

Water Safety Management Pack (for Health & Safety Chairs)



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Executive Lead:	Executive Medical Director
Target Audience:	All chairs of Governance Groups/Committees within the Water Safety Management structure.
Keywords (min. 5):	Water, safety, governance, plan, <i>Legionella</i> , <i>Pseudomonas aeruginosa</i> , harmful pathogens

Purpose of Pack

This pack contains information about water safety, an area we have highlighted for discussion in 2020-21. We realise that this can seem confusing and difficult to see your way through, so we have provided the following to help your local discussions:

1. An SBAR outlining the areas of additional risk from changes in activity due to COVID, which incorporates the standard Legionella considerations
2. Some guiding questions for the H and S team
3. Additional information about reporting structures
4. The proposed risk for the corporate risk register

In order to be assured about the elements of water safety, the pan Lothian Water Safety Group thinks you need to be able to answer these questions, for the areas covered by your local H and S group:

- What are the normal mechanisms (the five components set out in the SBAR) and do I know where and how any issues are reported?
- Do I have a list of all the augmented care areas where additional testing for Pseudomonas is required? Is there agreement about when any sampling is undertaken, who the reports are returned to, and the timescales for completion of any rectification works
- Do I have any additional considerations for water quality in the areas covered by my committee? These might include water used for haemodialysis or dental chairs, or for filling birthing pools. There might be temporary structures giving additional capacity such as a Vanguard unit.

There are additional elements that are usually discussed related to water temperature for safe bathing with which you will be more familiar.

The Water Safety Group is currently reviewing its controls and communication to identify imperfections and issues which we can address to strengthen our prevention, response and governance.

We have included SHTM 04-01 Part B which outlines operational management of water systems so that the reader can refer to it as the reference material. It is much more explicit for instance regarding the criteria and function of the Authorised Person or Duty Holder for example.

[SHTM 04-01 Part B can be found here.](#)

Role of the Pan Lothian Water Safety Group

To provide assurance to NHS Lothian Health Care Governance Committee which in turn reports to NHS Lothian Board of Directors, that there are appropriate risk management infrastructure and controls in place to minimise the risk of harm and infection from water used by patients / residents, staff and visitors associated with waterborne pathogens.

The WSG provides a forum for those individuals with delegated roles and responsibilities to take collective ownership for ensuring it identifies water-related hazards, assesses risks, identifies and monitors control measures and develops incident protocols.

This group operates two way reporting in the following channels (when required):

- a. Facilities Overarching Health and Safety Committee
- b. Pan Lothian Infection Control Committee
- c. NHS Lothian Local Health and Safety Committee(s)
- d. Dental Unit Water Lines Short Life Working Group

1. SBAR- Water quality issues in the remobilisation phase from COVID (TG/DI June 2020)

Situation

The provision of water of adequate potable quality, free from Legionella, is a statutory responsibility for NHS Lothian for all the properties we are responsible for. This is set out and governed by Health and Safety legislation.

Background

Prior to March 2020, the Water Safety group were attempting to address the inadequate governance “lines of sight” around water quality identified through the investigation of safe water provision on several NHS Lothian sites in 2019 including RHCYP/DCN. The recommendation was that there should be discussion in 2020/21 at every local Health and Safety group meeting (rather than once a year as a key risk) to develop clearer understanding about local mechanisms and controls to assure legislative compliance with water safety. Recent events at Howden Health Centre have revealed that delivery of key components of safe water management are not fully embedded to currently provide a sufficient level of assurance. Service restrictions, as a necessary response to prepare NHS facilities for the impact of Covid 19 admissions, have introduced new risks as some clinical areas have been out of clinical use for several weeks, and without sufficient processes and oversight, may come back into use without adequate assurance that the water is free from Legionella and fit for its intended purpose.

Assessment

1. Legionella controls around water in all areas are made up of five components with controls as outlined in the table below. Sampling of water for the presence of microorganisms and Legionella specifically is undertaken on a regular basis by those responsible for the infrastructure. This is either our Estates and Facilities team or our Hard FM external providers

Control measure	In normal circumstances	Normal checks and assurances	Impact of COVID
Temperature control	Temperature maintained and monitored (i.e. hot water remains hot and cold water is kept cold)	Building maintenance systems	Water standing in pipes may have moved outside temperature range
Adequate flow within a system	each outlet should be run every day	Part of cleaning regime, infrequently used outlets specifically identified in	More water standing in pipes or tanks for longer

		water safety plans	
System condition	pipes and tanks are well maintained	Inspected on a regular basis	
Microbiological Water Assessment	Identification of areas occupied by people recognised as being at high risk of acquiring Legionellosis and pre-emptive representative water culture.	Regular microbiological testing for Legionella species at predetermined sentinel water outlets.	
Clarity Regarding Roles and Responsibilities for safe water delivery	Reporting structures assign roles and responsibilities to named individuals who can demonstrate training in water safety and demonstrate clarity regarding actions they must deliver on discovery of non-conformance with any control measure.	Audit compliance with HSE Approved Code of Practice (ACOP) for the control of <i>Legionella</i> (L8) and SHTM 04-01	

2. The communication of and the actions to be taken on receipt of an abnormal result have been the subject of discussion at the Water Safety Group and the Health and Safety Committee. There are two main responsibilities set out in statute- that of the Authorised Person and that of the Duty Holder.

