

Document level: Trustwide (TW)
Code: IC17
Issue number: 3.1

The Control of Legionellae and Safe Water Services

Lead executive	Director of Operations
Authors details	Head of Estates - 01244 397726

Type of document	Policy
Target audience	All CWP staff
Document purpose	<i>To ensure statutory compliance to prevent or minimise the risks associated with either contaminated or very hot water to service users, visitors, staff and other persons working at or using CWP premises.</i>

Approving meeting	Infection Prevention and Control Sub Committee	Date 04-Feb-20
Implementation date	04-Feb-20	

CWP documents to be read in conjunction with	
HR6	Mandatory Employee Learning (MEL) Policy

Document change history	
What is different?	Full review of the document undertaken
Appendices / electronic forms	N/A
What is the impact of change?	N/A

Training requirements	No - Training requirements for this policy are in accordance with the CWP Training Needs Analysis (TNA) with Education CWP.
-----------------------	---

Document consultation	
Clinical Services	via discussion forum
Corporate services	via discussion forum
External agencies	N/A

Financial resource implications	None
---------------------------------	------

External references
1. Health and Safety at Work etc. Act 1974
2. Control of Substances Hazardous to Health (COSHH) Regulations 1994 The HSC Approved Code of Practice – L8 (Rev) Health Technical Memorandum 04-01

Equality Impact Assessment (EIA) - Initial assessment	Yes/No	Comments
Does this document affect one group less or more favourably than another on the basis of:		
- Race	No	
- Ethnic origins (including gypsies and travellers)	No	
- Nationality	No	

Equality Impact Assessment (EIA) - Initial assessment	Yes/No	Comments
- Gender	No	
- Culture	No	
- Religion or belief	No	
- Sexual orientation including lesbian, gay and bisexual people	No	
- Age	No	
- Disability - learning disabilities, physical disability, sensory impairment and mental health problems	No	
Is there any evidence that some groups are affected differently?	No	
If you have identified potential discrimination, are there any exceptions valid, legal and/or justifiable? N/A		
Is the impact of the document likely to be negative?	No	
- If so can the impact be avoided?	N/A	
- What alternatives are there to achieving the document without the impact?	N/A	
- Can we reduce the impact by taking different action?	N/A	
Where an adverse or negative impact on equality group(s) has been identified during the initial screening process a full EIA assessment should be conducted.		
If you have identified a potential discriminatory impact of this procedural document, please refer it to the human resource department together with any suggestions as to the action required to avoid / reduce this impact. For advice in respect of answering the above questions, please contact the human resource department.		
Was a full impact assessment required?	No	
What is the level of impact?	Low	

Contents

1. Introduction.....	4
2. Legislation and guidance	4
2.1 Statutory Safety Codes of Practice	4
2.2 Employers Duties.....	5
2.3 Employees duties	5
3. Trust responsibility.....	5
4. Delegated responsibility.....	6
5. Main safety objectives	6
6. Monitoring of performance	6
6.1 Risk assessment.....	6
6.2 Monitoring regime	7
7. Training requirements.....	7
8. Incidents of Legionellae contamination	8
9. Action in the event of a clinical case	8
10. Guidance documentation	8
Appendix 1 - Schedule of works and details of control scheme.....	10
Appendix 2 – Control parameters for hot and cold water services.....	12

1. Introduction

The use, quality and reliable supply of water are vital to the proper running of Cheshire & Wirral Partnership NHS Foundation Trusts (hereinafter referred to as the Trust) services and the well-being of the service users, staff and others, on, or using our site and services. Water is an essential facility, which is used for drinking, preparation of medicines and food, together with operational services needs such as bathing and the safe running of machinery.

The extremes of quantity and temperature of water can be harmful to all persons especially those who have medical, mental or ageing disabilities, the elderly and pre-adolescents. In addition, airborne water droplets can potentially contain Legionellae bacteria, a micro-organism which creates a hazard to the health of any person. It is subject to legislative control through Control of Substances Hazardous to Health (COSHH).

The Trust recognises the importance of the water service and accepts its responsibility under the Health and Safety at Work Act etc. 1974 (HSWA) and the Control of Substances Hazardous to Health Regulations 1999 to take all reasonable precautions to prevent or minimise the harmful effects of either contaminated (i.e. Legionellae) or very hot (i.e. over 43°C) to residents, service users, visitors, staff and other persons working at or using its premises.

2. Legislation and guidance

2.1 Statutory Safety Codes of Practice

The Trust, in implementing this policy, will use as a general source of practical guidance the Health and Safety Commission's Approved Code of Practice "L8" Legionnaires' disease –The control of Legionellae bacteria in water systems" 2001, made with the consent of the Secretary of State under Section 16 of the Health and Safety at Work etc., Act 1974.

