

## **Researchers present “a novel, automated, efficient environmental disinfection technology that significantly reduces *C. difficile*, VRE and MRSA contamination...”**

San Francisco CA, October 8, 2009. In a study presented at the 49th Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), researchers used a mobile, automated UV device to decontaminate hospital rooms at the Cleveland Veterans Affairs (VA) Medical Center in Ohio, and analyzed its ability to remove troublesome bacteria, including *C. difficile* spores. The device, known as Tru-D, uses reflected UVC germicidal energy to decontaminate air and surfaces, including those in primary shadows. Tru-D is manufactured by Lumalier in Memphis, Tennessee.

Curtis Donskey, MD, Chair of the Infection Control Committee at the Cleveland VA Medical Center, concluded that Tru-D is a “novel method for cleaning hospital rooms...easy to use...and more effective than standard disinfection for removing hardy bacteria” “The Tru-D device was able to decontaminate all surfaces in 40 hospital rooms, including hard-to-clean surfaces such as the undersides of tables.” 18% of sites under the edges of bedside tables were still contaminated with MRSA after routine hospital cleaning, versus 0% after Tru-D use. Research revealed that disinfection with Tru-D reduced the frequency of positive MRSA and VRE cultures by 89%.

“*C. difficile* spores are especially challenging for hospital staff”, Dr. Donskey said. On inoculated surfaces, application of Tru-D using the ‘spore’ setting consistently reduced recovery of *C. difficile* spores and MRSA by >2-3 logs. Similar VRE reduction was achieved in about half the time using a lower dose setting. “The UV device is computerized, and can assess how much is needed for decontamination by measuring the reflected UV radiation from surfaces in the room” stated Donskey. “It’s inexpensive to operate and requires no cleaning supplies.” After viewing results, Dr. Donskey requested the purchase of several Tru-D units for the Cleveland VA Medical Center.

Other researchers agreed. “UVC radiation is an exciting new technology for disinfecting patient rooms and contaminated surfaces in healthcare”, said Luke Chen, MBBS, FRACP, assistant professor of medicine in the Division of Infectious Diseases at Duke University Medical Center. “The Tru-D device demonstrated consistency and rapidity in killing microorganisms,” Dr. Chen explained. “There is potential to use this technology to rapidly clean and turn around patient rooms, clinic space, or waiting rooms.”

John Boyce, MD, chief of the Infectious Diseases Section at the Hospital of Saint Raphael and clinical professor of medicine at Yale University School of Medicine, added, “The advantages of the Tru-D device are that it is easy to employ and that it can reduce the number of positive bacterial cultures substantially.” Dr. Boyce authored a 2008 disinfection study of vaporized hydrogen peroxide, a technology requiring specially-trained operators and 4 to 6 hours to clean a room. “The UV radiation device has the potential to be effective, faster, and less expensive to operate...” stated Boyce.

Results presented by Dr. William Rutala PhD., M.P.H., at the 2009 APIC Conference (Association of Professionals in Infection Control and Epidemiology) showed similar results; a consistent 3.91 Log<sub>10</sub> reduction for MRSA, 3.36 Log<sub>10</sub> reduction for VRE, 3.77 Log<sub>10</sub> reduction for Acinetobacter, and 2.67 Log<sub>10</sub> reduction for *C. difficile*. Dr. Rutala’s APIC presentation can be found at [www.disinfectionandsterilization.org](http://www.disinfectionandsterilization.org).

Tru-D inventor Jeffrey L Deal, MD, FACS, DTMH, refined this advanced disinfection solution over a ten-year span, working closely with Lumalier to insure that Tru-D technology is readily available for broad deployment.

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