The Authorised Person is the appropriately trained member of the Estates team who instructs the necessary rectifications (thermal or chemical disinfection, replacement of pipes or tanks etc).

The Duty Holder is the lead manager within the management team responsible for the building in the context of its use- so the Site Director or HSCP Director for NHS Lothian buildings.

3. There are areas of the estate, both within hospitals and primary care clinical areas where footfall and use of water has been reduced, which then introduces an increased risk of reduced water consumption permitting stagnancy and facilitating growth of Legionella biofilm in the water system. This needs to be considered and mitigated by each local health and safety group (or water safety group if it exists as a separate subgroup) with knowledge of the water outlets in their building and clinical profile **and** the susceptibility of people using the water. The issues in a large managed system will be different to those in a smaller GP practice or health centre.

4. There are specific additional risks related to Dental Chair water lines which should provide water that is free of Legionella and be of a potable standard. This is because a standing column of water will have been sitting stagnant for some time and the water line will require decontamination. An SOP was developed for water line decontamination prior to the fallow period and methodology for quality assurance of the process as use of each chair ceased, but it is not clear how closely this was followed, and the recommended disinfection product was not reliably available. Not all facilities host dental services so this risk only impacts facilities that do.

Recommendations

1. Each local H and S group needs to establish the issues related to water safety for Legionella as a matter of urgency. That includes ensuring that:
 - a. There is clarity regarding roles and responsibilities for water management for each building.
 - b. the Legionella water sampling regime is known and outlined in a Legionella risk assessment and followed, including the reporting mechanism for positive results
 - c. Corrective actions regarding repeat testing or alterations in plumbing is undertaken in a timely manner and any modifications to the use of the building made explicit to all relevant stakeholders.
 - d. water safety matters are discussed at each local H and S group and reported appropriately
2. The remobilisation of premises and activity following a period of inactivity due to COVID pays attention to issues of water quality where this may be an issue and outlines any mitigating actions taken through the local H and S group
3. Actions related to enhanced water safety (testing for Pseudomonas in augmented care areas and dental lines) are not prioritised over basic items outlined in recommendation 1.

2. Guiding Questions - Water Safety Management Assurance for Health and Safety Groups/Committees

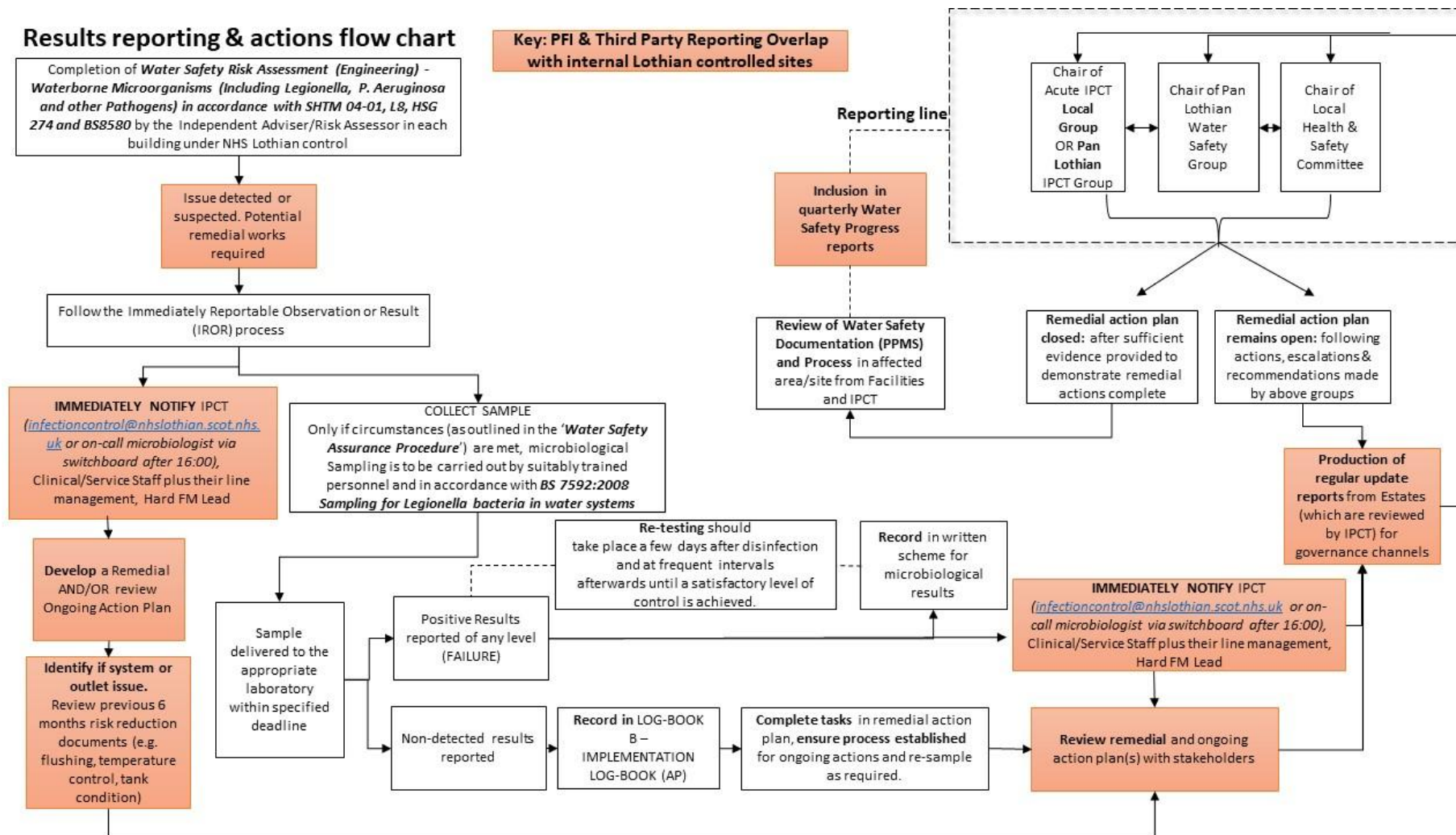
Please Note: The questions below can be used as prompts by Health and Safety Committee chairs when requesting documented evidence from those responsible for water safety for healthcare premises. Those providing the information to the questions will be the NHS Lothian Hard FM (Estates) and Third Party Providers e.g. Engie/Consort, Gallifordtry, Robertson FM and others.

For augmented care areas, clinical and or Soft FM representatives should provide the required documented evidence of the flushing requirements.

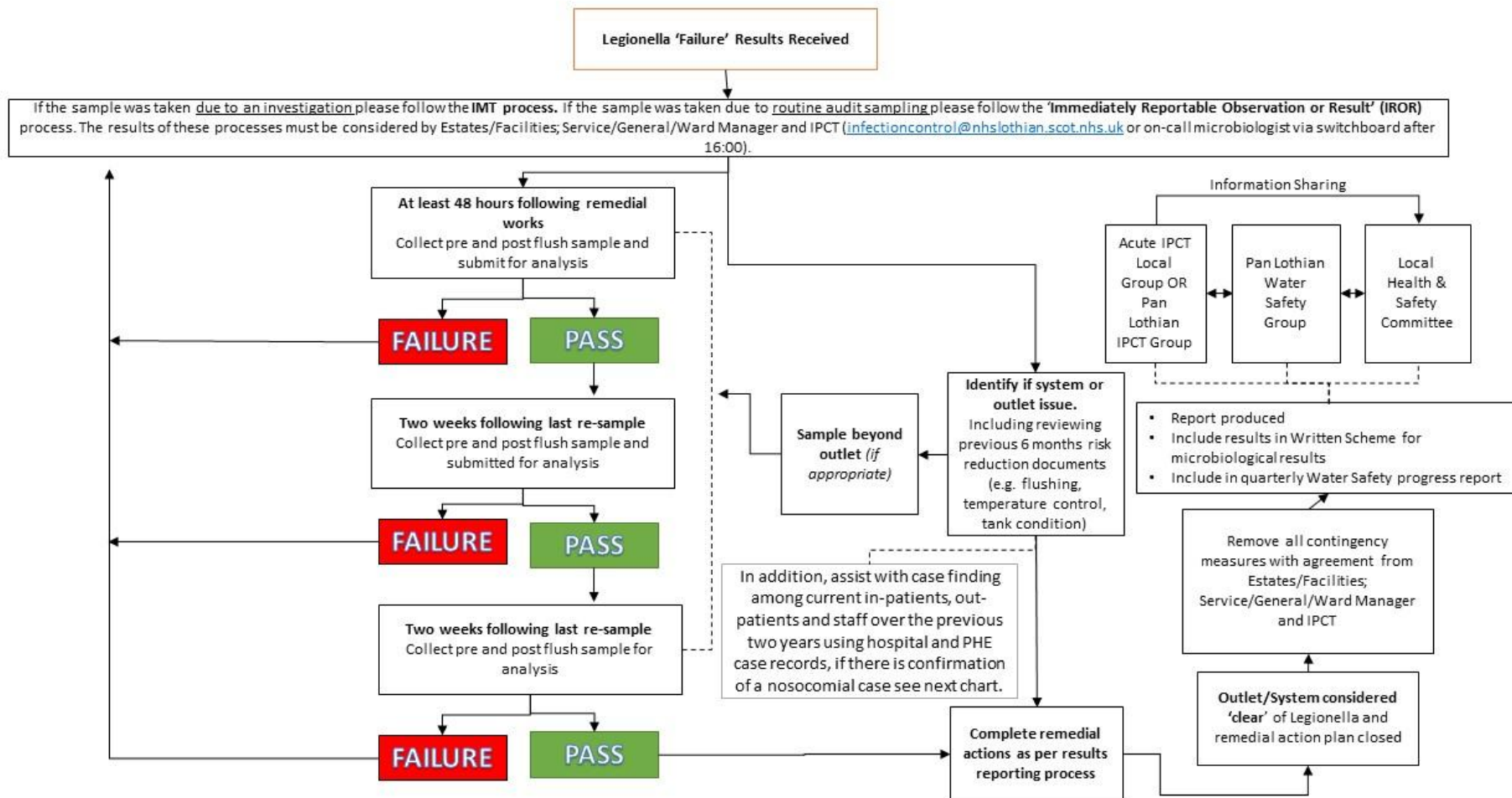
Health and Safety Committee:				Date:	Chairperson:	
Water Safety Management Q&A						
No	Question	Answer from Site/HSCP/Service(s) & Hard FM Providers': Y/N	Documented Evidence Presented: Y/N	Action by whom and when.	Comments	Closed Y/N
Section 1: Management (The Chief Executive of NHSL is the Duty Holder with overall responsibility for Water Safety supported by Duty Holders e.g. Hospital Site Directors/HSCP's Chief Officers for the operational management of water safety)						
1.	Have duty holders been clearly identified? e.g. Hospital Site Directors/ Chief Officers					
2.	Have those in control of the premises for water safety management been clearly identified? E.g. NHSL, Council, Third Party Providers.					
Section 2: Water Safety Plan						
3.	Is there a Water Safety Group in place for the Acute Hospital Site?					
4.	Does the WSG meet at least quarterly?					
5.	Is there an up to date Water Safety Plan for each premise with a clear review date? E.g. Hospital Site RIE/WGH/St John's/MCH/ELCH etc. or Building(e.g. Lauriston/Ellen's Glen)					
Section 3: Legionella						
6.	Is there an up to date Legionella Risk					

