A Separate Needed Standard for Operating Room UV Disinfection

The OR environment is unique in the healthcare sphere as follows:

- The target pathogens are relatively more susceptible to UV exposure. Staph, strep, E. Coli and pseudomonas comprise the majority of surgical site and prosthetic infections. UVC resistant C. diff, prevalent in hospital room HAIs, is not a consideration in the OR, even in colorectal cases.
- The acceptable log reduction on relevant OR surfaces should be a minimum log 3 and preferably log 4, which may be a more stringent standard than that for a hospital room.
- Although all HAI's are devastating, infected joint replacements, vascular grafts, heart valves, and other large "foreign body" implants carry 50% mortalities and are extremely expensive to care for.
- The OR contains different objects than a hospital room including overhead lights and multiple machines for imaging, suction, video, coagulation, anesthesia, etc. There are no curtains, bathrooms, call buttons, etc. that are found in a patient room.
- Materials in the OR are different than a hospital room. There tends to be more stainless steel and smooth ceramic tile, for example.
- Some manufacturers sell overhead UV systems intended solely for the OR. A hospital room standard would be inapplicable to such systems.
- There are over 5,000 free standing ambulatory surgery centers in the US, similar to the number of hospitals. A hospital room standard will be meaningless to ASCs.
- OR's are extremely conscious of room turnover time and this factor should be written as part of the standard. This should include initial entry into the room through final exit from the room, plus disinfecting the unit's power cord and wheels to prevent room cross contamination. The time standard should be less than the time required for chemical disinfection.

Conclusion:

UV disinfection standards written for patient hospital rooms are not applicable to the Operating Room environment. Separate standards are required for this unique environment.

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