1329. Alcohol-based Hand Rubs Are Effective for Reduction of Multi-Drug Resistant Candida
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Session: 151. HAI: Hand Hygiene
Friday, October 6, 2017: 12:30 PM

Background. Hand hygiene is one of the most important measures for preventing the spread of infection. However as new, multi-drug resistant organisms emerge there is the question as to whether marketed products are effective against them. Multi-drug resistant Candida auris (MDRCA) was first reported as an infectious agent in humans in 2009 and has since been implicated in a growing number of infections. In June 2016 the US CDC issued a clinical alert to healthcare facilities warning of the potential for MDRCA transmission and infection within healthcare facilities and the importance of infection control measures. To date, data on the effectiveness alcohol-based hand rubs (ABHRs) against MDRCA has been lacking. The objective of the study was to test the fungicidal efficacy of three commercial ABHRs against MDRCA.

Methods. Three test products, two ABHR foams and one gel, each containing 70% ethanol, were evaluated for fungicidal activity against MDRCA (AR-Bank #0390) using an in vitro time kill method (ASTM E2783-11). Reductions of the microorganism were determined after 10, 60, and 300 seconds.

Results. As shown in the figure, the mean log_{10} reduction, 6.7889 (99.999%) of MDRCA at the 15 and 30 seconds exposure times.

Conclusion. Health care workers should continue to use ABHRs as indicated for preventing the transmission of infection. This data indicates these products effectively kill MDRCA, and further highlights the importance of compliance with hand hygiene guidelines in healthcare settings.

Disclosures. S. Edmonds-Wilson, GOJO Industries: Employee, Salary

1330. Reducing Dissemination of Viruses from Computer Touchscreens through Patient Hand Hygiene and an Automated Ultraviolet-C Touchscreen Disinfection Device
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Background. Computer touchscreens in patient waiting areas are a potential source for spread of viral and bacterial pathogens in healthcare facilities. Patient hand hygiene is recommended to prevent acquisition of pathogens on hands.

Methods. We tested the efficacy of patient hand hygiene alone or in combination with a novel automated ultraviolet-C (UV-C) touchscreen disinfection device for reduction in dissemination of the non-pathogenic non-enveloped virus bacteriophage MS2 from contaminated touchscreens. Subjects randomized to control, alcohol hand sanitizer (10 or 30 second application), UV-C (30-second cycle), or alcohol hand sanitizer plus UV-C contacted 4 sites used during operation of the touchscreen and then fingertips were cultured. The log plaque-forming units (PFU) recovered were compared for each group. Patients were observed to determine the frequency of hand hygiene after use of a touchscreen in a waiting area.

Results. As shown in the figure, the mean log10 PFU of bacteriophage MS2 recovered from fingertips was significantly reduced by each of the interventions (P < 0.001). However, only the combination of hand hygiene and UV-C was effective in completely preventing virus transfer. Of 20 patients observed in a waiting area, 0 (0%) used hand sanitizer that was available adjacent to the touchscreen.

Conclusion. Our results suggest that use of alcohol hand sanitizer alone or in combination with an automated UV-C touchscreen disinfection device could reduce transmission of viruses from contaminated touchscreens. There is a need for education of patients on the importance of hand hygiene after contact with touchscreens.

Figure. Efficacy of hand hygiene (HH) and/or UV-C in reducing recovery of bacteriophage MS2 from fingers after contact with contaminated touchscreens

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