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CONTROL OF SUBSTANCES HAZARDOUS TO HEALTH INFORMATION/GUIDANCE

Introduction and Aim

This information/guidance document supports the control of hazardous substances to health procedural document and forms part of the suite of health and safety documents. This guidance should be followed to ensure the appropriate actions are taken under the legislative framework for violence and aggression.

Supporting Procedures and Written Control Documents

Control of Substances Hazardous to Health Procedure, Risk Management Policy, Health and Safety Policy, Incident reporting Policy, Stress, Lone Worker Procedure, Statutory and Mandatory Training Policy, Fire Safety Policy, Personal Protective Equipment Procedure.

Scope

This information and guidance supports the procedural document and is applicable to all Public Health Wales staff. In this document 'staff' refers to all staff including agency staff, temporary staff, those on honorary contracts and volunteers.

Equality, Health Impact Assessment

An EHIA has been completed.

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Control of Substances Hazardous to Health Guidance and Information

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1. Introduction

The purpose of this Procedure is to enable Public Health Wales, as an organisation, to comply with the Control of Substances Hazardous to Health (COSHH) Regulations 2002 (as amended).

The organisation recognises that some substances have the potential to cause ill-health and measures have been introduced to identify what substances employees use or are exposed to in the course of their work. Many substances can cause harm to health but, when used properly, they rarely do. This procedure extends to all employees of Public Health Wales students, patients, visitors and contractors.

The Control of Substances Hazardous to Health (COSHH) applies not just to chemicals but to a wide range of substances and preparations (mixtures of two or more substances) which have the potential to cause harm to health if they are ingested, inhaled, or are absorbed by, or come into contact with, the skin or other body membranes. They include:

- chemicals;
- products containing chemicals;
- substances used directly in work activities;
- substances generated during work activities and processes, such as dust from cutting plaster;
- fumes, vapours, mists and gases;
- naturally occurring substances;
- substances with Workplace Exposure Limits (WELs);
- any kind of dust where the average concentration in the air exceeds the levels specified in COSHH;
- biological agents such as microorganisms;
- microorganisms that cause diseases and microorganisms used in laboratories;
- wet working e.g. in cleaning, which can cause dermatitis;
- asphyxiating gases;
- medication such as cytotoxic drugs;
- any other substance which creates a risk to health.

If the packaging has any of the hazard warning symbols then it is classified as a hazardous substance. However, COSHH does not include:

- asbestos or lead, which have their own regulations;
- biological agents not directly connected with activities which are not in the employers control, such as catching 'flu.

Substances which are hazardous only because they are:

- radioactive;
- at high pressure;
- at extreme temperatures;
- have explosive or flammable properties.

2. **Definition - What is a 'substance hazardous to health'?**

COSHH covers substances that are hazardous to health. Substances can take many forms and include:

- **chemicals**
- **products containing chemicals**
- **fumes**
- **dusts**
- **vapours**
- **mists**
- **nanotechnology**
- **gases** and **asphyxiating gases** and
- **biological agents** (germs). If the packaging has any of the hazard symbols then it is classed as a hazardous substance.
- germs that cause disease such as leptospirosis or legionnaires disease **and** germs used in laboratories.

3. **Roles and responsibilities**

Managers:

- ensuring that the arrangements for undertaking COSHH risk assessments are defined within their area of responsibility;
- ensuring that employees are trained to use, handle and safe storage of all substances used in their work activities;
- ensuring that they are familiar with, and ensure that all employees under their control are aware of;
 - any contingency plan involving spillage;

- the safe disposal of unwanted substances;
- first aid arrangements appropriate to the substances used;
- ensuring that line managers implement the safe systems of work identified by the risk assessments;
- implementing arrangements to bring this policy and resulting safe working methods (and any revisions) to the notice of all employees within their Service Areas and others who may be affected;
- ensuring that the resources required in implementing this policy and safe working methods are provided, and ensure that financial requirements are included and provision is available;
- ensuring that substances are only used and dealt with in the prescribed manner;
- ensuring that re-assessments are carried out on at least a bi-annual basis;
- ensuring that up to date COSHH assessments are available at each location where employees use hazardous substances;
- ensuring that all workers receive appropriate supervision, instructions and training relevant to the substances they use;
- training should be recorded by the departmental manager and the training records retained in accordance with departmental procedures;
- monitoring employees to ensure they are complying with this Policy and safe working methods via auditing;
- respond to incidents.

