Reviewer's report

Title: Evaluation of an automated ultraviolet radiation device for decontamination of Clostridium difficile and other healthcare-associated pathogens in hospital rooms

Version: 2 Date: 1 June 2010

Reviewer: Anthony Dolan

Reviewer's report:

The authors have responded quite well, with the revised manuscript being an improvement and the added details have aided reader understanding. This is a good article with importance in this particular area, as non-toxic means of room decontamination are required.

Discretionary revisions:

The authors may wish to leave out line 38 to 39 after the word "monitoring".

Suggest that the section in the methods which deals with microbiology be moved towards the beginning of the methods, perhaps after preparation of c. diff spores.

Although the authors have accepted the limitations of the technology, they may choose to acknowledge some limitations of their methodology. For instance they use direct plating of swabs to ascertain the concentration of bacteria inoculated to a surface and to ascertain how many remain after exposure. How can direct plating (and counting!?!?) lead to there being a known quantity of 10,000 bacteria inoculated onto a surface as is indicated from what was done with the positive control? Direct plating also has inherent limitations, typically, less than 30% of bacteria are released from the swab, and depending on the swab, 100% recovery from the surface would rarely be achieved. As such there may be an underestimation as to how much may have actually been applied, but also how much was actually recovered.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests