

Policy

Spring Grove Hospital Center shall strive to prevent human inoculation with Legionella bacteria and shall conduct surveillance activities in order to identify possible cases of Legionellosis (Legionnaires Disease or Pontiac Fever).

Legionnaires' disease is characterized by fever, myalgia, cough, and clinical or radiographic pneumonia and Pontiac fever is a milder illness without pneumonia.

Procedure**Facility Surveillance**

SGHC has a water management program to reduce the risk of Legionella/Legionellosis, based on CDC's Water Management Tool Kit and ASHRAE Standard 188-2015. The water management program is under the jurisdiction of the COO, the Director of Plant Maintenance and the Director of Safety and Environment, with input from the Director of Infection Prevention and Control.

- A. Routine maintenance on plumbing systems and cooling systems shall be performed by the maintenance department per the Water Management Program in conjunction with the SGHC Director of Safety and Environment of Care. This routine maintenance shall be logged and monitored by the Director of Safety and Environment of Care and the results shared with the Director of Maintenance and incorporated into the maintenance department's quality assurance program.

Clinical Surveillance

- A. Legionnaires' disease is characterized by fever, myalgia, cough, and clinical or radiographic pneumonia and Pontiac fever is milder illness without pneumonia.
- B. The following guidelines are recommended in the diagnostic testing of patient's for Legionnaires' disease:
 1. Consider Legionellosis in the differential diagnosis if a patient develops the following:
 - a. Fever (temperature greater than 100 F), and
 - b. Respiratory symptoms (cough, chest congestion, etc.) suggestive of pneumonia.

2. If a patient develops fever and respiratory symptoms suggestive of pneumonia, obtain a chest x-ray on the patient.
3. If pneumonia is diagnosed:
 - a. Mild severity, meaning the patient is otherwise healthy and has normal vital signs (apart from fever) and there is no known exposure to Legionella – no specific testing for Legionella is indicated.
 - b. Moderate or severe pneumonia, or pneumonia of any severity in an immunocompromised patient or if exposure to Legionella is known or possible (e.g., during an outbreak) obtain a urine and/or sputum sample for Legionella testing, following the procedures detailed in SGHC Policy 062916, "Specimen Submission for Legionella Testing". Note that when patients are ill enough to be referred to an emergency room, their testing and further management is deferred to the ER/inpatient team.

The urinary antigen test has at least 70% sensitivity (ability to correctly identify those with the disease) and is 100% specific (ability to correctly identify those without the disease). In patients with Legionnaires' disease caused by *Legionella* serotype 1 (which causes most cases in the United States). The sputum PCR test has high diagnostic accuracy and detects all *Legionella* serotypes. Sputum culture has variable sensitivity (reported range, <10 to 80%), but specificity nears 100% as colonization with Legionella species does not occur. For sputum specimens, PCR testing is usually preferred due to its ease, accuracy, and rapid turnaround time. Culture is often done subsequently for epidemiologic purposes in confirmed cases.

- C. Somatic Medicine shall inform Infection Prevention & Control whenever there is a suspected or confirmed case of Legionnaires' disease in the hospital.
- D. For confirmed diagnoses, Infection Prevention & Control, will then notify the Division of Outbreak

Investigation and Surveillance of Infectious Diseases, Office of Epidemiology and Disease Control Programs, MDH at 410-767-6700 or 410-767-5778, and the Baltimore County Health Department as directed by the Maryland Department of Health.

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- E. The SGHC Infection Prevention and Control Department will aggressively monitor suspected cases of Legionnaires' disease, will communicate directives of the Maryland Department of Health or Baltimore County Health Department to Somatic Medicine and leadership will make recommendations as required and will assure appropriate follow up.

References


CDC, Developing a Water Management Program to Reduce Legionella Growth & Spread in Buildings, June 5, 2017


ANSI/ASHRAE Standard 188-2015. Legionellosis: Risk Management for Building Water Systems, 2015

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CDC, Healthcare-Associated Infections. Reduce Risks from Water, pp 1-6, Last reviewed: September 11, 2019 (on-line)

CDC, "Clinical Guidance for *Legionella Infections*", Jan 29, 2024.
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