With regard to the detailed practical guidance of implementing this policy, the Trust will use the detailed technical advice on design, maintenance, operation and management of water systems given in the Health and Safety Commission guidance section of the L8 ACoP and the NHS Estates two documents entitled "Health Technical Memorandum 04 01, The Control of Legionellae, hygiene, "safe" hot water, cold water and drinking water systems" Part A: Design, installation and testing and Part B: Operational management. Health Technical Memorandum 04 now supersedes Health Technical Memorandum 2027 and Health Technical Memorandum 2040.

It should be noted that the Trust does not operate any wet cooling towers.

As laid down in The Health and Safety Commission's Approved Code of Practice the Trust will undertake to:

- Identify and assess sources of risk;
- Prepare a scheme for preventing or controlling the risk;
- Implement and manage precautions;
- Keep records of the precautions implemented and will do so for each of the health care premises within the Trust.

2.2 Employers Duties

The Trust as employers have a general duty under The Health and Safety at Work Act etc. 1974 to ensure so far as is reasonably practicable, the health, safety and welfare of all its employees.

HSWA 2(1) requires employers to:

- 1) Provide and maintain plant and systems of work that are safe and free from health risks.
- 2) Make arrangements for ensuring safety and the avoidance of health risks in connection with the use, handling, storage and transportation of articles and substances [HSWA 2(2)b].
- 3) Provide such information, instruction, training and supervision to ensure the health and safety at work of their employees [HSWA 2(2)c].
- 4) Provide a safe working environment [HSWA 2(2)e].

Those in control of premises must ensure that they are safe and that any plant or substance does not endanger the health of all persons at work and the general public (HSWA).

These duties are made more specific in respect of substances (such as Legionellae bacteria) hazardous to health by the COSHH Regulations 2002. The Approved Code of Practice produced by the Health and Safety Commission and the Health Technical Memorandum 04 01 produced by the Department of Health sets the standard against which actions of the Trust will be measured by the Health and Safety Executive (HSE).

2.3 Employees duties

Employees have a duty under Section 7 of the Health and Safety at Work Act etc. 1974 to take reasonable care for their own health and safety and of that of others who may be affected by their acts or omissions at work.

Towards this end, employees should use correctly all work items provided by their employers, in accordance with their training and their instructions they receive to enable them to use the items safely.

Employees' duties under Section 7 also include co-operating with their employer to enable the employer to comply with statutory duties for health and safety.

Employers or those they appoint (e.g. under Regulation 6 of the COSHH Regulations) to assist them with health and safety matters therefore need to be informed without delay of any work situation which might present a serious and imminent danger. The danger could be to the employee concerned or, if it results from the employee's work, to others.

Employees should also notify any shortcomings in the health and safety arrangements, even when no immediate danger exists, so that employers in pursuit of their duties under the HSWA and other statutory provisions can take such remedial action as may be needed.

3. Trust responsibility

The Trust recognises its responsibility to implement in full the codes of practice as defined Health and Safety Commissions document and for specific technical guidance the NHS Approved Code of Practice HTM 04 01 in order that they properly control their water supply system.

A criminal prosecution may result from conditions, which are conducive to the growth Legionellae bacteria even though there is no evidence that the bacteria are present or that an outbreak has occurred.

4. Delegated responsibility

The Chief Executive is responsible for the Trust Wide implementation of this policy. The Chief Executive has delegated this responsibility to the Head of Estates. The Head of Estates will appoint a Responsible Officer who must have building services experience to implement, monitor, record and report on all aspects of this policy directly to him or a nominated deputy.

The Head of Estates is responsible for the implementation of this policy. The Estates department will forward any information to departmental managers regarding planned preventative maintenance, service contracts or any other information relating to water services on their site if requested. All personnel involved in commissioning new buildings, major refurbishment, ward/department closures or re-commissioning which involves the introduction of new water services, disruption or re-commissioning which involves the introduction of new water services, disruption and cutting into water services must fully comply with this policy at all stages of their contract.

5. Main safety objectives

The prime objective of this policy and procedural documents is the proper care and maintenance of the Trust's water supply services, in the interests of service users, Trust workforce and other persons entering Trust premises. The water is to be maintained in a safe condition and be managed in such a manner that very hot water, above 43°C, does not injure anyone with particular care being taken in respect of people with medical, mental or ageing disabilities, the elderly and pre-adolescents.

To achieve these aims, risk assessments must be regularly performed by named competent persons from the Legionellae Control Team engaged by the Trust.

High risk areas will be clearly identified and knowledge of these areas together with the necessary safeguards will be given to all persons on Trust premises.

These regulations envelope the construction sites on which various self-employed contractors are engaged within the Trust premises. They each have a duty to one another to advise them and Trust officers of any work they plan to perform which could affect the general public's health and safety.

