**Supplemental Material**

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| Table S1. Microbial reduction in Formica surfaces experimentally contaminated with healthcare-associated pathogens using a fixed cycle-time ultraviolet-C (UV-C) device by two different radiation designs (excluded data of too numerous to count cultures [TNTC]) | | | | |
|  | Carbapenem-resistant *Klebsiella pneumoniae* | | Methicillin-resistant *Staphylococcus aureus* | |
|  | Design A | Design B | Design A | Design B |
| UV-C direct sites | 5.74 [5.24-6.23] (n=12) | 6.61 [6.33-6.88] (n=12) | 5.27 [4.71-5.83] (n=12) | 5.97 [5.65-6.28] (n=11) |
| UV-C indirect sites | 4.92 [3.03-6.81] (n=3) | 5.65 [5.25-6.06] (n=14) | N/A (n=0) | 4.74 [4.32-5.17] (n=12) |
| Total | 5.57 [5.12-6.03] (n=15) | 6.09 [5.79-6.40] (n=26) | 5.27 [4.71-5.83] (n=12) | 5.33 [4.96-5.69] (n=23) |

**Values are shown in mean Log10 Reduction [95% confidence interval] (the number of samples). N/A, not applicable.**

Quantitated inoculum was 6.93-log10 per Rodac template for **carbapenem-resistant *K. pneumoniae*** and 6.65-log10 per Rodac template for **methicillin-resistant *S. aureus***.

Microbial reduction was calculated as subtracting the number (log10) of test organisms measured on UV-C cycle completion from quantitated inoculum (log10).

**Design A, UV-C device was placed at the end of the bed in the center of room with a single cycle (total exposure time: 5 minutes).**

**Design B, UV-C device was placed at both sides of the bed in the center of room with one cycle at the right side and another cycle at left side (total exposure time: 10 minutes).**

Most of TNTC occurred at UV-C indirect sites for Design A in both CRKP (15/19 TNTC) and MRSA (18/25 TNTC).

When data of TNTC cultures were excluded, overall, we observed a 5.57-log10 reduction in Design A and a 6.09-log10 reduction in Design B for decontamination of CRKP (*P*=0.0469) and a 5.27-log10 reduction and a 5.33-log10 reduction for MRSA (*P*>0.05), respectively.

At UV-C direct sites, we observed a 5.74-log10 reduction in Design A and a 6.61-log10 reduction in Design B for decontamination of CRKP (*P*=0.0028) and a 5.27-log10 reduction and a 5.97-log10 reduction for MRSA (*P*=0.0301), respectively.

At UV-C indirect sites, there were no statistical differences by radiation design.

As seen in these data analysis without TNTC, both designs A and B are effective for CRKP and MRSA at UV-C direct sites (Design B is statistically better than Design A, but the difference is less clinically important).

Design B is also effective even at UV-C indirect sites (5.65-log reduction for CRKP and 4.74-log reduction for MRSA).

Thus, data other than UV-C indirect sites for Design A are accurate based on countable plates, which supports our data in Table 1.