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PUBLIC HEALTH ADVISORY

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Subject: Increase of Legionnaires' Disease Cases in York County
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Increase of Legionnaires' Disease Cases in York County

Summary:

Maine Center for Disease Control and Prevention is investigating an increase in cases of Legionnaires' disease, a potentially fatal pneumonia, in persons who live in, work in, or visit York County. Providers should consider the possibility of Legionnaires' disease in patients presenting with respiratory illness, particularly if the patient reports spending time in York County in the 14 days prior to the onset of symptoms. Providers should perform testing using both urine antigen and sputum/respiratory culture and consider using empiric treatment with activity against *Legionella*.

Background:

Maine recorded eight confirmed cases of Legionnaires' disease in York County in 2021, an increase from the 5-year median of four cases per year for York County. Maine also recently received two reports of cases of Legionnaires' disease in persons with exposures in York County who were diagnosed outside of Maine. Cases range in age from 50–80 years old. Maine CDC has not identified a common exposure between cases and is investigating to determine whether these cases could be linked to an environmental source.

Legionellosis is an infectious disease caused by a gram-negative bacillus of the genus *Legionella*, most commonly *Legionella pneumophila*. Legionnaires' disease is the acute pneumonic form of the disease. Legionellosis is generally acquired by inhalation of an infectious dose of aerosolized *Legionella*, usually in contaminated water from sources such as cooling towers, whirlpool spas, showers, and faucets.

Symptoms of Legionnaires' disease are similar to other forms of pneumonia and usually occur 2–14 days after exposure to an environmental source. High fever, chills, cough, chest pain, and muscle aches are common symptoms. Presenting symptoms of Legionnaires' disease are similar to those of COVID-19. Legionellosis is diagnosed through laboratory tests, most commonly the urine antigen test or culture of respiratory specimens (sputum or bronchoalveolar lavage). Legionnaires' disease commonly results in hospitalization, and the fatality rate is 5–30%.

Testing for and empirically treating *Legionella* is especially critical for persons at high risk for Legionnaires' disease, including persons >50 years old, cigarette smokers, and persons with chronic lung disease, or persons with immunocompromising conditions.

Although urine antigen is a fast and convenient way to diagnose *Legionella* infection, culture data are needed to enable Maine CDC to link cases to potential environmental sources of exposure to *Legionella*. Do not hold antibiotics to wait for culture results.

Recommendations:

- Consider Legionnaires' disease in the differential diagnosis of pneumonia.
- Test for *Legionella* infection in patients with suspected or confirmed pneumonia, using both urine antigen and sputum/respiratory culture, particularly for patients who live in or have spent time in York County in the 14 days prior to symptom onset.
 - When ordering a sputum culture, alert your laboratory to test for *Legionella* since special materials and microbiologic techniques are required to isolate this organism.
 - Culture yield is greatest when sputum or respiratory samples are taken early in the patient's course. Do not delay initiating antimicrobial therapy to obtain cultures.
 - Patient infections with *Legionella* should be promptly reported to Maine CDC.
 - *Legionella* isolates grown from respiratory specimens should be sent to the Maine Health and Environmental Testing Laboratory for further analysis.
- Consider further evaluation of patients with respiratory symptoms who have a negative test for COVID-19.
- Use recommended treatment options for pneumonia that include macrolides and fluoroquinolones with activity against *Legionella* species (See guidelines at [Legionnaires Disease and the Updated IDSA Guidelines for Community-Acquired Pneumonia](#).)
- Empiric treatment of pneumonia should include a macrolide or fluoroquinolone that has activity against *Legionella*. Do not withhold empiric therapy for *Legionella* while awaiting *Legionella*-specific testing.

Reporting requirements

Legionellosis (Legionnaires' disease or Pontiac fever) is notifiable in Maine. Confirmed cases of legionellosis should be reported by phone to 800-821-5821, by fax to 800-293-7534, or electronic lab report.

For more information:

- Maine CDC Legionella webpage: <https://www.maine.gov/dhhs/legionella>
- U.S. CDC Legionella webpage: <https://www.cdc.gov/legionella/index.html>