

Abbreviated duration of superheat-and-flush and disinfection of taps for Legionella disinfection: lessons learned from failure.

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摘要

Abstract

One medical center in southern Taiwan faced an outbreak of nosocomial Legionnaires' disease; a total of 81 suspected cases were detected during an 8-month period. Baseline environmental surveillance showed that 80% of the distal sites in intensive care units (ICUs) were positive for Legionella pneumophila. Superheat-and-flush was selected for hospital water supply disinfection because it required no special equipment, and it can be initiated expeditiously. We conducted 2 episodes of superheat-and-flush based on the published recommendations from the Department of Health, Taiwan; US Centers for Disease Control and Prevention; and American Society of Heating, Refrigerating, and Air-Conditioning Engineers. Both flushes failed to control colonization of Legionella in the hospital water supply. The rate of distal sites positive for Legionella in wards and ICUs was 14% and 66%, respectively, 10 days after the second flush. The effect of replacement of faucets and showerheads in ICUs appeared to be insignificant in colonization of Legionella. The application of superheat-and-flush for flush duration of 5 minutes was ineffective. Superheat-and-flush may not be economic for a large medical center because it could be costly and labor intensive.