

## Pontiac Fever Associated with a Residential Hot Tub

November

Hennepin County

On November 14, 2012, the Minnesota Department of Health (MDH) Acute Disease Investigation and Control Section was forwarded an e-mail complaint by the Hennepin County Human Services and Public Health Department. The complainant reported that four family members had become ill with fever, cough, and other flu-like symptoms after attending a hot tub party at a relative's home on November 10 in Brooklyn Park, Minnesota. An investigation was initiated on November 14.

Contact information for the attendees was provided by the complainant. MDH epidemiology staff interviewed party attendees to obtain information on exposures and illness history. A case was defined as a hot tub party attendee who subsequently developed fever and/or chills and at least one respiratory symptom.

Of five individuals interviewed, four (80%) met the case definition. All four cases reported fever and muscle aches, three (75%) cases reported cough, two (67%) of three cases reported chills, two (67%) of three cases reported headache, two (67%) of three cases reported dizziness, two (67%) of three cases reported tightness in chest, one (33%) of three cases reported sore throat, and one (33%) of three cases reported vomiting. The median incubation period was 43 hours (range, 41.5 to 45 hours) for the three cases with known onset times. The median duration of illness was 37.25 hours (range, 25.5 to 49 hours) for the two cases who had recovered at the time of interview. One (25%) case visited a medical provider for their symptoms.

The only people to go in the hot tub on November 10 were the four cases; all of the cases reported spending 1 to 2 hours in the hot tub.

The owner of the hot tub reported that the hot tub was an eight person residential model unit housed in an outside enclosure in a private backyard. The hot tub had been drained and cleaned in October and was last used approximately 2 weeks prior to the November 10 party. The owner reported that they add chlorine or oxidizing shock after using the hot tub; however, they do not routinely check the chemicals and did not check the chemicals prior to use on November 10.

This was an outbreak of acute febrile illness associated with a residential hot tub. The symptoms, incubation period, and high attack rate are characteristic of Pontiac Fever, a milder illness caused by *Legionella* bacteria. The improper maintenance and lack of disinfection of the hot tub likely led to the proliferation of the bacteria. The owner of the hot tub was referred to the Centers for Disease Control and Prevention's recommendations for disinfection of hot tubs contaminated with *Legionella*.