



NC DEPARTMENT OF
**HEALTH AND
HUMAN SERVICES**

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June 29, 2018

To: North Carolina Clinicians

From: Jean-Marie Maillard, MD, MSc, Medical Director, Communicable Disease Branch

Subject: Increases in Reported Cases of Legionnaires' Disease

This memo provides clinicians with information regarding increases in reported Legionnaires' disease cases in North Carolina and nationally and recommendations for diagnosis, prevention, and reporting.

Background:

The incidence of Legionnaires' disease in the United States increased more than 4-fold between 2000 and 2016. The reported incidence in North Carolina is similar to the national incidence and has followed a similar trend during this period, increasing from 0.65 to 2.36 cases per 100,000 population. Cases of Legionnaires' disease have occurred in most counties in North Carolina. However, the incidence varies considerably by county. County-specific incidence rates can be found under the Communicable Diseases Yearly Reports heading at <https://epi.publichealth.nc.gov/cd/figures.html>. It is unclear whether increases in reported legionellosis are due to increased awareness and testing, an increasing number of susceptible persons due to aging of the population, increased *Legionella* in the environment, or some combination of these factors.

Recommendations:

The North Carolina Division of Public Health asks that clinicians help address increases in Legionnaires' disease by sharing prevention measures with patients and by ensuring the early detection of cases, allowing for a rapid response to prevent additional cases.

Diagnosis

- Culture of lower respiratory secretions and the *Legionella* urinary antigen test are the preferred diagnostic tests for Legionnaires' disease. Serological assays can be nonspecific and are not typically recommended.
- Testing is recommended for **patients with pneumonia** who
 - Failed outpatient antibiotic treatment
 - Require intensive care
 - Have a weakened immune system or chronic disease
 - Report travel within 10 days before illness onset, or

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- Have healthcare-associated pneumonia and who reside in facilities where other Legionnaires' disease cases have been identified.
- *Legionella* urinary antigen testing is a diagnostic test, not a screening test, so is not recommended for individuals who have not had clinical symptoms. There is no public health recommendation to repeat *Legionella* urinary antigen testing in patients who have already tested positive. The urinary antigen is likely to remain positive for several months after acute illness even if the patient has received antibiotic treatment.
- Additional information about legionellosis for clinicians is available on the CDC website: <https://www.cdc.gov/legionella/clinicians.html>

Prevention

- Remind patients who have hot tubs or whirlpools to check pH, disinfectant, and other chemical levels regularly and to clean them as recommended by the manufacturer.
- Remind patients who use respiratory equipment such as nebulizers or CPAP machines to follow manufacturer instructions for cleaning and maintenance. Only sterile or distilled water should be used with this equipment, even for cleaning and maintenance. The equipment should not be cleaned with tap water.
- Water management programs are used to minimize the growth and spread of *Legionella* in building water systems. They are the key component of Legionnaires' disease prevention for health care facilities, including hospitals and long-term care facilities, and other at-risk buildings with complex water systems in which susceptible populations reside. Additional information about water management plans to reduce the risk of *Legionella* is available on the CDC website: <https://www.cdc.gov/legionella/wmp/index.html>

Reporting

- As a reminder, North Carolina law requires physicians to report suspected cases of Legionnaires' disease to public health. Please contact the NC Communicable Disease Branch at 919-733-3419 or your local health department with any questions.