They must identify and agree on a competent person to risk assess the site on a regular basis and keep a written record of these assessments and proposed action whenever the conditions on the construction site change, so that new hazards can be and the appropriate safeguards implemented.

6. Monitoring of performance

6.1 Risk assessment

The Estates Team or their nominated contractor will undertake a Legionellosis risk assessment of all the building services which comprise the Trust's whenever a significant change in building use or major refurbishment has taken place and it is deemed that the original assessment is no longer deemed to be valid.

An Estates record of all hot and cold water outlets such as baths, bidets, shower and wash basins will be maintained.

A record of all cisterns, humidifiers and other water systems which may present a Legionellosis hazard will be maintained. On each of these systems a current risk assessment will be held and updated whenever it is believed the risk may have changed significantly. During the assessment the following areas are examined:

- The physical condition and design of hot and cold water storage systems (such as tanks and calorifiers) and their ability to prohibit the proliferation of bacteria through the use of temperature control, water flow and prevent of contamination;
- The physical condition and design of pipe work and water outlets in respect of their ability to prevent thermal gain and cause stagnation;
- A review of the water conditions in the last twelve months as reported during the ongoing monitoring regime must be used to ensure an accurate and pragmatic view of risk is achieved;
- Any variations outside of the acceptable temperature limits must be examined in detail, with the frequency and duration of non-compliance assessed, corrective actions with acceptable time scales must be discussed and confirmed in writing;

This list of assessment areas is not exhaustive and the risk assessor should have the competency to decide what additional areas need to be examined.

6.2 Monitoring regime

The Estates Team or their nominated contractor will undertake a routine programme of monitoring to ensure the recommendations outlined in this document are being adhered to. A report will be prepared and submitted annually to the Health and Safety Sub Committee.

Water services should be routinely checked and inspected, and should be well maintained. Personnel, consultants or contractors designing or working on these systems must be familiar with the requirements of this document and that of the HSC ACoP L8 and HTM 04 01 Part A & B.

Items of plant such as softeners, water filters, and strainers will need to be checked in line with the manufacturer's recommendations.

Systems will require more frequent inspection and cleaning if not operated regularly. If the water supply quality is poor or varies, or if there is inadequate enclosure of tanks or if correct water temperatures are not achieved increased monitoring may be necessary.

The schedule of works and details of the control scheme for the control of Legionellae bacteria in water systems are provided in [Appendix 1](#).

The schedule of works for the management of safe hot water temperatures will be in accordance with the latest guidance from NHS Estates including the Health Technical Memorandum 04 01, The Control of Legionellae, hygiene, "safe" hot water, cold water and drinking water systems – see [Appendix 2](#).

7. Training requirements

The Estates Team and those competent staff who are chosen to deputise for them must be provided with regular training so that they are properly updated on new developments in the management and control of water services.

All managers responsible for Trust buildings have a duty of care and must be given training in order that they are aware of known hazards and the safe precautions to adopt to ensure their sites are safe.

The Trust recognises that only with the help of the site managers can the Estates Team maintain a safe regimen of care across the Trust's services.

8. Incidents of Legionellae contamination

Where Legionellae bacteria is detected within any plant and/or systems within properties under their remit, the Nominated Person will, in conjunction with and under the advice of, the Estates Team, investigate accordingly in order to determine the cause of the contamination and identify and prioritise any remedial action required.

The event will be recorded within a Datix Incident Reporting form completed by the Head of Estates or nominated Deputy which will be processed as per the normal reporting procedures and actioned appropriately. The risk rating called for within the Datix Incident Reporting Form will be agreed by the Head of Estates in conjunction with the Trust's Senior Health & Safety Manager.

The Estates Team will agree the locations of 'high risk' areas within their premises, that is, those areas occupied by patients who are particularly susceptible to infection. Where Legionellae bacteria are detected in high risk areas, the risk assessment carried out shall take account of this and will call for more stringent remedial action than for all other areas. A list of high risk areas will be contained within the Written Scheme for the site.

The detection of legionella bacteria in a system is not notifiable hence information relating to an event will therefore be contained within the Estates Team and actioned accordingly. Any Incident Report resulting in a 'High' or above risk rating will call for a Critical Incident Review which will be supported by an Investigation Report.

9. Action in the event of a clinical case

A single case of Healthcare Associated Legionnaires Disease should be reported to the HSE via RIDDOR (Reporting of Injuries Diseases and Dangerous Occurrences Regulations 1995) and also reported through the CWP incident management and reporting policy.

An outbreak of Legionnaires Disease is defined as two or more confirmed cases of infection occurring in the same locality within a six month period.

