

SUBJECT: Guidelines for Legionnaires' Disease	APPLICABLE TO: DHS facilities	ISSUED: April 24, 2019 (OBSOLETES PROCEDURE NUMBER 16-001)
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ADMINISTERED BY: Office of the Medical Director	APPROVED BY: Joslyn Carter, Administrator Department of Social Services/ Department of Homeless Services
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PURPOSE

To provide guidelines to shelter and other Department of Homeless Services (DHS) facility staff when a DHS client is diagnosed with Legionnaires' disease.

BACKGROUND

Legionnaires' disease causes pneumonia with possible symptoms including cough, shortness of breath, fever, muscle aches, headache, nausea, vomiting, and diarrhea. Symptoms usually appear 2-10 days after being exposed to *Legionella* bacteria. Legionnaires' disease may require hospitalization. People can get Legionnaires' disease when they breathe in small droplets of water that contain the bacteria suspended in air. The water vapor (mist) can be warm or cool and can come from a shower or faucet, hot tubs, or cooling towers (units usually located on top of a building that cool the building). **Legionnaires' disease cannot be spread from one person to another.** Legionnaires' disease is treated with antibiotics and most people recover with early treatment.¹

Risk factors for Legionnaires' disease:²

- Age 50 years or older
- Being a current or former smoker
- Chronic lung disease
- A weak immune system or taking medicines that weaken the immune system
- Underlying illnesses such as diabetes, kidney failure, or liver failure
- Cancer

DEFINITIONS

- **Client:** an individual experiencing homelessness and living in a DHS facility.
- **Facility (DHS facility):** DHS operated or staffed facility or program or DHS contracted shelters, which provides services to clients. Facilities include congregate shelters, drop-in and reception centers, safe haven, Tier IIs, hotels and cluster sites.
- **Patient:** a person with a laboratory confirmed diagnosis of Legionnaires' disease.

PROCEDURE

I. Notification

- The Department of Health and Mental Hygiene (DOHMH) will alert the DHS Office of the Medical Director (OMD) if a homeless client is diagnosed with Legionnaires' disease (laboratory-confirmed by urine antigen test or culture). The client's identifying information (first name, last name, date of birth) will be shared via secure email-DOHMH BISCOP account or password protected document, preferably, or via phone call.
- If shelter/site staff are made aware by onsite clinic or hospital personnel that a client has been diagnosed with Legionnaires' disease, they will inform their DHS Program Administrator (PA) within 2-4 hours of the report. The DHS PA will inform the OMD within one day of receiving the information about the Legionnaires' disease case. If the initial information did not come from the DOHMH, the OMD will confirm the case of Legionnaires' disease with DOHMH.

II. Actions for staff in case of Legionnaires' diagnosis among facility clients

- A. If a client with Legionnaires' was known to have lived in a particular DHS shelter facility during the incubation period (10 days before the client first felt ill), shelter staff will:
- **Education:** Share information and educate the client using appendices 1 and 2.
 - **Surveillance:** Notify the on-site clinic (if available), to consider Legionnaires' disease when evaluating clients with respiratory symptoms, and to refer these clients for laboratory testing for legionella.

A client with Legionnaires' disease does not need to be moved to another shelter/site because the disease is not capable of being transmitted from one person to another.

- B. If a single client with Legionnaires' did not leave the shelter during the entire 10 days incubation period or there are **two or more facility clients with**

Legionnaires' reported within a 12 month period at a given facility, DHS OMD, Program Staff, Facility and Logistics, shelter clinicians (if available) and facility leadership will all work closely with DOHMH to evaluate patient information, educate the clients, implement testing of the water system and remediation. Shelter and other DHS facility staff, please see appendix 3. Specifically, facility staff will:

- **Education:** Share information and educate the client using appendices 1 and 2.
- **Surveillance:** Notify the on-site clinic (if available) to consider Legionnaires' disease when evaluating clients with respiratory symptoms, and refer these clients for laboratory testing for legionella.
- **Water Testing:** Collaborate with Office of Public Health Engineering, DOHMH to conduct initial water sampling. The water testing process will include:
 - Initial water testing after preparation of a sampling plan by a DOHMH contractor.
 - Additional sampling by a water testing company selected by shelter management if initial samples demonstrate systemic risk for *Legionella*.
- **Mitigation:** Ensure that clients do not take a shower in the facility until DOHMH advises that these clients can resume the use of showers. A temporary plan will be devised to minimize exposure to water spray or mist. These temporary plans may include:
 - Purchasing filters for shower heads (for example: steri-spray shower, inline safe legionella filters);
 - Removing shower heads and attaching a hose or metal piping to prevent misting and providing a bucket and cup to the clients for bathing;
 - Providing mobile shower facilities outside the site, and ensuring water supply is not connected with the water system of the facility; and
 - Transporting clients to another facility for showers.
- **Short-term remediation and long-term management:** If after initial water sampling, sample results indicate the need for short-term potable water system remediation, the Office of Public Health Engineering, DOHMH will notify DHS of the need for such remediation. In response to DOHMH's notification, shelter/site management will develop a short term remediation plan in consultation with a water treatment company. To avoid any conflict of interest, the water treatment company should be different from the water system testing company. This plan will be reviewed and commented on by DOHMH before implementation.
 - Possible short-term remediation measures may include:

