



London Ambulance Service **NHS**
NHS Trust

Legionella Prevention and Control Policy

DOCUMENT PROFILE and CONTROL.

Purpose of the document:

To ensure that the Trust has robust systems in place for the management of Legionella.

Sponsor Department: Estates Department

Author/Reviewer: Senior Building Service Engineer - to be reviewed annually by December 2018

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Amendment History			
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02/04/15	0.8	IPC Taskforce	Amendments Infection Control Taskforce March 2015 Section 3 amalgamated with Section 4.6 to clarify the roles and responsibilities of IPC, and IPC Taskforce and Committee; addition of DIPC and Public Health England role Page 12 – addition of assurance role of the strategic IPCC
27/01/15	0.7	DIPC	No additional comment
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Various	0.2	Estates Safety and Risk Infection control 'Health advisory board' representative	Minor
12/01/2014		Head of Infection Prevention and Control, Public Health England	Significant comments
07/10/13	0.1	Senior Building Service Engineer	New Policy

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the revised version is approved, whereupon it becomes version 2.0. The system continues in numerical order each time a document is reviewed and approved.

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Equality Analysis completed on	By
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Links to Related documents or references providing additional information		
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1. Introduction

- 1.1. *Legionella* species bacteria occur commonly in nature and small numbers are often found in water systems. The bacteria do not usually cause a problem unless they are present in large numbers and are aerosolised.
- 1.2. This policy incorporates the latest guidance available and has been tailored to meet the needs of the London Ambulance Service NHS Trust
- 1.3. Whilst the LAS will have overall responsibility for water management on its premises, where premises on the organisation site are leased to third parties, it will be the responsibility of the third party to implement their own policy, risk assessment and procedures, which should be in-line with this policy.
- 1.4. This policy is intended to prevent or, where this is not practicable, control the risks associated with *Legionella* species in water.

2. Scope

- 2.1 This Policy applies to all open water systems in sites owned, controlled, managed or leased by the Trust when used as operational business properties where the trust has Duty Holder responsibilities to ensure the welfare and safety of their patients, staff and visitors.
- 2.2 This policy applies to all managers, employees within the Trust, tenants and other bodies using Trust premises.
- 2.3 Building/engineering services/consultant engineers and contractors involved in the design, maintenance and repair of the systems and associated services will also need to adhere to this policy and procedure.

3. Objectives

- 3.1 To ensure that occupants and visitors to Trust premises are not exposed to water quality hazards, including those caused by legionella bacteria.

4. Responsibilities

4.1.1 Chief Executive

- 4.1.1 Has overall responsibility for all aspects of the quality of water supplies within ALL the Trust properties.
- 4.1.2 Shall nominate, in writing, via a delegated authorised person, a “Competent Responsible Person” to take day-to-day responsibility for controlling the identified risk from *Legionella* bacteria and other water hygiene issues

4.1.3 Shall ensure that adequate resources are made available to ensure that this policy is fully implemented.

4.2. Director of Finance

4.2.1 The Director of Finance via designated deputies, is responsible for exercising the Trust's duty of care with respect to the estates and facilities functions, and shall ensure suitable and sufficient arrangements are in place for implementing the policy and associated procedural document.

4.3. Competent Responsible Person (Estates Senior Building Service Engineer)

4.4.1 The Senior Building Service Engineer shall accept management responsibility for Legionella control.

4.4.2 Will prepare and implement an Operational Policy for Controlling Legionella and maintaining safe water and surface temperatures.

4.4.3 Ensure the competence of staff or external contractors used for any aspect of monitoring and/or maintaining the precautions for Legionella control.

4.4.4 Put in place arrangements for reporting an outbreak or suspected outbreak of Legionella or other water associated infections

4.4.5 To carry out precautions on the Control of Legionella and audit processes.

4.4.6 Will ensure consideration be given to design standards recommended within relevant HTM 04 01 and other design guidance.

4.4.7 Assess the training needs of staff in Control of Legionella.

4.4.8 Liaise between suitable training establishments and Consultants to provide approved courses on Control of Legionella.

4.4.9 Ensure personal training records are kept up to date.

4.4.10 Carry out two-yearly Risk Assessment Reviews on all water systems and air conditioning plant in line with the Health and Safety Executive L8 Guidelines.

4.4.11 Carry out remedial work highlighted during Risk Assessment where deemed appropriate.

4.4.12 Implement maintenance and inspection routines, as described in the Risk Assessment (or Written Scheme) as required in Health and Safety Executive L8 and other relevant and associated guidance documents.

