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Health Care Provider Advisory
2 Epidemiologically Linked Legionellosis Cases at Fitness Facility

Requested Actions

- Be aware that Yakima Health District is investigating 2 epidemiologically linked cases of Legionellosis implicating the same hot tub as the source for their infection. Remediation of the affected facility is underway and its clients are being notified.
- Consider Legionellosis when evaluating patients presenting with pneumonia symptoms.
- Ask about potential exposures, particularly hot tub use at home or at a fitness facility, in the 2-14 days prior to onset. Other exposure risks include:
  - Aerosolized water (e.g., fountain, whirlpool spa, hot tub, humidifier, evaporative condenser, nebulizer, grocery store misting machine)
  - Time spent in a hospital as in inpatient, outpatient or employee
  - Travel
  - Spending at least one night away from the home
  - Exposure to soil

Legionellosis Facts

Legionellosis is usually associated with two clinically and epidemiologically distinct syndromes: Legionnaires' disease, a potentially fatal form of pneumonia, and Pontiac fever, a self-limited "flu-like" illness without pneumonia. Persons with Legionnaires' disease may present early in the illness with nonspecific symptoms including fever, malaise, myalgia, anorexia, and headache. Cough may be only slightly productive, and chest pain, occasionally pleuritic, can be prominent. Chest x-rays almost always show pneumonia. Case fatality rate is 10%. Pontiac fever is a milder, self-limited illness. Persons at increased risk for Legionellosis include persons over 50 years of age and those with certain medical conditions such as COPD, diabetes, and immunosuppression.

Testing

- Urinary antigen assay **and** culture of respiratory secretions on selective media are the preferred diagnostic tests for Legionnaires' disease (i.e., collect urine and respiratory specimens and submit BOTH for testing). Be sure to specify in the requisition that you are requesting testing for *Legionella* (requires special media—see below).

- Urine antigen tests: Rapid immunoassays are available commercially to detect *Legionella* antigens in urine. The test has good sensitivity (70–80%) for detecting *Legionella pneumophila* serogroup 1 antigen (80% of cases) but poor sensitivity (5%) for detecting other *L. pneumophila* serogroups and other species.
- Culture: *Legionella* bacteria can be isolated from lower respiratory tract secretions, lung tissue, and pleural fluid by using special media. The sensitivity of culture is highly variable depending on the severity of illness and the experience of the laboratorian performing the test. The advantage of culture is that it will detect all species and allow for comparison with environmental samples, if available.
- Serologic tests: Demonstrating a four-fold rise in antibodies to *L. pneumophila* serogroup 1 can confirm the diagnosis but is more useful for epidemiologic investigations than for clinical use. An acute serum specimen should be collected when the diagnosis is suspected (during the acute phase of illness) and the convalescent serum specimen should be collected at 4, 6 and 12 weeks after onset.

Treatment

- Comparative antibiotic trials have established that the newer macrolides (especially azithromycin) and the respiratory tract quinolones (especially levofloxacin) are effective for *Legionella* infection.

Reporting

Legionellosis is a reportable condition in Washington. Health care providers should notify Yakima Health District within 24 hours.

For more information, see https://www.cdc.gov/legionella/downloads/fs-legionella-clinicians.pdf