	assessment in place for building/premises?					
7.	As a result of the above Risk Assessment is there is place an up to date written scheme of control?					
8.	As a result of the risk assessment has legionella monitoring sampling been required at any of the premises?					
9.	As a result of the legionella monitoring sample(s) have any actions been required?					
Section 4: Augmented Care Areas						
10.	Have augmented care areas been clearly identified for each Acute Services Hospital Site and within the HSCP's?					
11.	For those augmented care areas is the daily flushing undertaken?					
12.	Does the Senior Charge Nurse have evidence that the flushing procedure is performed as specified?					
13.	Have any actions been taken in response to any water sampling monitoring?					
14.	If so have these actions been closed out?					

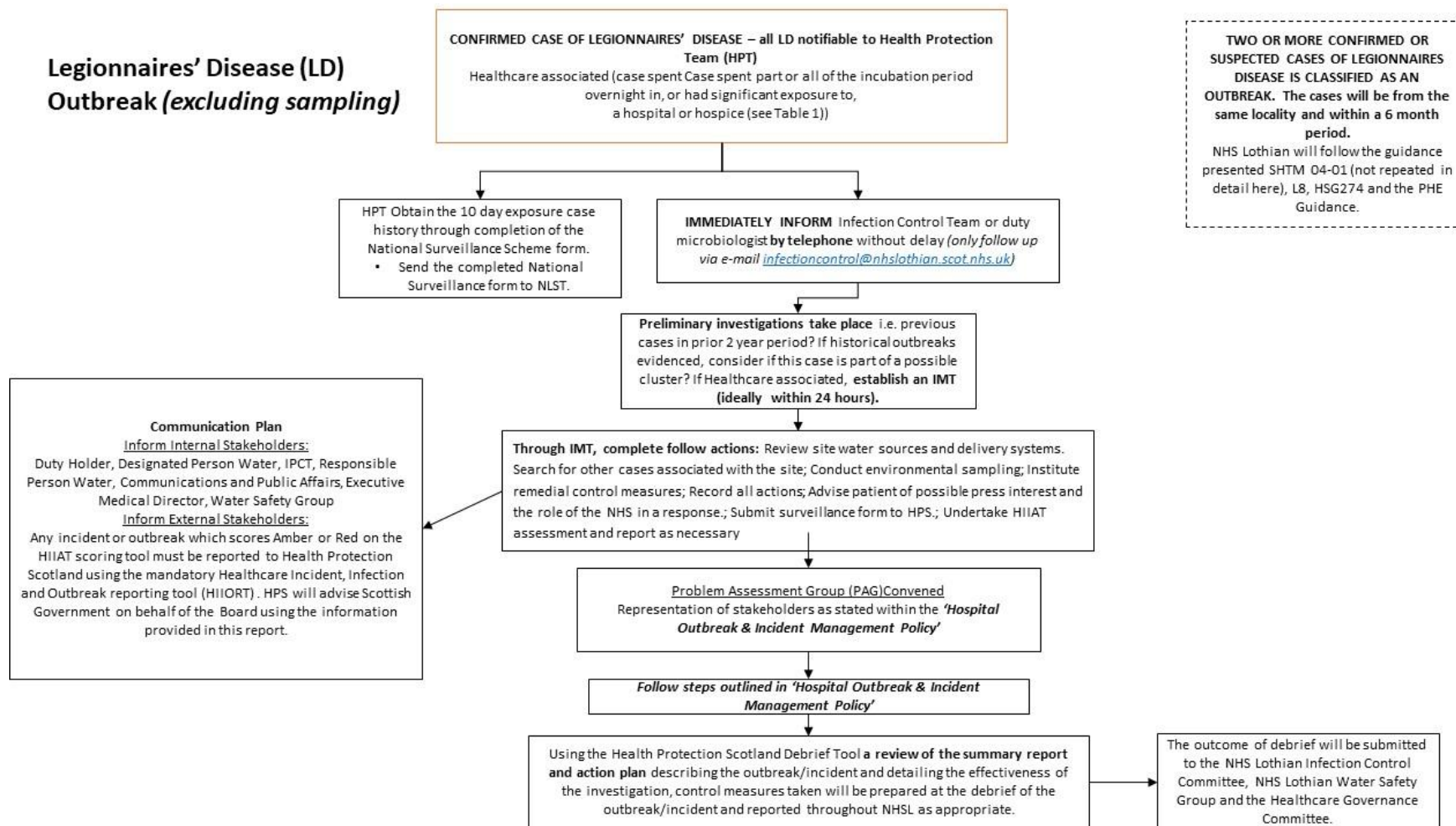
3. Additional Information on Reporting Structures



