

Water System Enhancements

August 2013 Update

VA Pittsburgh Healthcare System produces News to Know to communicate directly with Veterans, volunteers, employees and our many community partners. This update, which is part of an ongoing series, aims to share timely and accurate information about our recent water systems enhancements as we continue to usher in a new era of *Legionella* control.

Drafting our HACCP Plan | *Project Progress Check: Done!*

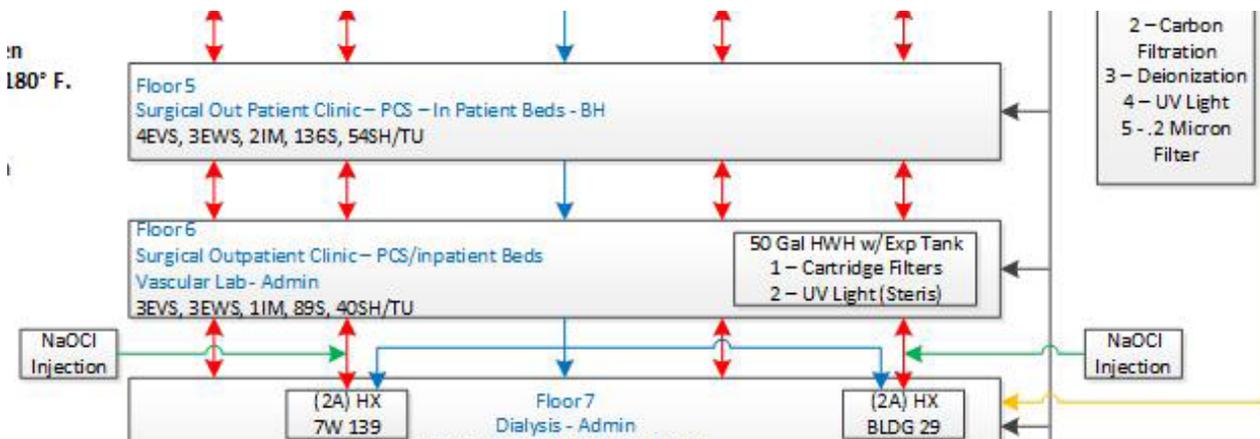
We recently completed the first full draft of our HACCP Plan, which currently stands at 89-pages long and serves our University Drive and H.J. Heinz campuses. This document specifies nine critical control points—six in the potable (drinkable) water systems at each campus and three in the utility water systems at each campus. For each critical control point, this plan specifies critical limits, monitoring methods and frequencies, and corrective actions to perform if a critical limit is surpassed.

While our HACCP plan will change substantially in early drafts, it will continue to evolve indefinitely as our operations, structures, systems and test results change.

We will again utilize the expertise of our partners at the U.S. Environmental Protection Agency (EPA), and we plan to send these scientists an early draft our HACCP Plan in the coming weeks.

What is HACCP?

HACCP stands for Hazard Analysis and Critical Control Points and is the most used process globally in terms of protecting people from waterborne or food borne disease causing microorganisms. The Centers for Disease Control and Prevention, EPA, American Water Works Association, The Joint Commission on Hospital Accreditation and the World Health Organization have all expressed support for the use of HACCP plans to help prevent *Legionella* pneumonia.



An early draft of our HACCP plan.

Install Mixing Valves and Instantaneous Hot Water Heaters

 **Project Progress Check: 70 percent complete**

This project will kill *Legionella* bacteria by raising and sustaining the water in our plumbing system to a temperature of 140 degrees Fahrenheit. As part of this improvement, contractors are working every day of the week at our University Drive and H.J. Heinz campuses to install specialized valves on more than 3,300 faucets and showerheads. These valves will prevent users from getting scalded yet allow superheated water to flow through our fixtures during scheduled sterilization treatments.

Map Piping in Above-Ground Plumbing

 **Project Progress Check: 10 percent complete**

In this project, we are enhancing the overall efficiency of our water systems by identifying and then removing obsolete sections of piping. We are also generating a permanent record of all piping in our above-ground plumbing systems—some 14 miles total—at both University Drive and H.J. Heinz.



Putting Patient Safety First

Our primary maintenance and treatment methods currently utilize chlorine, which—at certain concentrations—effectively kills *Legionella* bacteria. At both our H.J. Heinz and University Drive campuses, we maintain *Legionella* control by chlorinating our water at EPA-safe drinking levels, and we test these levels on a daily basis. In accordance with our HACCP Plan and current zero-tolerance testing policy, if we detect even one colony of *Legionella* pneumonia in our water system, we swiftly treat the water in this area with a sustained infusion of concentrated free chlorine. This incredibly aggressive approach does result in occasional water use restrictions. While inconvenient, these restrictions are necessary to ensure the safety of our water systems and reflect our steadfast commitment to putting patient safety first.

In regards to examining our patients for *Legionella* pneumonia: We conduct a urine antigen test and try to collect a sputum sample for each and every confirmed *and* suspected case of pneumonia. This incredibly strict surveillance regimen is one of the most rigorous in the health care industry, and it led us to identify eight cases of community-acquired *Legionella* pneumonia in the last eight months.

In July, we reported one possible health care acquired case of *Legionella* pneumonia (the only such case identified in 2013). However, this patient's sputum sample did not grow *Legionella* bacteria and our corresponding water samples did not contain even a single *Legionella* colony. As a result, we lack all genetic information necessary to confirm this patient's source of infection. Regardless, we swiftly treated this patient for pneumonia, and he is currently home and healthy.