

Patient management response if *Legionella* detected in water supply

Guideline

Centre for Healthcare Related Infection Surveillance and Prevention & Tuberculosis Control

Preamble

Legionnaires' disease is caused by *Legionella* bacteria inhaled by an individual from a water source. (An exception is disease caused by *L. longbeachae* where the exposure is to bacteria in soil and gardening materials). Patients at greatest risk are those who are substantially immunocompromised. There is no evidence that *Legionella* is spread from person to person.

All facilities should ensure that they have a sound water risk management plan that has been comprehensively implemented and reviewed when circumstances change (refer to: Guideline for managing microbial water quality in health facilities 2013, available from: <http://www.health.qld.gov.au/legionnaires/docs/prem-guide-water-qual.pdf>). This plan should include water sampling as a quality management tool once all water management systems have been established. The following guidelines are designed to assist in the patient management response if *Legionella* is detected in a facility's water supply.

Investigations and antibiotics for individual patients

- An increased "index of suspicion" for Legionnaires' disease when suspected hospital-acquired pneumonia occurs.
- Appropriate investigations for patients with suspected hospital-acquired pneumonia may include urinary *Legionella* antigen testing, culture of lower respiratory tract specimens (e.g. broncho-alveolar lavage) or PCR if available.
- There is no proven role for routine antibiotic prophylaxis. It may be considered by an expert incident management team if an outbreak has occurred.
- Empiric use of antibiotics active against *Legionella* (macrolides or quinolones) may need to be considered in patients with suspected Legionnaires' disease.
- Paired serum (acute and convalescent) specimens for *Legionella* serology should be collected when the diagnosis is suspected. The first sample should be collected within 3 weeks of onset with a further sample collected in accordance with the recommendations of the local laboratory.

Care of Patients

- There is no evidence of person to person spread of *Legionella* and there is no need for contact, droplet or airborne precautions for patients suspected of having legionellosis. Visitors may continue to be allowed.

- If Legionella are detected in the water supply, an expert incident management team should be convened to assess the situation and determine patient management strategies. This group should include at least one of the following:
 - Infectious diseases physician
 - Public health physician
 - Clinical microbiologist
 - Infection control practitioner
- If shower or tap water from a ward has Legionella detected, the expert incident management team should consider whether to suspend showering of patients in that ward until further environmental investigations and/or corrective actions have been undertaken (refer to: Guideline for managing microbial water quality in health facilities 2013, available from: <http://www.health.qld.gov.au/legionnaires/docs/prem-guide-water-qual.pdf>). This is particularly important in wards with patients at the highest clinical risk, such as patients on immunosuppressive therapy. Other factors to consider are the prevalence of chronic underlying disease and age profile.
- Recommencement of showering should be made in consultation with the expert incident management team and will depend on a number of factors, including the pattern and level of the *Legionella* results. This decision should be made in consultation with the expert incident management team once the nature of changes to water management and water treatment is known.
- In wards with the highest clinical risk patients, aerosolisation from sources other than directly from showers and taps might be important. The expert incident management team may wish to consider, in situations where inhalation or aspiration may occur, advising patients not to drink water from affected taps in the ward—bottled water should be provided, pending the outcome of any further investigation of the ward's water source. In these circumstances, staff should also not use the water in the vicinity of high-risk patients. Advice should be sought from the expert incident management team before recommencing water use when these restrictions are applied.