Follow-up processes for Legionella 'failures' re-samples:



Legionnaires' Disease (LD) Outbreak (excluding sampling)

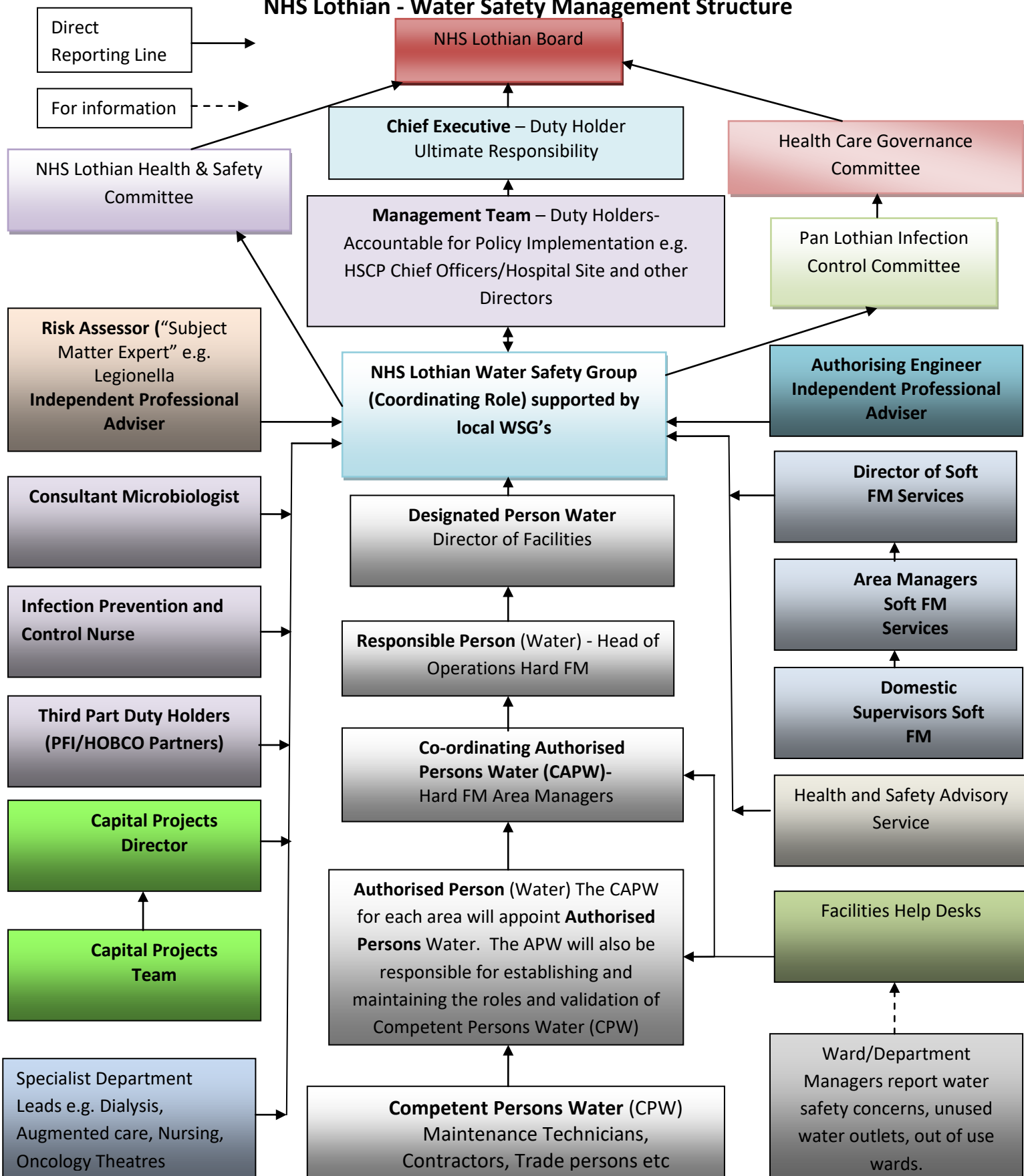


TWO OR MORE CONFIRMED OR SUSPECTED CASES OF LEGIONNAIRES DISEASE IS CLASSIFIED AS AN OUTBREAK. The cases will be from the same locality and within a 6 month period.
NHS Lothian will follow the guidance presented SHTM 04-01 (not repeated in detail here), L8, HSG274 and the PHE Guidance.

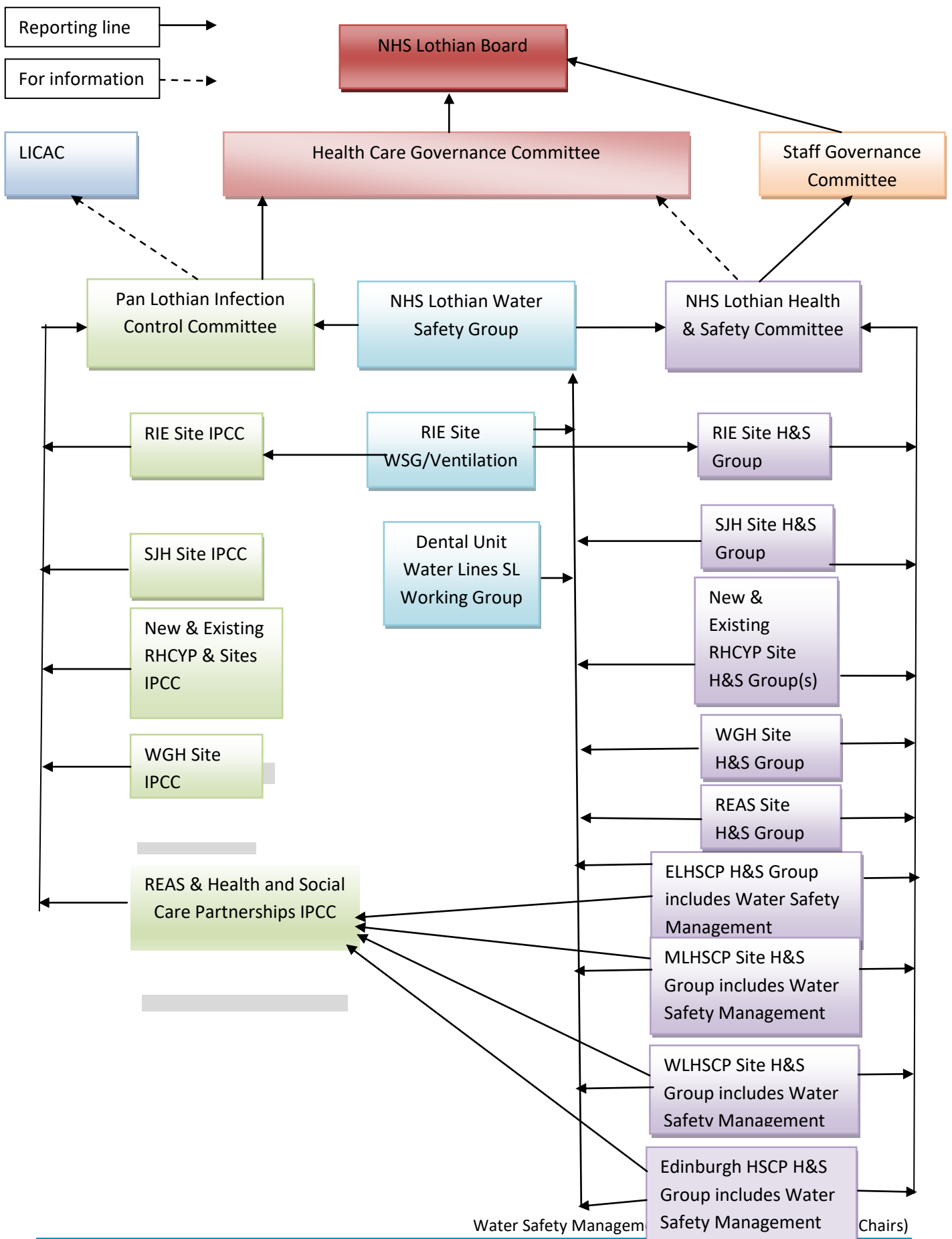
Definition Healthcare associated LD (PHE guidelines) – to accompany LD Outbreak steps

Type A	The case stayed overnight in healthcare associated premises for the entire 2 to 10 day incubation period
Type B	The case stayed overnight in healthcare associated premises for any of the 2 to 10 day incubation period (or worked as a regular employee in the premises during the 10 day incubation period) AND the premises have been associated with a case of LD with onset more than 2 years* previously
Type C	The case stayed overnight in healthcare associated premises for any of the 2 to 10 day incubation period (or worked as a regular employee in the premises during the 10 day incubation period) AND the premises have not been associated with a previous case of LD
Type D	The case visited healthcare associated premises during the 2 to 10 day incubation period, including as an occasional, transient worker but did not stay overnight and did not work at the premises as a regular employee; and a risk assessment indicates investigation of the case as healthcare associated due to, for example, frequency of visits, nature of treatment, underlying illness/susceptibility to LD, documented exposure to a source known to be contaminated, risk to other patients.

