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Studies Highlight the Emergence of UV Germicidal Technology in the Fight Against Infectious Pathogens.

ATLANTA, April 12 /PRNewswire/ -- Attendees of the Fifth Decennial International Conference on Healthcare-Associated Infection were offered a record 37 presentations on the critical role of contaminated environmental surfaces in the transmission of pathogens in healthcare settings.

Several studies focused on the use of Tru-D, an automated, no-touch, portable UV device, to control microbial contamination. Results were similar for all tests, with data indicating a meaningful reduction of MRSA, VRE, Acinetobacter, and C-diff on an array of environmental surfaces.

In a presentation by Dr. William A. Rutala, Ph.D., M.P.H, (UNC Health Care System), research performed by Dr. Philip Carling (Carney Hospital, Dorchester MA) was referenced whereby invisible luminescent pens were used to determine the effectiveness of terminal cleaning protocol. Data revealed that only 50% of surfaces within a patient room are disinfected at terminal cleaning. More importantly, several prior studies show that inadequate terminal cleaning of rooms occupied by patients with MDR pathogens places the next patient in these rooms at increased risk of acquiring these organisms.

Before-and-after culture tests performed by Rutala revealed that automated UV germicidal irradiation reduced >99.9% of vegetative bacteria, 99.84% for C.difficile. In MRSA patient rooms, UV-C caused a significant reduction in samples positive for MRSA (37 pre vs. 2 post) and in total average CFU's (384 pre vs. 19 post). The study concluded that UV germicidal energy provides "reliable biological activity against a wide range of pathogens."

"In an environmental-surface study presented by Nancy L. Havill, MT, and John M. Boyce, MD, (Hospital of Saint Raphael, New Haven, CT), disks inoculated with *Clostridium difficile* spores ($\sim 10^5$) were placed in patient rooms and bathrooms. UV Light decontamination (UVLD) reduced the number of C. difficile spores on disks by an average of 99%. Cultures were also obtained from high-touch surfaces in each room before and after UVLD. When UVLD was first carried out in the patient bathroom, followed by a second cycle in the patient room, 88% of 25 contaminated high-touch surfaces yielded no growth with UVLD. Havill concluded that UV-C light successfully eliminated aerobic bacteria from most high-touch surfaces."

The study, "Evaluation of an automated ultraviolet radiation device for decontamination of healthcare-associated pathogens in hospital rooms and on portable medical equipment." was presented by a research group from the Louis Stokes Cleveland VA Medical Center, Cleveland, OH (Michelle Nerandzic, BS; Jen Cadnum; Michael J. Pultz, BS; Curtis Donskey, MD). After routine cleaning, 18% of sites under the edges of bedside tables were found to be contaminated with MRSA. After Tru-D disinfection, sites revealed 0% contamination (P <0.001). An average of 3.5 logs of planted *S. warneri* remained under each bedside table after routine hospital cleaning versus 0.8 logs per site after Tru-D disinfection (P = 0.06). Tru-D disinfection also reduced the frequency of positive C. difficile cultures by 83%. They concluded that "the Tru-D Rapid Room Disinfection device is an efficient environmental disinfection technology that significantly reduces C. difficile and Staphylococcus spp. contamination on commonly touched hospital surfaces. More importantly, Tru-D reduces contamination levels on surfaces not easily amenable to standard housekeeping disinfection.

Tru-D is a patented, automated, no-touch UV germicidal device that provides fast, consistent high-level disinfection without chemicals, and with minimal training. For information about Tru-D Rapid Room Disinfection, contact Chuck Dunn @ 800-774-5799, or visit <http://www.lumalier.com>.