Health and Safety function and local specialists

The Health and Safety function and local specialists (i.e. Health and Safety Lead for Microbiology) are responsible for providing advice and guidance to managers on the effective implementation of the COSHH procedure and safe working methods.

Employees

The main duties of employees are to:

- co-operate with the organisation so far as this is necessary to enable them to meet their obligations under the COSHH Regulations, e.g. by following established procedures which minimise the risk of exposure;
- make full and proper use of control measures including personal protective equipment and report defects;

- ensure that equipment is returned after use to any storage place that is provided for it, and to report immediately to their manager, supervisor as appropriate, any defects discovered in equipment;
- where appropriate, attend Occupational Health medical examinations at the appointed time and give information about their health that may reasonably be required; and
- report any accident or incident which has or may have resulted in the release into the workplace of a biological agent.

4. Risk Assessment

The COSHH assessment must be undertaken by a competent person who is familiar with the systems of work within the area being assessed. It may be necessary to undertake more than one assessment for each area e.g. an assessment for nursing activities and another for housekeeping activities.

It is the responsibility of managers to ensure that a COSHH assessment is undertaken for their areas of responsibility and their assessment documentation is kept up-to-date. Where there are no substances hazardous to health within this area this must be clearly noted.

The Safety Data Sheet play a vital role when completing COSHH risk assessment as it provides key information on the hazardous substance, which is used to help identify control measures required. It is important to understand that they are not a replacement for the risk assessment procedure.

Assessment includes:

- Identification of all hazardous materials within the area;
- Identifying the level of risk these materials pose determined by the following:
 - how much of the substance is used;
 - the nature of the hazardous substance;
 - what the routes of entry are;
 - the persons at risk of exposure;
 - what the substance's potential hazards are;
 - what the substance's potential ill health effects are;
 - emergency arrangements;
 - existing precautionary control measures;
 - further precautionary measures that may be required.

If there is no risk to health or the risk is negligible, no more action is required. If there are health risks, then the manager must consider what else needs to be done to comply fully with COSHH requirements.

Assessments must be undertaken when

- a new substance is used in the workplace that is classified as a substance hazardous to health;
- initial COSHH assessments states when a review should take place i.e. annually;
- there has been a change in the safe operating procedure;
- the substance is used for a different task;
- the substance used is changed, i.e. manufacturer or concentration;
- the HSE issue guidance relating to the substance or work activity;
- following any adverse event involving the substance or work activity.

Preventing and controlling risks: Adequate control

All control measures must perform as intended and continue to prevent or adequately control the exposure of employees to substances hazardous to health. This includes correcting as soon as possible any defects found in the controls which could result in reduced efficiency, effectiveness or levels of protection for employees.

Department/service managers shall be responsible for implementing effective safety management systems for the prevention and control of exposure to hazardous substances in their work areas.

The following is the preferred hierarchy of control measures, which should be considered:

- elimination (change the process or activity so that the hazardous substance is not used or generated);
- substitution (using it in a safer form for example pellets instead of powder);
- isolation (separation of the process from the employee by distance or the use of barriers to prevent exposure);
- reduction (time of exposure / numbers of employees exposed)
- enclosure (partial or fully);
- safe systems of work (or working procedures are detailed instructions to enable staff to work safely);
- housekeeping;

- information/instruction;
- personal protective equipment.

Employees are required to make full use of all the control measures and to report any defects. It is the responsibility of all managers that all reasonable steps are taken to ensure that staff are able to do so.

5. Training and/or Communication with Staff

There is a legal requirement under COSHH Regulations for the organisation to provide suitable and sufficient training, information and instruction:

- to all employees who use potentially hazardous substances;
- on storage and disposal procedures to be followed;
- on any significant risks to health and the precautions which should be taken;
- on monitoring of exposure;
- on collective results of health surveillance;
- on procedures for dealing with incidents and emergencies.

Following the completion of a COSHH risk assessment the need for information, instruction and training must be considered and appropriate arrangements made by the manager.

These might range from a simple instruction to regular formal sessions and be a combination of theory and practice. The use of hazardous substances will be restricted to trained, experienced and authorised persons who are familiar with the safe use of the substances, hazards associated with processes and the safety precautions to be observed. The Manager should ensure that staff undergo local training, which is specific to their role and must be focused on the substances which they actually come into contact with as part of their work.