4.4.13 Keep maintenance and monitoring records and make available for inspection and written records to be kept for 7 years and computer records also for 7 years.

4.5. Deputy Responsible Persons (Senior Surveyor)

4.5.1 Accept management responsibility for all the tasks described below and have deputised management responsibility of all the tasks listed under the Responsible Person section - in their absence.

4.5.2 Ensure that the in house or specialised contractors respond in a correct and timely fashion to system and/or equipment faults.

4.5.3 Proactively manage problems highlighted during routine monitoring or highlighted during the Risk Assessment Process to a satisfactory conclusion.

4.5.4 Report to Responsible Person that problems highlighted during routine monitoring or highlighted during the Risk Assessment have been carried out to a satisfactory conclusion.

4.6. Infection Prevention and Control

4.6.1 Head of Infection Prevention and Control (HIPC)

4.6.1.1 The HIPC is responsible for providing infection prevention and control related advice on the routine management of water quality

4.6.1.2 The HIPC is responsible for advising on and monitoring the infection prevention and control aspects of this policy and procedures for the control of water associated infections.

4.6.1.3 The HIPC is the person nominated by the Director of Infection Prevention and Control (DIPC) to advise on infection prevention and control elements of this policy and to have oversight of the maintenance of water quality.

4.6.2 In the event of an outbreak, the DIPC will declare the outbreak and together with the Public Health England Local Health Protection Team Lead, will convene an Outbreak Committee to ensure appropriate actions are taken (Appendix 1 and 2).

4.6.3 The monthly Infection Prevention and Control Taskforce (IPCT) is responsible for monitoring the infection prevention and control aspects of the policy and procedures for the control of water-associated infections.

4.6.4 The quarterly Infection Prevention and Control Committee (IPCC) will receive Trust-wide quarterly compliance reports from the Trust Responsible Person/Deputy Responsible Person for Legionella; and onward reporting via the Safety, Development, and Effectiveness Committee to the Board.

4.7. General/Departmental and operational Managers

4.7.1 Shall inform the Estates Department in writing by email to Estates.servicedesk@lond-amb.nhs.uk as and when LAS premises and departments are subject to a temporary closure (more than 4 four days).

4.7.2 Report any failures in line with Estates procedures for fault and incident reporting.

4.8. Employees

4.8.1 All employees must be aware that they have a duty of care for complying with this policy and the safety of themselves and others.

5 Assessment of the risk of legionella

5.1 Standard to meet:

Health and Safety Executive: Approved Code Of Practice (2013) L8, Page 11 paragraph 28

A suitable and sufficient assessment must be carried out to identify and assess the risk of exposure to legionella bacteria from work activities and water systems on the premises and any precautionary measures needed. The duty holder is responsible for ensuring the risk assessment is carried out.

The Risk Assessments will consider:

- The potential for aerosol formation.
- Assess hot and cold water systems including temperatures.
- Means of preventing or controlling risk.
- The likely risk to those who will inhale droplets. The susceptibility of the population exposed to Legionella will be subdivided into three categories

(High Risk –To note - As an ambulance service, LAS does not have specialty departments and/or clinical rooms.)

Moderate Risk – other healthcare premises.

Low Risk – non-healthcare premises

5.1.1 A suitable and sufficient risk assessment will be carried out every two years and reviewed annually. This will typically be carried out by a suitably qualified and experienced external contractor (a member of the Legionella Control Association or approved similar organisation). The risk assessment will include all risk items such as:

- Cold water storage tanks
- Hot water generators
- Hot and cold water distribution systems
- Evaporative condensers/wet cooling systems
- Air handling units
- Plus any other water risk items e.g. ornamental fountains, vehicle washes.

5.1.2 Plant room and building schematics will form part of the risk assessments.

5.1.3 The risk assessment will produce a list of remedial actions in a prioritised order of RISK, DIFFICULTY and COST that will be actioned by the Responsible Person (including requests for additional resources as deemed necessary). Water testing for the presence of Legionella will not form the basis of a Legionellosis risk assessment or an ongoing monitoring regime unless circumstances dictate sampling to be required for reassurance.

5.1.4 Whenever there is reason to doubt the current risk assessment is no longer valid the building will be re-assessed, for example:

- Change of building use
- Changes to plant and/or water use
- Availability of new information
- Results of checks show it is no longer effective.

5.2. Elimination of the risk of legionella

5.2.1 Where the risk assessment shows there is a reasonably foreseeable risk, the use of the water system, part of the water systems or systems of work that lead to exposure will be avoided so far as is reasonably practicable.

