



Guideline on the management of Legionella cases, incidents, outbreaks and clusters in the community

Quick Reference Guide

Health Protection Network
Scottish Guidance

November 2014



Initial notification and investigation

A suspected or confirmed case of legionellosis is usually reported to the NHS board HPT by:

- microbiology diagnostic services (local laboratory or reference laboratory);
- hospital clinicians through hospital-based assessment of community acquired pneumonia;
- by general practice;
- or as a post-mortem finding.

Every single case of Legionnaires' disease should be fully investigated in a timely fashion (same day where possible). This might be the first case in an outbreak and prevention of further cases is the priority. It should be noted that there might well be an appreciable delay before cases start to be reported.

A single case definition (potentially a preliminary outbreak case) may read as follows:

'Any person with:

a confirmed or presumptive diagnosis of Legionnaires' disease;

AND a history of association with (place) in the 2-14 days before onset of illness;

AND whose illness started between dd/mm/yyyy and dd/mm/yyyy.'

Initial enquiries

Initial enquiries should identify if the case is community, nosocomial or travel acquired.

These enquires are usually carried out as soon as possible (same day) after notification to the NHS board HPT, by members of the HPT. The full guidance contains an epidemiological questionnaire which may be useful during these enquiries (Appendix D), and definitions which can be used to classify the case (Section 1.4).

Additional useful information is recent (weeks to months) cases associated with a geographical location, including overseas destinations (contact HPS for this information).

The CPHM (CD/EH) and on-call CPHM should be advised of the results of these initial enquiries.

Activation of an IMT

The CPHM (or Infection Control Doctor if a nosocomial incident) confirms that an incident, cluster, outbreak or nosocomial infection exists or a Legionnaire's disease death has been identified at post mortem.

The CPHM (or ICD) may then choose to activate a PAG or IMT to manage and further investigate the incident. The overall purpose of the PAG or IMT is to protect public health and prevent further infection.

Membership of the PAG or IMT is described in Appendix C.

Roles and responsibilities of members of the IMT are described in Appendix B.

Risk assessment

The PAG or IMT must assess the risk associated with the incident. The key assessments are:

- What is the likelihood of a population continuing to be exposed to *Legionella*? and,
- What is the potential impact on health?

Investigation tools

Epidemiological investigation (Section 3) – epidemiological questionnaire is provided (Appendix D), additional outbreak tools available include mapping, cluster analysis and analytical studies.

Environmental investigation (Section 4) – including classification of water sources (see **Table 1 on page 5**), water sampling and roles of agencies involved in investigation and enforcement.

Microbiological investigation (Section 5) – full assessment of clinical and environmental samples, including employment of sensitive molecular techniques to fully characterise isolates at SHLMPRL – for clinical algorithm see Figure 1 in this guide; template line listing documents are available (Appendices E and F).

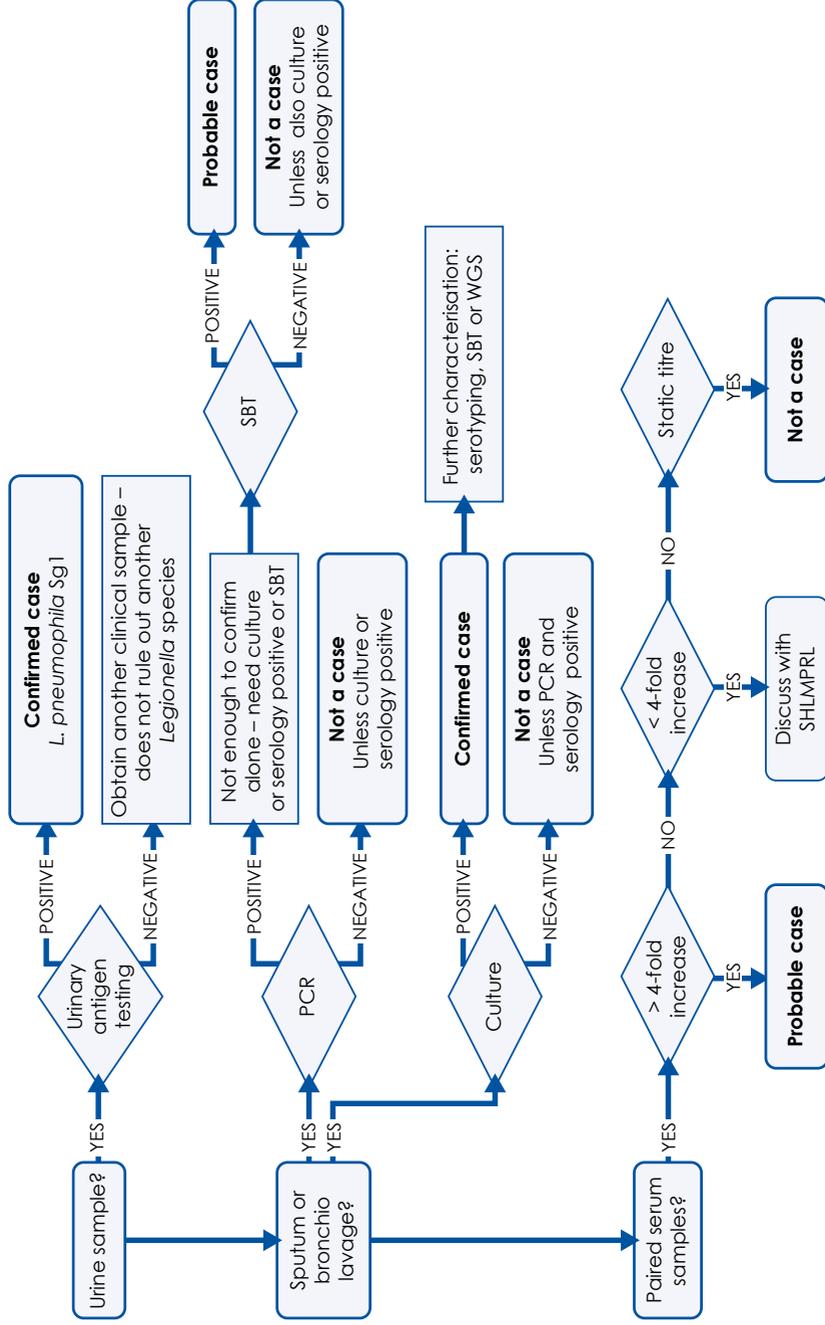
Other considerations

- Communication to different stakeholder groups (Section 6) – including templates
- Control mechanisms for water systems and enforcement (Section 7) – including HSE guidance
- End of outbreak reporting (Section 8)

TABLE 1: Table 1: Potential sources of *Legionella* in installations

High risk sources
Cooling towers/evaporative condensers/air conditioning systems and hybrid systems
Hot and cold water systems – often related to shower-heads
Whirlpools/spa baths/birthing pools
Other risk sources
High pressure hosing/cleaning
Car/train wash
Industrial water systems
Open plant and machinery cooling systems
Fountains
Commercial irrigation system
Sewage plants
Ship water pump repair
Growing media / composted green waste (specific species: <i>L. longbeachae</i>)
Garden sprinkling water systems
"Respiratory therapy devices" which generate aerosols
Contaminated hospital equipment
Hot spring bath water
Public bath water
Ice machines
Dental equipment
Food display humidifiers
Air humidifiers

FIGURE 1: Interpretation of clinical microbiological investigation results.



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Health Protection Network site:

<http://www.hps.scot.nhs.uk/about/HPN.aspx>

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