

New Study Shows Xenex's Room Disinfection System Reduces Environmental Contamination



Xenex Healthcare Services announced on June 6, 2013, that Dr. Mark Stibich presented the poster *"Reductions in Environmental Contamination and Hospital Infection Rates After Implementing a Pulsed-Xenon Ultraviolet (PX-UV) Disinfection System"* at the International Forum on Quality & Safety in Healthcare in London. According to the poster, use of the Xenex room disinfection system at a VA hospital resulted in a 98.1 percent decrease in aerobic bacteria and a 99 percent reduction in MRSA contamination. The poster also presented results from three different hospitals which reported a reduction in their Multi-Drug Resistant Organism (MDRO) and hospital acquired *Clostridium difficile* (C. diff) infection rates after using pulsed xenon disinfection to reduce microbial contamination in patient rooms and other areas.

The environmental study was conducted at a Veterans Affairs facility in Temple, Texas. Rooms that had previously housed patients with Methicillin-resistant *Staphylococcus aureus* (MRSA) were sampled and levels of aerobic bacteria and MRSA were assessed. The same surfaces were sampled again after routine terminal cleaning, and after use of the Xenex device. Chetan Jinadatha, MD, MPH, Central Texas Veterans Healthcare System (Temple, TX), was the first author of the poster.

Outcome studies comparing MDRO infection rates before implementing the Xenex device with infection rates after implementation were done at different classes of facilities across the United States. Cooley Dickinson Hospital, Northampton, MA, reported a 53 percent reduction in hospital acquired C. diff infection rates (HA-CDI) after Xenex's device was used to disinfect patient rooms at discharge, operating rooms, emergency rooms, and other areas. MRSA infection rates at Cone Health, Greensboro, NC, dropped 56 percent in 2011 after Cone Health implemented an infection prevention program that included Xenex's device. After implementing Xenex for room disinfection, Westchester Medical Center, Valhalla, NY, reported a facility-wide reduction in both HA-CDI and overall healthcare associated infections (HAIs).

"Current hospital cleaning equipment and chemicals have proven to be inadequate to completely eradicate contaminants, but when new UV disinfection technologies are added to routine cleaning, recent studies show hospitals are able to dramatically reduce the number of deadly pathogens in patient rooms," said Dr. Stibich. "We are proud of the research being performed which proves that using our room disinfection 'robot' can help hospitals reduce their bacterial count. We now have conclusive proof that hospitals utilizing Xenex's room disinfection system are experiencing a cleaner and therefore a safer environment."

HAIs are the fourth-leading cause of death in the United States, costing more than \$30 billion each year. Hospital cleanliness plays a role in the spread of HAIs, which are caused by microorganisms such as C. diff, MRSA, Carbapenem-Resistant Enterobacteriaceae (CRE) and *Acinetobacter baumannii*. Research shows that hospital cleaning teams using standard cleaning practices are not able to disinfect all the surfaces in patient rooms, with more than half of the surfaces remaining untouched. Some superbugs such as C. diff are showing resistance to chemical disinfectants, making them even more difficult to eliminate. Others, like CRE, have developed a resistance to antibiotics, making them nearly impossible to treat.

Innovative hospitals throughout the U.S. are now utilizing Xenex Healthcare Services' patented, pulsed xenon UV light room disinfection system to destroy viruses, bacteria and bacterial spores in the patient environment without contact or chemicals. Uniquely designed for ease of use and portability, a hospital's environmental services staff can operate the Xenex device without disrupting hospital operations. The Xenex system can disinfect over thirty (30) rooms per day, allowing hospitals to use the system continuously to reduce contamination levels throughout their facilities.

Dr. Stibich speaks frequently about environmental disinfection technology and is regarded as a thought leader in the infection control community. As Chief Scientific Officer of Xenex, he oversees scientific research, product development, facility assessments, and protocol design. He also leads new technology development and is an inventor on multiple patents. He meets frequently with infection prevention representatives at healthcare facilities, helping them understand and solve their infection control challenges. Dr. Stibich holds a doctoral degree from the Johns Hopkins University School of Public Health, a Masters in Health Science, also from Johns Hopkins, and a bachelor's degree from Yale University.

The International Forum on Quality & Safety in Healthcare was a four day meeting comprised of an international group of chief executives, government officials, health care managers and clinicians who share a concern and a passion for improving quality and safety in healthcare.

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