Supervision may be required for new employees or for established and experienced staff following the introduction of new substances. Local information, instruction and training should include:

- names of any substances which they are to work with;
- any potential risks created by exposure;
- how to access and understand the COSHH assessments;
- the main findings of the COSHH assessment;

- precautions needed to protect themselves and others;
- how to use any personal protective equipment provided;
- results of exposure monitoring and health surveillance;
- emergency procedures which should be followed in the event of an incident.

Further training must be undertaken if there is:

- a new substance introduced;
- a change in the use of a substance, safety data sheets or re-classification;
- a change in the composition of the substance;
- new equipment which involves the use of substances;
- an incident investigation which has identified a need;
- observation that procedures are not being followed.

6. Monitoring and auditing

Health surveillance

In certain circumstances, it will be necessary to undertake health surveillance of employees. Health surveillance is a systematic process, which is required when:

- there is an identifiable disease or adverse health effect associated with a work practice;
- there is a reasonable possibility that the effect may occur under the conditions of the work practice (e.g. if control is dependent on Personal Protective Equipment) and;
- there is a valid means for detecting the effect before it becomes permanent.

The objective of health surveillance is to protect the health of individual employees by detecting as early as possible adverse changes which may be caused by exposure to hazardous substances. Health surveillance informs the evaluation of any measure(s) taken to control exposure and contributes to the collection and collation of up to date information to inform the determining and evaluation of substances hazardous to health.

Health surveillance and immunisations will be undertaken via the Occupational Health Service. This is provided through a contract and

details of which are provided on the intranet:
<http://howis.wales.nhs.uk/sitesplus/888/page/64954>

Exposure to two or more substances

Where a work activity may expose employees to more than one substance hazardous to health, the Manager must consider the possible enhanced harmful effects of combined exposures. If employees are under health surveillance, the results should be closely monitored for evidence of enhanced effects.

Emergency Arrangements

Where the risks of a substance escaping are high, or the substance is especially hazardous, the local manager will ensure that the appropriate emergency arrangements are in place as part of the risk assessment process. Guidance to inform the identification of emergency arrangements can be found on the supplier's Safety Data Sheet and COSHH assessment.

Personal Protective Equipment

Where the risk assessment has concluded that it is necessary to use personal protective equipment (PPE), this shall comply with the provisions set out in the PPE Regulations.

The main requirement of the Regulations is that PPE is to be supplied and used at work wherever there are risks to health and safety that cannot be adequately controlled in other ways.

The Regulations also require that PPE is properly assessed before use to ensure it is suitable:

- it has the necessary CE marking;
- is provided with instructions on how to use it safely;
- is used correctly by employees;
- employees are trained in the use of;
- is maintained and properly stored in a well-defined place;
- checked at suitable intervals; and
- when discovered to be defective, repaired or replaced before further use.

Personal protective equipment which may be contaminated by a substance identified as hazardous to health must be removed on leaving

the working area and kept apart from uncontaminated clothing and equipment. This equipment must be subsequently decontaminated and cleaned or, if necessary, disposed of appropriately.

Exposure monitoring

Where the COSHH assessment shows it is necessary, valid and suitable occupational hygiene techniques should be used to estimate the amount of employees' exposure to substances hazardous to health. For airborne contaminants, this measurement will normally involve collecting a sample of air from the employee's breathing zone using personal sampling equipment. It may also, where appropriate, involve sampling the air at the workplace periodically or continuously, using static sampling equipment.

Where air sampling techniques alone may not give a reliable indication of exposure, e.g. where there is skin absorption, ingestion or where respiratory protective equipment (RPE) is being used to adequately control exposure, biological monitoring is often a useful complementary technique to air monitoring

As part of the Health and Safety Audit process, managers will be required to provide a summary report on the status of COSHH assessments

- confirmation that all hazardous substances in current use cannot be replaced by less hazardous alternatives;
- the number of identified concerns in relation to occupational exposure to hazardous substances;
- confirmation that COSHH assessments have been either completed or reviewed and that all staff have been made aware of any associated risks;
- details of reviews of current Safety Data sheets for all hazardous substances in use within their remit;
- confirmation that engineering controls such as Local Exhaust Ventilation (LEV) are inspected and maintained to schedule and that records are kept for the required 5 years.

Workplace Exposure Limits

Some hazardous substances have been assigned a 'Workplace Exposure Limit' (WEL). These limits are set for substances what may cause the most serious health effects, such as occupational asthma or cancer.


















A list of substances with WELs is published in the guidance note EH40 and can be obtained from the Health and Safety team.