5.3. Control of the risk of legionella

5.3.1 Where avoidance is not reasonably practicable, there will be a written scheme for controlling the risk from exposure that will be implemented and properly managed as detailed in the 'Legionella Logbook' which will include a written scheme of monitoring requirements and which will be maintained by the responsible person in the estates department.

In particular;

- Domestic hot water storage vessels will be operated at a temperature of 60°C and return at 50°C.
- Domestic hot water distribution systems will be maintained at a minimum temperature of 50°C at the sentinel outlets. If the temperature falls below 50°C on a regular basis then legionella monitoring must commence until the problem is resolved and temperature regime maintained.

- Domestic cold water storage and distribution systems will be maintained at a below a temperature of 20°C
- To maintain distribution system temperatures, dead legs will be removed as soon as reasonably practicable when identified.
- Low use outlets must be run weekly for a minimum of 3 minutes.
- Shower heads and hoses should be cleaned and descaled quarterly or as necessary indicated by fouling
- Water tanks and hot water calorifiers will be inspected annually.
- Whenever possible stand-by distribution circulation pumps will be removed and stored locally for emergency use. Where this is impracticable twin set pumps will be switched every week
- Shunt pumps on calorifiers will not be used continuously, but for one hour each day during a period of low demand.
- Flexible hoses will not be used in new installations.
- Fire hose reels will be removed as a matter of policy.
- Low use (less than weekly) vehicle washes must be flushed manually for 3 minutes.

5.4. Monitoring regime-Hot and cold services

- 5.4.1 Monitoring of the trusts water systems will be carried out in line with the guidance set out in HSG 274, parts 1, 2 and 3 respectively. Additionally monitoring will be carried out when advised by either external consultants or when identified as part of the Legionella Risk Assessments.

6.0 Training and records of Training

- 6.1 All Estates Duty Holders and those competent staff who are chosen to deputise for them will be provided with in-depth training courses so that they are properly updated on new developments in the management and control of water services.
- 6.2 These approved training courses will be undertaken at least every three years to ensure the competent staff can fulfill the performance of their specific duties, or more frequently if legislation or significant system changes arise.
- 6.3 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 systems are safe.

- 6.4 In order to ensure a safe system of work the Trust recognizes, the requirement and importance of involving all disciplines and staff to assist Estates maintain a safe regime of care across the Trust's total estate.
- 6.5 The nominated Responsible Person (*Legionella*), with the assistance of internal or external resource where applicable, will arrange training for all managers so that the procedures to adopt to cope with risk systems on their site is understood.
- 6.6 All training will be recorded and records kept by the Estates department

7.0 Monitoring/audit

- 7.1 Audits of procedural systems, to ensure continual compliance, will occur on at least an annual basis and will be carried out by suitably qualified and experienced "competent person" appointed by the Responsible person.
- 7.2 The *HSE ACOP (2013) and Guidance* details what action should be taken to control or minimise the risk of exposure from Legionella within a water system.
- 7.3 The overall system will be audited on at least an annual basis to ensure that all aspects of the system are included within the scheme of precautions and remains to be a robust and effective system.
- 7.4 All records (written and electronic) will be kept in the appropriate record keeping logbooks and be retained for at least 7 years.

IMPLEMENTATION PLAN	
Intended Audience	<p>Directors-to ensure responsibilities are understood and formally appoint responsible people.</p> <p>Operational managers - so that responsibilities are understood.</p> <p>Site admin teams- so that checks can be made of preventative testing and access.</p> <p>Estates team- To ensure procedures reflects requirements.</p> <p>Health, safety and risk.</p> <ul style="list-style-type: none"> • To consider against existing COSHH policy and ensure that policy is recorded. • To check against latest requirements of new HSE L8 and codes of practice. • To determine and communicate any audit process. • Ensure any audit is robust. <p>Infection control-</p> <ul style="list-style-type: none"> • To ensure that Infection control committee has the opportunity to assess and comment. • To review against current HSE L8 requirements and codes of practice. • To determine if a joint audit with Safety and Risk team is appropriate.
Dissemination	Through normal process for policy.
Communications	Managers to extract relevant elements and cascade to teams.
Training	<p>For Estates team</p> <p>-Half day refresher for HSE L8 legislation for helpdesk, surveyor and engineers. Infection control representative to be invited.</p> <p>-Full day Responsible persons training for Duty holder and deputy.</p>

