ABSTRACT: EVALUATION OF LOW-INTENSITY ULTRAVIOLET-C RADIATION FOR DECONTAMINATION OF STETHOSCOPES AND GLUCOMETERS

OBJECTIVES:
To examine the efficacy of the UV-Angel (portable UV-C radiation device) against methicillin resistant staph aureus (MRSA), vancomycin resistant enterococcus (VRE) and clostridium difficile (C. diff) inoculated onto stethoscope heads, as well as the device’s efficacy on in use stethoscopes and glucometers.

METHODS:
Stethoscope heads were inoculated with MRSA, VRE and C. diff and treated with 1 cycle of UV-C. Log reductions were calculated by comparing recovery from treated surfaces versus untreated controls. In use stethoscopes and glucometers were cultured from hospital floors before and after 1 cycle of decontamination. CFU (colony forming units) were counted before and after 1 cycle of decontamination.

RESULTS:
One cycle of UV-Angel resulted in a significant reduction of MRSA, C. diff and VRE from the surfaces of inoculated stethoscopes compared to untreated controls. One cycle of UV-Angel resulted in a significant reduction of bacterial counts from in use stethoscopes and glucometers obtained from hospital floors.

CONCLUSION:
The UV-Angel is effective automated means of decontaminating stethoscopes and glucometers making it a useful means of preventing hospital acquired infections.