- Heat treatment of water tanks by raising the temperature of the water and flushing the hot water from the system. To avoid the risk of scalding, facility staff must ensure the water temperature drops to a safer temperature before distribution to fixtures.
- Chlorination of the water system.
- Once short-term remediation of the water system is complete, samples will be collected at approximately 7 and 30 days after sampling. The facility director will submit results from both 7 and 30 day sampling to DOHMH within 24 hours of receipt of such results. Upon receipt of 30 day sample results, the facility director will submit a report to the DOHMH, DHS PA and the OMD, which includes:
 - All short term remediation steps taken;
 - Results from 7 and 30 day water samples;
 - A sampling plan (sampling methodology, frequency of testing, type of testing) to verify the remediation plans were effective or if on-going remediation is needed. The testing schedule will cover the first year after the remediation occurs; and
 - A long-term water management plan developed with a consultant. The long-term management plan will be submitted to DOHMH for review and comment within 90 days after completion of initial remediation.

III. Reporting remediation and management progress to DHS

Facility directors must keep DHS program leadership informed as remediation and management progresses. DHS leadership will notify the DSS Communication team, as needed. DOHMH will be asked to provide a copy of their final report to DHS OMD.

For additional information on:

1. Water testing and remediation go to <https://www.cdc.gov/legionella/water-system-maintenance.html>.
2. Legionnaires' disease, call 311 or visit NYC Department of Health website <http://www1.nyc.gov/site/doh/health/health-topics/legionnaires-disease.page>.
3. Other resources: Center for Disease Control and Prevention <https://www.cdc.gov/legionella/about/index.html>

REFERENCES

¹NYC Department of Health and Mental Hygiene. Legionnaires' Disease. <http://www1.nyc.gov/assets/doh/downloads/pdf/cd/legionellosis-poster.pdf>

²Center for Disease Control and Prevention. Legionella (Legionnaires' Disease).
<https://www.cdc.gov/legionella/about/index.html>

APPENDICES

Appendix 1	Legionnaires Disease: Tips for Client
Appendix 2	What You Need To Know
Appendix 3	Legionnaires' Disease Investigation Process By DOHMH

Appendix 1: Legionnaires' Disease: Tips for client

The risk of getting sick from a building's water supply is very low, especially for healthy people. The most important thing you can do is to get medical attention right away if you start having symptoms such as fever, chills, muscle aches and cough. This is even more important if you are aged 50 or older (especially if you smoke cigarettes), have chronic lung disease, have a weakened immune system or take medicines that weaken your immune system.

If you have one of the health issues which are listed above, take these extra steps as a precaution:

- Don't take a shower, even a cool shower – since it could create water vapor (mist).
 - Instead, take a bath, but fill the bucket slowly to avoid creating mist.
- It is fine to wash dishes, but fill the sink slowly to avoid creating mist.
- It is fine to drink cold water from the tap, but start with cold water when heating water for tea, coffee or cooking.
- You do not need to wear a mask.

Source: <http://www1.nyc.gov/site/doh/health/health-topics/legionnaires-disease.page>

WHAT YOU NEED TO KNOW

Legionnaires' Disease

Legionnaires' is a type of pneumonia. It is caused by bacteria, and **cannot be spread from one person to another.**

It is easily treated with antibiotics, and most people get better with early treatment.

People get sick by breathing in water vapor with the bacteria (for example, mist from contaminated cooling towers). Window air conditioners are NOT a risk.

You're at higher risk if you are aged 50 or older (especially if you smoke), have chronic lung disease, have a weakened immune system or take medicines that weaken your immune system.

Don't wait! Get help right away if you feel sick.

- If you have fever, chills, muscle aches or cough, get medical attention right away.
- This is especially important if you have a medical condition that affects your breathing or if you are a smoker.

Tell your health care provider you are concerned about Legionnaires' disease. Your provider may need to do tests to find out if you are sick with Legionnaires' disease or a different infection.

Appendix 3: Legionnaire's disease investigation process by DOHMH

NYC DOHMH uses electronic laboratory reports to initiate investigations of every reported Legionnaires' disease case in New York City. Investigations include interviews of patients and review of patients' medical records. Patient information gathered from these investigations includes home, work, and other addresses during the disease incubation period (10 days before symptom onset), known water exposures during the incubation period (e.g. gym use, hot tub use, grocery store misters), as well as information about underlying medical conditions that are risk factors for contracting Legionnaires' disease.

This information is analyzed on a daily and weekly basis to allow for rapid detection and response to clusters of disease, whether they occur among residents of the same building, or more broadly in the community. When we detect two cases occurring within 12 months among residents of the same building, who lived in the building during the disease incubation period, we initiate sampling and possible remediation of the building's potable water system. A potable water system evaluation is also initiated in the rare instance in which a single case of Legionnaires' disease is diagnosed in a person who lives in a higher-risk setting, like a homeless shelter, and the person did not leave that setting for the entire 10-day disease incubation period.

Source: Bureau of Communicable Diseases, NYC Department of Health and Mental Hygiene