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## APPENDIX A

### Primary Prevention of Legionellosis

#### I. Central Power Plant Cooling Towers

- A. The cooling towers located on top of the Central Power Plant (CPP) direct tower drift away from the hospital's air systems. Drift eliminators are utilized to minimize aerosol drift.
- B. An outside contractor together with Facilities evaluates and treats CPP water.
  - pH levels are monitored daily.
  - A RLU (light reflecting unit) test for bacteria is performed weekly.
  - Biocide levels are monitored weekly by the contractor and a minimum of three times weekly by Facilities staff.
  - Legionella tests are sent out to an independent lab quarterly.
  - HEIC is notified of the results of all legionella testing.
  - If legionella is identified in the water, the towers are decontaminated in accordance with manufacturer's recommendation and standard industry practice.

#### II. JHOPC Cooling Towers

- A. A small enclosed tower above the JHOPC building serves radiology equipment.
- B. An outside contractor monitors the water treatment for the JHOPC cooling tower.
  - pH levels are monitored quarterly.
  - A biocide is fed into this system by an automatic feed system.
  - Biocide levels are monitored quarterly.
  - Legionella tests are conducted by an independent laboratory quarterly. The results are returned to Facilities for review.
  - HEIC is notified of the results of all Legionella testing.
  - If Legionella is identified in the water, the towers are decontaminated in accordance to manufacturer's recommendation and standard industry practice.

#### III. Water-Distribution System


- A. Storage type hot water tanks were replaced with tankless instantaneous water heaters.
  - Sink faucet aerators located in patient care areas shall be removed, decontaminated, and reinstalled annually.
  - During daily cleaning of patient rooms, the cleaning personnel shall let the water in patient rooms (hot and cold water of faucets and showerheads) run a minimum of 5 minutes/day to facilitate chlorine dioxide flushing through pipes.
  - Biocide tablets are installed, as needed, in evaporator drains pans serving air handling units and air conditioning units.
  - Water temperature will be maintained at 110°F at the sink outlet.
  - Permanent water disinfection systems shall be installed in all in-patient care buildings utilizing Chlorine Dioxide as the disinfecting agent.
  - Chlorine Dioxide will be used as a method of treating the water supply shall Legionella be detected.

#### IV. Other

- A. The JHH microbiology lab has Legionella testing capabilities including urinary antigen testing, DFA, and culture.
- B. Pulsed-field gel electrophoresis (PFGE) is available to compare all cultivatable isolates from clinical and environmental sources.

#### V. Patient Care

- A. Sterile water is used for rinsing nebulizers and other semi-critical respiratory care equipment.
- B. Physicians and providers are advised to routinely send expectorated sputum, brocheoalveolar specimens, and urinary antigen for Legionella in high-risk patients with pneumonia. All bronchoscopy

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specimens, expectorated sputum, tracheal aspirates, and pleural fluid from patients suspected of having nosocomial pneumonia shall be submitted for Legionella culture.

- C. Water cultures are done quarterly in buildings that house high-risk patients. Results will be reviewed with HEIC. HEIC and Facilities will meet as necessary to determine a plan of action in the event Legionella sp. is detected based on the species identified, the number of CFUs/ ml and the percentage of positive cultures.