NHS Lothian - Water Safety Management Structure



Governance Groups/Committees for Water Safety Management.



4. Proposed Risk for the Corporate Risk Register- Risk 5020 – Legionella

Priority for Continuous Improvement	Risk Description	Linked Risks	Controls	Key Measures	Updates/actions
Protect and improve the health of our population	There is a risk that Legionella may be present in water supplies to healthcare premises	HAI (1076)	<p>Governance and management</p> <p>The NHS Lothian Water safety group provides strategic oversight and leads improvement for this work, chaired by NHS Lothian Medical Director and includes external, independent subject matter expert (AE Water)</p> <p>The group reports to HCG committee through the Pan Lothian Infection control committee. There is also a reporting line to Staff governance committee through Health & safety committee.</p>	<p>Compliance with all aspects of SHTM 04-01 Part B Operational Management.</p> <p>E.g. Evidence of up to date Legionella risk assessments and water safety plans for all buildings</p> <p>Evidence that competence assessed, named</p>	<p>Water safety plans to be developed for all buildings and agreed by relevant site/service water safety groups – timescale to be agreed.</p> <p>Checklist to be implemented across all sites to provide documentary evidence of assessment of all</p>
	due to reduced or no usage of water in some areas during COVID pandemic, seasonal increase in water temperature and incomplete implementation of existing plans to	<p>Associated Plans</p> <ul style="list-style-type: none"> - Water safety plan 			
	Improve systems of	<p>Assurance Committee</p> <ul style="list-style-type: none"> - Healthcare governance 			

Priority for Continuous Improvement	Risk Description	Linked Risks	Controls	Key Measures	Updates/actions
	control and assurance around water safety. This may lead to harm to patients, staff and the general public, potential prosecution under H&S law. In addition, the ability to remobilise services following Covid-19 will be affected where we are not able to demonstrate safety of water systems.	<p>Grading</p> <ul style="list-style-type: none"> - Suggest high (12) (Major impact/likelihood possible) 	<p>Operationally, subgroups are in place for each acute hospital site and for the HSCPs and REAS, which link to local H&S and Infection prevention and control committees.</p> <p>Designated roles are in place as per legal requirements (HSE) including duty holders - (CEO) and HSCP chief officers and Designated person water (DPW)</p> <p>Policies and plans</p> <p>Local policy and guidance are in place and current being updated:</p> <ul style="list-style-type: none"> - NHS Lothian Water Safety Policy - Draft template for site based Water safety plans developed and being tested <p>All underpinned by national policy framework and suite of national guidance:</p>	<p>individuals (with letter of appointment where appropriate) are performing key roles as outlined in SHTM 04-01 Part B.</p> <p>Evidence of monitoring records over last 5 years E.g. water flushing records</p> <p>Compliance with water temperature control</p> <p>Water monitoring results Compliance with testing schedules</p> <p>Results of microbiology testing</p>	<p>relevant areas.</p> <p>Clear route for assurance for non- NHS Lothian owned premises, including primary care to be agreed – timescale to be agreed.</p> <p>Specific plan in development in relation to dental chairs and remobilisation of services – timescale to be agreed.</p>

Priority for Continuous Improvement	Risk Description	Linked Risks	Controls	Key Measures	Updates/actions
			<ul style="list-style-type: none"> • SHTM 04-01 Water Safety for Healthcare Premises Parts A to G, • HSE Approved Code of Practice L8 Legionnaires' Disease – the control of legionella bacteria in water systems, • Health Protection Guidance for neonatal units (NNUs) (levels 1, 2 & 3), adult and paediatric intensive care units (ICUs) in Scotland to minimise the risk of <i>Pseudomonas aeruginosa</i> infection from water (2018). <p>Procedures and monitoring</p> <p>Various processes in place with improvement plans in place to demonstrate clear assurance processes (see actions).</p>	as required	

Priority for Continuous Improvement	Risk Description	Linked Risks	Controls	Key Measures	Updates/actions
			<p>Water testing schedules and water temperature monitoring in place.</p> <p>Water safety information shared and reviewed via H&S groups.</p> <p>Legionella risk assessments in place.</p> <p>Problem assessment groups (PAGs) and Incident management teams (IMTs) convened as required to respond to issues.</p> <p>AEW provides annual independent audit.</p> <p>Adequacy of controls</p> <p>The control is not designed to properly manage the risk, and further controls and measures are required</p>		