The procedures to be followed in the event of an outbreak will be as defined within the HSE Approved Code of Practice L8, 'The Control of Legionella Bacteria in Water Systems' appendix 2, 'Action in the Event of an Outbreak'.

10. Guidance documentation

- The Health and Safety at Work Act etc. 1974;
- Control of Substances Hazardous to Health and Control of Carcinogenic Substances to Health Regulations 2002;

- HSE ACOP L8 “Legionnaires’ disease -The control of legionella bacteria in water systems” 2013;
- Health Technical Memorandum 04 01, The Control of Legionella, hygiene, “safe” hot water, cold water and drinking water systems” Part A: Design, installation and testing and Part B: Operational management 2006.

Appendix 1 - Schedule of works and details of control scheme

Weekly			
Item	Task	Department Responsible	Recorded
1	<p>Sporadically-used outlets should be flushed through and purge to drain, or purge to drain immediately before use without release of aerosols AT LEAST ONCE A WEEK (refer to HTM 04 01 Part B – page 26 Table 2). During temporary ward or department closures a flushing regime is required for each and every outlet including WCs.</p> <p>Flushing should be carried out for minimum of 3 minutes. (Refer to HTM 04 01 Part B – page 10 paragraph 5.13).</p> <p>It is EVERY EMPLOYEE'S responsibility to make their head of department aware of infrequently used outlets so they can be included in a flushing regime.</p>	Each departments' responsibility	Notify Facilities

Monthly			
Item	Task	Department Responsible	Recorded
2	Review of Flow and Return Calorifier Temperatures via Honeywell Controls BMS system	Estates	Zetasafe Database
3	Temperature Checks of Sentinel HWS Outlets	Estates	Zetasafe Database
4	Temperature Checks of sentinel CWS Outlets	Estates	Zetasafe Database
5	Base Exchange Softeners, Filters and Screens checked and cleaned	Estates	Zetasafe Database

Quarterly			
Item	Task	Department Responsible	Recorded
6	Potable water analysis	Estates	Zetasafe Database
7	Dismantle, clean and descale showerheads and hoses	Estates	Zetasafe Database
8	Review Meeting Estate	Estates and Legionellae Control Team	Zetasafe Database

Bi-annual			
Item	Task	Department Responsible	Recorded

9	Cold Water Storage Tank (CWST) Ball valve and tank temperature checks	Estates	Zetasafe Database
10	Undertake risk assessment of all water installations in premises operated by the trust.	Estates	Zetasafe Database

Annually			
Item	Task	Department Responsible	Recorded
11	Temperature checks on representative number of non-sentinel hot and cold water outlets on a rotational basis	Estates	Zetasafe Database
12	Inspection and clean of cold water storage tanks	Estates	Zetasafe Database
13	Calorifiers are opened up and descaled. This negates the requirement for a sample to be taken from the calorifier drain annually	Estates	Zetasafe Database

Appendix 2 – Control parameters for hot and cold water services

Item	Parameter	Unit of Measure	Action Level	Action to be Instigated
1	Temperatures			
	CWST	°C	>20	Check integrity of tank and pipe insulation, carry out TBC bacterial analysis
	CWS	°C	>20	
	Calorifiers	°C	Flow <60 Return <55	Check for the correct operation of calorifier temperature gauge and then the thermostat setting, change as necessary. Check pipe insulation integrity. Recheck temperature after 24 hours, carryout TVC analysis if not satisfactory. If unable to achieve the correct temperatures take specific sample for Legionellae and risk-assess system. Continue Legionella sampling on a weekly basis until control temperatures are achieved.
	HWS	°C	<50	
All infrequently used outlets should be flushed at least once a week (HTM 04 01)				
2	If water analysis deemed to be required by Responsible Person – the following principles will be adopted: Total Viable Counts taken from Portable Water Systems	No./ml after 1 day at 37 °C	>10	Check temperatures and ascertain if any reason why results are high, recheck bacterial levels within 48 hours. Inform Legionellae Control Team. If recheck remains unsatisfactory refer to Legionellae Control Team. Immediately contact Infection Control Team.
		No./ml after 3 days at 22 °C	>100	
		Total Coliforms/100ml	>1	Immediately contact Legionellae Control Team
		E.coli / 100ml	>1	Immediately contact Legionellae Control Team

Cleaning and disinfection of hot and cold water services must be undertaken:

- If routine inspection shows it to be necessary

- If the system or part of it has been substantially altered or entered into for maintenance purposes in a manner which may lead to contamination
- If it is suspected that the building is at the centre of a Legionellosis outbreak

NOTE: The cleaning and disinfection of cold water storage tanks is a specialised procedure and operators must be familiar with all precautionary measures, including the appropriate regulations regarding the entry into confined spaces.

Appropriate training of operators and a record of inspection work must be recorded in the central Zetasafe database.