Legionnaires’ Disease
A problem for health care facilities

Legionnaires’ disease (LD) is a serious, and often deadly, lung infection (pneumonia). People usually get it by breathing in water droplets containing Legionella germs. People can also get it if contaminated water accidentally goes into the lungs while drinking. Many people being treated at health care facilities, including long-term care facilities and hospitals, have conditions that put them at greater risk of getting sick and dying from LD. Legionella grows best in buildings with large water systems that are not managed effectively. CDC outbreak investigations show that effective water management programs—actions that reduce the risk of Legionella growing and spreading in building water systems—can help prevent problems that lead to LD. Health care facility leaders* should be aware that LD is a risk in their facility and that they can take action to prevent infections.

Health care facility leaders can:

- Build a team focused on keeping their facility’s water safe.
- Create and use a water management program to limit Legionella and other waterborne germs from growing and spreading. [www.cdc.gov/legionella/WMPtoolkit](http://www.cdc.gov/legionella/WMPtoolkit)
- Work with healthcare providers to identify LD cases early and determine if the cases may be associated with a health care facility.
- Report LD cases to local public health authorities quickly and work with them to investigate and prevent additional cases.

Want to learn more? [www.cdc.gov/vitalsigns/legionella](http://www.cdc.gov/vitalsigns/legionella)

*Leaders may include infection control practitioners, facility managers, hospital administrators, quality assurance staff, or others.
Health care facilities may put people at risk for LD when they do not have an effective water management program. These limit germ growth by:

- Keeping hot water temperatures high enough.
- Making sure disinfectant amounts are right.
- Keeping water flowing (preventing stagnation).
- Operating and maintaining equipment to prevent slime (biofilm), organic debris, and corrosion.
- Monitoring factors external to buildings, such as construction, water main breaks, and changes in municipal water quality.

Contaminated water droplets can be spread by:

- Showerheads and sink faucets.
- Hydrotherapy equipment, such as jetted therapy baths.
- Medical equipment, such as respiratory machines, bronchoscopes, and heater-cooler units.
- Ice machines.
- Cooling towers (parts of large air-conditioning systems).
- Decorative fountains and water features.

Health care facility leaders and providers should be aware that some people are at increased risk for LD:

- Adults 50 years or older.
- Current or former smokers.
- People with a weakened immune system or chronic disease.

16 of 21 jurisdictions reported definite cases of health care-associated LD in 2015

Reported definite cases of health care-associated LD
Did not report a definite case of health care-associated LD
Not included in the analysis: Jurisdictions reporting less than 90% of Legionella infections to SLDSS, which contains information such as health care facility exposures

*Alaska had no cases to report
A 62-year-old man has been in the hospital for 12 days and just started showing symptoms of pneumonia.

His doctor orders tests to check for different types of pneumonia. They come back positive for LD. He gets treated with antibiotics.

Infection prevention staff promptly contact the local health department to report the case.

Hospital staff review the patient’s stay at the hospital to see all the places he’s been exposed to water.

Hospital leaders remind providers to test for LD with respiratory culture and urinary antigen in patients with health care-associated pneumonia.

Hospital leaders and public health experts put measures in place to help protect others while figuring out how the patient got sick.

The water management team looks for changes in water quality and collects water samples from around the hospital to test for Legionella.

Legionella is found in the building’s water supply. Hospital leaders work with public health and other experts to make the water safe.

Hospital leaders review their water management program to see if they need to make changes to help prevent LD infections.

**Health care facility leaders can protect patients from LD with prevention and early recognition.**

*The same steps apply when two or more cases of possible health care-associated LD (patients with LD who spent part of the 10 days before symptoms began at the same facility) are identified within 12 months of each other.*

What Can Be Done?

The Federal government is

■ Promoting LD prevention practices and providing tools on how to develop water management programs for health care facilities and other at-risk buildings.


■ Tracking LD and providing guidance in responding to outbreaks to find the source and help prevent more infections.

Healthcare providers can

■ Test for LD in people with health care-associated pneumonia, especially those with severe pneumonia or in facilities where other LD cases have been identified or Legionella has been found in the water.

■ Test for LD in people with pneumonia who have a weakened immune system or chronic disease, fail outpatient treatment, require intensive care, or report recent travel.

■ Order a culture specific for Legionella from a lower respiratory specimen (e.g., sputum), preferably before giving antibiotics. Also order a urinary antigen test.

■ Talk to their laboratories to make sure they do Legionella tests on site or have another way to quickly get results.

Health care facility leaders can

■ Build a team focused on keeping their facility’s water safe.

■ Create and use a water management program to limit Legionella and other waterborne germs from growing and spreading. [www.cdc.gov/legionella/WMPtoolkit](http://www.cdc.gov/legionella/WMPtoolkit)

■ Work with healthcare providers to identify LD cases early and determine if the cases may be associated with a health care facility.

■ Report LD cases to local public health authorities quickly and work with them to investigate and prevent additional infections.

State and local officials can

■ Improve monitoring for LD in health care facilities (including reviewing previous cases to look for patterns), and respond promptly to reports of cases.

■ Understand capacity of laboratories to process Legionella specimens, and encourage laboratories to save patient isolates for public health investigations.


■ Report details for all LD outbreaks to CDC’s National Outbreak Reporting System. [www.cdc.gov/nors](http://www.cdc.gov/nors)

■ Provide tools and information to help health care facility leaders create and use Legionella water management programs.

Practical guide for developing a Legionella water management program
[www.cdc.gov/legionella/WMPtoolkit](http://www.cdc.gov/legionella/WMPtoolkit)