The absence of a substance from the list of WELs does not mean it is a safe substance; a COSHH risk assessment should still be undertaken to establish any necessary control measures.

Hazard Symbols/abbreviations/description of hazards

In 2009 the new international symbols (Globally Harmonised symbols (GHS)) have gradually been replacing the European symbols (a black edged square with a black symbol and orange background).

The new symbols are below:

New symbols	Description	Old 'CHIP' Symbol
	Explosive (Symbol: Exploding bomb)	Explosive 
	Flammable (Symbol: flame)	Highly/ Extremely flammable 
	Oxidising (Symbol: flame over circle)	Oxidising 
	Gases under pressure (Symbol: Gas cylinder)	No symbol
	Corrosive (Symbol: Corrosion)	Corrosive 
	Acute toxicity (Symbol: Skull and crossbones)	Toxic/Very Harmful Toxic 
	Health hazard/Hazardous to ozone layer (Symbol: Exclamation mark)	Harmful/ Irritant 
	Serious health hazard (Symbol: health hazard)	No current specific symbol Use either 
	Hazardous to the environment (Symbol: Dead tree and fish)	Dangerous for the environment 

7. Spillage and other emergencies

If a spillage occurs, it is essential to ensure that the correct procedure is followed and appropriate PPE is provided for use in the management of the spillage or other emergencies. PPE wherever reasonably practicable, should be stored outside of the area of intended use. All spillage or emergency kits must be stored in a suitable cupboard close to the main access and egress. Where this is not possible, face masks, filters etc., must be stored in sealed containers where they cannot become contaminated. After the spillage has been cleared all PPE must be placed into the appropriate waste bag, sealed and disposed of as chemical waste.











8. Records maintenance

All areas of the organisation will maintain a list of hazardous and /or dangerous chemicals in use within the area (Appendix 1).

No area will commence the use of any substance that may be deemed as hazardous or dangerous until a risk assessment has been undertaken.

Appendix 2 Hazardous / Dangerous Substance Hazard Assessment Form

SEE BELOW FOR UPDATED SYMBOLS

Assessor(s) Name		Assessor(s) Signature		Assessment date		
				Review date		
Substance Details						
Name		Material Safety Data Sheet	YES		NO	
Manufacturer		Contact Tel. No.				
Substance Hazards (please use Material Safety Data Sheet)						
Hazardous		Yes No		Yes No		Yes No
	Acute Toxicity (Cat1 - 3)		Acute toxicity		Health hazard/Hazardous to the ozone layer	
Hazardous		Yes No		Yes No		Yes No
	Respiratory Sensitisation		Corrosive (corrosion)		Gas under pressure	
Dangerous		Yes No		Yes No		Yes No
	Explosive		Oxidising		Flammable	
		Yes No		Yes No		
			Hazardous to the environment			
Associated Hazards			Storage Criteria			

Workplace Exposure Limits (WEL)			
Substance & Concentration	WEL	Recommended Control	Environmental Monitoring
			Yes / No
			Yes / No
			Yes / No
			Yes / No

Workplace Exposure		
Amount/Volume being used	Length of Exposure	Staff Exposed

Risk Evaluation with no controls in place													
Probability					Consequence					Risk Level			
1	2	3	4	5	1	2	3	4	5	1-3 (Green)	4-6 (Yellow)	8 -12 (Amber)	15 - 25 (Red)

Prevention and Control												
Eliminate					Substitute							
Enclose / Isolate					Local Exhaust Ventilation					General Ventilation		
Exposure Reduction					Good Housekeeping					Personal Protective Equipment		
Health Surveillance					Inform, Instruct, Train							

Risk Evaluation with Current controls in place													
Probability					Consequence					Risk Level			
1	2	3	4	5	1	2	3	4	5	1-3 (Green)	4-6 (Yellow)	8 -12 (Amber)	15 - 25 (Red)

Emergency Procedures	
Fire	
Spillage	

Disposal	
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Routes of Transportation	
Inhalation	
Ingestion	
Eye Contact	
Skin Contact	
Other	

References

Health and Safety at Work Act 1974

Control of Substances Hazardous to Health Regulations 2002

Dangerous Substances and Explosive Atmospheres Regulations 2002

Personal Protective Equipment at Work Regulations 1992

Classification, Labelling and packaging (CLP) Regulation 2015

Link to HSE - <http://www.hse.gov.uk/coshh/index.htm>