Monitoring:				
Aspect to be monitored	Frequency of monitoring AND Tool used	Individual/ team responsible for carrying out monitoring AND Committee/ group where results are reported	Committee/ group responsible for monitoring outcomes/ recommendations	How learning will take place
Monthly non conformance Risk assessments Shower head cleaning and monitoring records for low usage outlets. Training records	Monthly monitoring	Nominated responsible person (Estates Senior building service engineer.)	IPCT	Internal team meetings and discussion at IPCT
Trust wide compliance with any remedial plan, compliance with Temperature monitoring and flushes	Quarterly assurance reports	Head of Estates	IPCC	Onward assurance to SDEC and the Board

Actions to be taken in the event of a positive sample.

Background information

Legionella bacteria are common in natural water courses such as rivers and ponds. Since legionella are widespread in the environment, they may contaminate and grow in other water systems such as cooling towers and hot and cold water services.

They survive low temperatures and thrive at temperatures between 20-45°C if the conditions are right, e.g. if a supply of nutrients is present such as rust, sludge, scale, algae and other bacteria. They are killed by high temperatures.

Cooling towers, evaporative condensers and hot and cold water systems have been associated with outbreaks, hence control measures are in place to ensure appropriate temperatures are monitored and regular flushing, disinfection and scaling are undertaken. Within LAS other equipment which may pose a significant risk are water jet sprays, obsolete/low use toilets, taps and showers.

Legionellosis cannot be spread from person to person, and therefore control measures and regular risk assessment of systems are essential to reduce bacterial load of water systems. Occasionally, when sampling is indicated following risk assessment, this would generally be advised by the infection control team and/or in collaboration with external contracts/consultants.

Reporting arrangements

The Responsible Person (Estates Senior Building Service Engineer) would be expected to inform the Head of Infection Control immediately by email. In her absence, the Director of Infection Prevention and Control should be notified.

A decision for further action to be taken will be taken jointly with representation from Infection Control, Safety and Risk, and Responsible Person for Legionella Control (LAS), and from the local Public Health England's Health Protection Team.

1000+ cfu/l	<ul style="list-style-type: none"> • Initiate disinfection immediately, continue flushing, take out obsolete pipes • If lots of outlets with 1000+ cfu/l, consider valving off and disinfect sequentially, otherwise disinfect across the system • Update Safety and Risk/Infection Control • Head of Infection Control/DIPC raise awareness with Executive Team (may need additional funding to mitigate risks) • Head of IPC continue to liaise with PHE HPT lead 	<p>RPL with Consultants, Contractors, and others as identified in actions required</p> <p>Head of IPC with internal and external leads</p>	<ul style="list-style-type: none"> • Within 4 working days • Immediate • Immediate • Within 2 working days
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Action in the event of an outbreak

1. An outbreak is defined as two or more confirmed cases of legionellosis occurring in the same locality within a six-month period. Location is defined in terms of the geographical proximity of the cases and requires a degree of judgment. The responsibility lies with the Director of Infection Prevention and Control for the declaration of an outbreak in LAS.
2. The DIPC and local PHE HPT lead will invoke an Outbreak Committee whose primary purpose is to protect public health and prevent further infection in staff in LAS. This will normally be set up to manage the incident and will involve representatives from relevant complexes and departments.
3. PHE Health Protection team staff and/or EHO acting on their behalf (often with the relevant officer from the enforcing authorities - either HSE or the local authority) may make a site visit to assist with Outbreak control or pursue compliance with health and safety.
4. As part of the outbreak investigation and control, the following requests and recommendations may be made by the enforcing authority.
 - (a) To shut down any processes which are capable of generating and disseminating airborne water droplets and keep them shut down until sampling procedures and any remedial cleaning or other work has been done. Final clearance to restart the system may be required.
 - (b) To take water samples from the system (see Appendix 1) before any emergency disinfection being undertaken. This will help the investigation of the cause of the illness. The investigating officers from the local authority/ies may take samples or require them to be taken.
 - (c) To provide staff health records to discern whether there are any further undiagnosed cases of illness, and to help prepare case histories of the people affected.
 - (d) To co-operate fully in an investigation of any site that may be suspected of being involved in the cause of the outbreak. This may involve, for example:
 - (i) tracing of all pipework runs;
 - (ii) detailed scrutiny of all operational records;
 - (iii) statements from plant operatives and managers;
 - (iv) statements from water treatment contractors or consultants.

5. Any infringements of relevant legislation, may be subject to a formal investigation by the appropriate enforcing authority.