Meeting	Chair/Contact	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20
Pan Lothian Infection Control Committee	Chair: Professor A. McMahon, Admin: Evelyn Murray (Evelyn.Murray@nhslothian.scot.nhs.uk)	01-Jul			26-Oct		
RHSC (Sciennes) Infection Control Committee	Chair: Peter Campbell (Associate Nurse Director, RHSC) Admin: Christine Fraser (Christine.M.Fraser@nhslothian.scot.nhs.uk)	24-Jul	28-Aug	25-Sep	23-Oct	20-Nov	
SJH Infection Control Committee	Chair: Agnes Ritchie (Associate Nurse Director, SJH) Admin: Aris' PA (start date in July 2020)			10-Sep			10-Dec
RIE Water and Ventilation Safety Group	Chair: Janice Alexander (RIE Site Director)/ Simon Dunn (Associate Nurse Director RIE) Admin: Emma-Jane Gunda (Emma-Jane.Gunda@nhslothian.scot.nhs.uk)	TBC					
WGH Infection Control Committee	Chair: Geraldine Marsh (Associate Nurse Director WGH), Kath Anderson (Associate Medical Director WGH). Admin: Heather Mansfield (Heather.Mansfield@nhslothian.scot.nhs.uk)	13-Jul	10-Aug	14-Sep	19-Oct	09-Nov	14-Dec
NHS Lothian Health & Safety Committee	Admin: healthandsafety.service@nhslothian.scot.nhs.uk		18-Aug			24-Nov	
RIE Health & Safety Committee	Chair: Mike Pearson	<i>Estimate</i>			<i>Estimate</i>		
WGH Health & Safety Committee	Chair: Jenny Fleming	<i>Estimate</i>			<i>Estimate</i>		
SJH Health & Safety Committee	Chair: Aris Tyrothoulakis	<i>Estimate</i>			<i>Estimate</i>		

Royal Hospital for Sick Children, YP, DCN Health & Safety Committee	Chair: Fiona Mitchell	<i>Estimate</i>			<i>Estimate</i>		
Outpatients and Associated Services Health & Safety Committee	Chair: Anne Donaldson	<i>Estimate</i>			<i>Estimate</i>		
REAS Health & Safety Committee	Chair: Tracy McKigan	<i>Estimate</i>			<i>Estimate</i>		
West Lothian HSCP Health & Safety Committee	Chair: Yvonne Lawton	<i>Estimate</i>			<i>Estimate</i>		
East Lothian HSCP Health & Safety Committee	Chair: Gordon Gray	<i>Estimate</i>			<i>Estimate</i>		
Midlothian HSCP Health & Safety Committee	Chair: Roxanne King	<i>Estimate</i>			<i>Estimate</i>		
Edinburgh HSCP Health & Safety Committee	Chair: Sheena Muir	<i>Estimate</i>			<i>Estimate</i>		
Corporate Services Health & Safety Committee	Chair: Judie Gajree	<i>Estimate</i>			<i>Estimate</i>		
Facilities Services Health & Safety Committee	Chair: George Curley	<i>Estimate</i>			<i>Estimate</i>		
DATCC Health & Safety Committee	Chair: Jane McDonald	<i>Estimate</i>			<i>Estimate</i>		

Committee Chair	Site Director / Chief Officer	Water Safety Governance
Tracey Gillies	Tracey Gillies	NHSL H&S Committee
Michael Pearson	Janice Alexander	RIE Local HS Committee
Aris Tyrothoulakis	Aris Tyrothoulakis	SIJ Local HS Committee
Fiona Mitchell	Fiona Mitchell	RHSC (New & Existing) Local HS Committee
Jenny Fleming	Chris Stirling	WGH Local HS Committee
Roxanne King	Morag Barrow	MLHSCP Local HS Committee
Yvonne Lawton	Allister Short	WLHSC Local HS Committee
Catriona Cockburn	Alison MacDonald	ELHSCP Local HS Committee
Sheena Muir	Judith Proctor	Edin HSCP Local HS Committee
Tracey Mckigen	Tracey Mckigen	REAS

Health & Safety Support	Estates Water Safety
Ian Wilson	George Curley Or Brian Douglas
Eric Drennan	Paul Dobosz (ENGIE)
Helen Copland	Ian Strachan or Michael Mastaglio Or Ray Jarvis
Eric Drennan	Jim Picken (existing) Bouygues/Multiplex (new)
Shona Cameron	Jim Picken
Angeles Mendoza	Craig Lees or Brian Tully (Third Party Provider – Robertson FM)
Helen Copland	Ian Strachan or Michael Mastaglio Or Ray Jarvis
Angeles Mendoza	Craig Lees Or Brian Tully (Third Party Provider – GallifordTry)
Julia Johnston	Fraser McNeill (Third Party Providers – Walker Timber/ RobertsonFM)
Nicholle Cockburn	Fraser McNeill (Third Party Provider – GallifordTry)

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