Author’s response to reviews

Title: Impact of pulsed xenon ultraviolet disinfection on surface contamination in a hospital facility’s expressed human milk feed preparation area

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Author’s response to reviews:

Dear Editor and Reviewers

Thank you for taking the time to consider my manuscript and the extremely inciteful remarks and suggestions

The following amendments have been made as per your recommendations

1. The citations have been removed from the abstract.

2. The CI for the p-values have been included in the main body of the manuscript

3. The pre: post cleaning ratio in the methods section was a poor choice of terminology and has been expanded on to clarify the inconsistency of conventional cleaning and highlighting the consistent improvement on post cleaning TSB following the introduction of the PX-UVD.

4. The limitations have been amended to include a comment on the disconnect between surface bioburden in relation to clinical infection, which will allow the limitation to tie into the conclusion where we envision a future long term study to evaluated this very relationship. Our facility has now finally acquire a permanent device.

5. Indeed, an interrupted time series design would have been the perfect statistical analytical tool however following discussion with the independent statisticians we used for this study, concern was raised firstly on the basis of the short duration of the study and secondly, most noteworthy, the impact of admission seasonality to our facility and the impact of high traffic and possible associated bioburden. Our facility has 2 distinctive seasonal peaks with the
largest and busiest period for the majority falling outside the study period not but design but by sheer coincidence related to the availability of the PX-UVD we received on loan; hence the ANOVA analysis was preferred

6. In response to Reviewer 2 suggestions pertaining to well publicized effects of PX-UVD on Clostridium difficile we have attempted to clarify this in the discussion. The independent laboratory cultured all organisms including gram positive and gram negative and yeast. Our facility and in particular the neonatal and paediatric departments fortunately have an extremely low incidence of these type of organisms, in stark contrast to the adult ICU and surgical ICU’s, however as can be seen by the dominance of the Gram negative species they remain the bane of our existence and this is more a reflection/impact of study design

Kind regards

Ricky Dippenaar