

## Description of Nosocomial Legionella Infections – Los Angeles County, October 2005–August 2014

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**Date:** Tuesday, April 21, 2015  
**Time:** 1:30 pm/et  
**Location:** Dunwoody Suite

**Summary:** Current investigation practices for hospital-associated *Legionella* infection may not be enough to detect and prevent future cases.

### Abstract:

**Background:** Quarterly environmental culturing of water systems for Legionella is required in European hospitals; however, CDC requires US hospitals to test only during an outbreak ( $\geq 2$  cases) or after one transplant unit case. We reviewed nosocomial cases in Los Angeles County (LAC) to determine whether CDC guidelines should be changed to include culturing of water in high risk areas (sinks, fountains, showers) after a single nosocomial case.

**Methods:** Data from LAC legionellosis surveillance for October 2005–August 2014 were imported into Epi Info™ 7 and reviewed. All cases are confirmed per CDC/CSTE definition. Nosocomial cases were designated as possible nosocomial (2–9 days in hospital before diagnosis) or definite nosocomial ( $\geq 10$  days). The incubation period is 2–10 days.

**Results:** Of 743 confirmed Legionella cases, 55 (7.4%) were nosocomial from 42 facilities. Of these, 40 (72.8%) were definite and 15 (27.2%) possible. Fourteen (25.5%) were linked to 6 outbreaks. Five of 6 index cases were definite (83%); of 33 definite initial cases, 5 (15%) had subsequent cases at the same facility. Water culture identified 2 outbreaks where environmental cultures matched clinical isolates, 2 where cultures demonstrated other Legionella strains, and 2 with negative testing. In the 2 outbreaks where environmental testing revealed the same strain as the clinical isolates, subsequent cases occurred 1 and 22 days after the index case; when other Legionella strains were identified, they occurred 188 and 269 days later.

**Conclusions:** Because 15% of definite cases were followed by subsequent cases, preventative environmental testing might be considered after one case. When environmental testing reveals other Legionella strains, those water systems might still benefit from intervention, as these systems still support Legionella growth.