Opening the Door to Cleaner Healthcare Environments

By Scott Gardeen

PUSH PLATE SWITCHES ARE used throughout hospitals to allow for easy door accessibility for wheelchairs and heavy equipment such as hospital beds and carts. Many push plates are made of stainless steel, which unfortunately can allow toxic bacteria to remain active for weeks.

In 2002, the Centers for Disease Control and Prevention (CDC) estimated that the national average for hospital-acquired infections (HAI) is about 4.5 infections per 100 hospital admissions.[1] To reduce these growing numbers, the CDC and The Joint Commission have called for hospitals to actively pursue prevention, control and investigation of HAIs.

Pullman Regional Hospital in Pullman, Wash., is taking measures to combat deadly infections. Pullman falls well below the national average, with a hospital-wide infection rate of about 1.2 percent, but is looking to new technologies to reach its ultimate goal of zero healthcare-related infections. Pullman conducts thorough room cleanings one to two times a day but wants to do more to reduce infectious bacteria by switching out the type of material used on high-touch surfaces.

Converting to Copper

Pullman Regional Hospital recently received a $10,000 grant from the Copper Development Association (CDA) to replace some of its most frequently touched metal surfaces with copper-alloyed hardware. In December 2013, the hospital began replacing its most frequently-touched surfaces with antimicrobial copper. The first items to be replaced with copper were the stainless steel

Photos courtesy of ATEK Access Technologies

push plates throughout the building. Unlike silver or any other touch-surface metal, copper is recognized by the U.S. Environmental Protection Agency (EPA) as being able to continuously kill greater than 99.9 percent of bacteria[2] that can cause HAIs, including Methicillin-resistant Staphylococcus aureus (MRSA), within two hours when cleaned regularly.

"Copper provides an opportunity to kill deadly bacteria that cause infections because it continuously cleans without having to do anything," says Ed Harrich, Pullman Regional Hospital Director of Surgical Services. "We turned to ATEK Access Technologies because it is a leader in access technologies for public entrances and the only copper push plate manufacturer in the U.S."

Accessing a Solution

The Larco CopperShield push plate, an automatic door activation switch made from CuVerro® bactericidal copper, helps inhibit build-up and growth of bacteria between routine cleaning and sanitizing, and it continuously kills bacteria. Pullman Regional Hospital uses the 4.5-inch push plate, which features a handicap logo and "press to open" engraving on 18-gauge brushed copper alloy. The push plates can be mounted directly into electrical or universal mounting boxes and can be hardwired or connected wirelessly to the door.

According to Harrich, the conversion to the Larco CopperShield push plates was easy and cost-effective. "The Larco CopperShield push plate is an integral part of our improved infection control plan," says Harrich. "Its ability to continuously combat bacteria falls right in line with the culture of 'patient safety first.'"

Cutting Infections and Costs

By killing bacteria that cause infections, the Larco CopperShield push plates not only keep Pullman compliant with the CDC standard, they also decrease the potential for patients to come in contact with deadly bacteria, potentially saving Pullman Regional Hospital millions of dollars in re-admissions costs.

According to the *Journal of Medical Economics*, HAIs in U.S. acute-care hospitals lead to direct and indirect costs totaling $96-$147 billion annually.

Harrich also says that the Larco CopperShield push plates are cosmetically pleasing, and the Pullman Regional Hospital staff is happy because the plates provide a more hygienic environment. The copper material comes in a variety of alloys that offer different hues and prevent tarnishing.

In addition to the Larco CopperShield push plates, Pullman Regional Hospital also replaced 72 faucets, 1,100 drawer pulls and four IV pull handles with copper, and it plans to do more, including arm rests and door handles.

"We're focused on the closest touch points to patients right now to achieve our goal of zero infections,

and the Larco CopperShield wall switch will help us further supplement our current infection-control program because of its inherent ability to kill bacteria that cause these infections," says Harrich.

Pullman Regional is one of the first hospitals in the country to start using copper, but Harrich expects the trend to catch on quickly as hospitals across the nation ramp up their efforts to reduce and eliminate infections.

Unlike silver or any other touch-surface metal, copper is recognized by the EPA as being able to continuously kill greater than 99.9 percent of certain bacteria within two hours when cleaned regularly.

The use of CuVerro® bactericidal copper products is a supplement to and not a substitute for standard infection-control practices; users must continue to follow all current infection-control practices, including those practices related to cleaning and disinfection of environmental surfaces. This surface has been shown to reduce microbial contamination, but it does not necessarily prevent cross-contamination. CuVerro® is a registered trademark of GBC Metals, LLC and is used with permission (L-0006-1406). See www.CuVerro.com for more details.

Endnotes

1. Scott II, R. Douglas, "The Direct Medical Costs of Healthcare-Associated Infections in U.S. Hospitals and the Benefits of Prevention." *Centers for Disease Control*. March 2009.
2. Laboratory testing shows that, when cleaned regularly, CuVerro® surfaces kill greater than 99.9% of the following bacteria within two hours of exposure: Methicillin-resistant Staphylococcus aureus, Staphylococcus aureus, Enterobacter aerogenes, Pseudomonas aeruginosa, E. coli 0157:H7, and Vancomycin-Resistant Enterococcus faecalis (VRE).

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