics of the room will continue to produce harmful mercury vapour for years afterwards. Air monitoring may then be required to ensure safe residual levels of mercury vapour after any spillage.

## 3. SPILLAGE PROCEDURES

### Mercury Spillage Procedure for Liquid Mercury

Recover or treat spillages at once. It is especially important to ensure good ventilation and act promptly to keep exposure time to a minimum. DO NOT discard mercury to sinks, toilets or drains. If a sink, toilet or drain is contaminated isolate the area where possible and notify the Estates & Facilities department for immediate attention.

1. Segregate off the immediate area to prevent people walking on the contaminated part. Remember when mercury falls, it breaks into many small particles and may spread over a wide area.
2. Suitable Personal Protective Equipment must be worn i.e. gloves, vapour mask.
3. Reduce the surface area affected by pooling globules – use pan and scoop method – **DO NOT** brush or sweep the area.
4. **Mercury must not be sucked up through a capillary tube by mouth.**

As much as possible of the spilt mercury should be gathered up using disposable materials, e.g., pipette, wooden spatulas. It may be drawn up through a capillary tube into a flask connected to a vacuum source or drawn into a hypodermic syringe (without needle). Place the mercury in a jar of water and seal the lid. Adhesive tape may be useful for picking up droplets.

**DO NOT USE VACUUM CLEANERS OR ASPIRATION UNITS TO CLEAR UP A MERCURY SPILLAGE AS THIS WILL VENT MERCURY VAPOUR INTO THE ATMOSPHERE. THEY ARE ALSO DIFFICULT TO DECONTAMINATE AND MAY ACT AS A SOURCE OF MERCURY VAPOUR IN THE FUTURE.**

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5. If **all** traces of mercury have been located and no mercury contamination remains the surface should be wiped with a damp cloth which should then be put in a polythene bag, sealed and put into a clinical waste bag for incineration.
6. If there is any doubt that some mercury remains, or if the spillage has been on a soft pervious surface
  - Treat the area liberally with mercury spillage paste (obtained through Estates & Facilities) and left to dry for 3 hours. (This renders the mercury non-volatile by forming an amalgam).
  - The paste should be wiped up with a damp cloth.
  - Place the cloth in a strong clear polythene bag, double bag with label affixed

indicating Mercury Contamination and this should be taken to the Pharmacy Department for them to dispose of as special waste'.

7. Mercury which may remain, e.g., in cracks in the floor, other crevices or under floor boards, may be treated with mercury spillage paste.
8. Dirty mercury should not be thrown away, but kept under water in a sealed airtight jar and sent to Pharmacy, clearly labelled 'SPILT MERCURY'.
9. If any person has been significantly exposed to mercury vapour or skin contact with liquid mercury, advice should be sought from the Occupational Health Team.
10. The incident must be reported on the Trust's DATIX incident reporting system.

### **Small Spillage - Procedure for Smooth Surfaces**

**DO NOT use a vacuum cleaner or aspiration unit to clear up a mercury spillage as this will vent mercury vapour into the atmosphere**

#### **DO**

- Immediately isolate area to essential staff only
- Ventilate the room to keep the temperature as low as possible
- Ensure all cuts and grazes on hands are covered
- Wear protective disposable gloves (as identified in the risk assessment)
- Isolate any electrical equipment that may have become contaminated with mercury as mercury is a good conductor of electricity
- Draw up mercury using an appropriate sized syringe (no needle) or bulb aspirator
- Small droplets should be collected on adhesive tape i.e. adhesive tape and the area finally wiped down with damp tissues
- Place the mercury into a laboratory sample pot or similar container containing sufficient water to cover the mercury droplets – the water will prevent the evaporation of the mercury – secure the lid and seal with adhesive tape. Clearly label the container 'spilt mercury'.
- Place all items used to remove the spillage (syringe, gloves, paper towels) into a clear plastic bag – double bag (2<sup>nd</sup> clear bag) and attach a label clearly indicating 'Mercury Contamination' and 'date'. Take the container and bag to the Pharmacy Department for them to dispose of all items as special waste.
- Hands must be thoroughly washed in cold running water using liquid soap. Disposable paper towels should be used to dry the hands.
- Complete a UHL Incident Reporting Form via the Trust incident reporting system DATIX
- If you feel unwell seek assistance from Occupational Health Service, your GP or Emergency Department out of hours

**MERCURY SPILL KITS ARE AVAILABLE FROM THE SECURITY OFFICES AT EACH HOSPITAL SITE  
WHEN NEEDED**

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Spare spill kits are kept in the Medical Equipment Libraries at each hospital sites.

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**SPILL KIT CONTENTS:**

- Disposable plastic gloves or two pairs Nitrile gloves
- Disposable shoe coverings
- Face mask / chemical safety goggles / vapour mask
- Paper towels
- Bulb Aspirator (for manual extraction of mercury from surfaces) or syringe without needle
- Receptacle fitted with a seal
- Mercury absorbent paste (equal parts of calcium hydroxide, flowers of sulphur, and water)
- Instructions for use
- Card containing contact numbers for assistance and advice

Local Spillage Procedures: - The local spillage arrangements will depend on the type of spillages likely in your area. Types of spillages will be identified via your activity risk assessments or from local inspections and incident records. If spillages in the area are minimal this information will be short. If there are risks associated with chemical spillages then the arrangements will be more complex.

Type of spillage from your activity risk assessment.	Hazards associated with spillage	Do you need to isolate or evacuate the area? How are you going to prevent	How is the spillage to be dealt with?	What equipment is needed? Is it available? Where is the equipment	Who has the necessary training to deal with the spillage?	Additional information / special arrangements
Water, cleaning agents, chemicals (name each chemical)	slip, inhalation, asphyxiation, fire, burns to skin, reaction with other chemicals,	Which groups should be excluded from the area? Staff, patients, visitors, etc. How? – Close	Neutralise? Asorb? Wipe? Disinfect? Etc.	Spill kit, respirator kit, neutralising granules, etc. Cupboard,	All Staff, groups of staff (job role), named personnel, etc?	Report to manager, report on Datix, report to Health and Safety team, etc.
<b>Example</b> (please delete this row from your working document): <b>Mercury</b>	Inhalation, skin contact. See COSHH Risk Assessment No 123XYZ	Yes – Isolate the area Exclude others from entering the area.	In accordance with spill pack instructions and Mercury Policy – See attached mercury spillage instructions.	Spill pack – located in sisters office. Additional packs available from Medical Physics on (tel No)	(Named personnel)	Report incident on Datix. Waste must be treated as special waste – ontact pharmacy department on (tel. No).

Once spillages and cleaning procedures have been identified it will be necessary to ensure that appropriate signage and instruction is available in suitable locations to ensure that staff have relevant information relating to the actions required in the event of a spillage. Further advice and guidance can be sought from the Health and Safety Team.