

Chemical Exposure Illnesses Associated with a Hotel Spa Pool

March

St. Louis County

On March 2, 2020, the Minnesota Department of Health (MDH) foodborne and waterborne illness hotline received an online complaint reporting that multiple people had become ill with coughing and difficulty breathing within seconds of the spa pool jets being turned on at a hotel in Duluth on March 1. MDH Environmental Health (EH) was notified, and an investigation was initiated.

MDH staff interviewed the complainant about his illness and exposure history. A MDH sanitarian conducted an onsite inspection of the spa pool on March 3. Spa pool logs were also reviewed.

Detailed illness and exposure history information was only obtained from the original complainant. He became sick with coughing, watery eyes, throat irritation, and trouble breathing within seconds of the spa pool jets turning on. The coughing and throat irritation lasted several hours. He also reported that a red, itchy, rash developed on the skin approximately 2 hours after exposure to the spa pool. According to the complainant and hotel employees, multiple other individuals (both children and adults) experienced similar symptoms.

Upon inspection of the spa pool by MDH sanitarians on March 3, it was observed that the spa pool emergency shut off button was on the same control box as the button to turn on the jets to the spa pool. It was reported by the certified pool operator that despite being labeled, there was a history of spa pool users pushing the emergency shut off button to turn off the jets. Sometime during the evening of Saturday, February 29, the shut off button was accidentally pushed by a pool user, allowing the water to sit in the spa pool overnight without any circulation. On Sunday morning, March 1, the pool operator checked the chemicals and stated they were where they should be in the spa pool; however, review of the spa pool logs showed a pH reading of 8.4 (above the acceptable limit of 7.8), and no measurements for combined chlorine were noted. Additionally, the employee that tested the spa pool on Sunday morning did not turn on the jets as he was instructed to do, so he did not notice that the pump was not working. The spa pool opened at 8:00 a.m., and by 8:30 a.m. the hotel staff reported receiving complaints about burning skin and trouble breathing.

This was an outbreak of chemical exposure illnesses associated with a hotel spa pool. It is likely that water sat overnight in the spa pool, not being filtered or treated, and improperly treated water was released when hotel guests turned the spa pool jets back on the next morning. As a result of the outbreak, the hotel updated their testing instructions and retrained staff. Additionally, a flip cover was installed over the emergency shut off button.