

Peer Review Report

Review Report on Monitoring prevalence and persistence of environmental contamination by SARS-CoV-2 RNA in a makeshift hospital for asymptomatic and very mild COVID-19 patients

Original Article, Int J Public Health

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EVALUATION

Q 1 Please summarize the main findings of the study.

The authors used a longitudinal study design and found to characterized SARS-CoV-2 on several types of environmental surfaces in the Sanya second makeshift hospital. They found that:

70% of sewage from bathroom were positive

The most contaminated objects are top surfaces of patient cubic partitions (100%)

The highest rate of contamination was found from the no-touch surfaces (73.07%) and toilet setting (70.67%) followed by air samples (48.19%)

SARS-CoV-2 relic RNA can be detected on indoor surfaces for up to 20 days after the COVID-19 infectors has left the makeshift hospital.

Q 2 Please highlight the limitations and strengths.

Limitations

I have one of the major limitations related to this work. It is the hospital's disinfection approach and frequency. This appears to be an important gap in the interpretation of the data. It would have been rigorous to subject all the surfaces to the same intensity and frequency of disinfection and test them to see which were the most rapidly and intensely infected. This information would have been very useful for the health authorities. In this case, however, it seems that the quantity of DNA found on certain surfaces is linked more to shortcomings in disinfection approaches. I will strongly advice that the authors discuss the limit of the approach.

In conclusion, the authors say that "The findings can be used to guide the makeshift hospital infection control strategies by identifying high-risk contamination sites." Note that the current study design could not this conclusion. Since, you were not identifying the "high-risk contamination sites" but the "less-cleaned contamination sites"

Not clear how many samples have been collected par surface

Please, remove the titles of the figure from the figures themselves to improve the resolution of the figures

Strengths

Effort of sampling has been made

Data generate during this study could be useful for the Sanya second makeshift hospital to improve their disinfection approach.

Q 3 Please provide your detailed review report to the authors. The editors prefer to receive your review structured in major and minor comments. Please consider in your review the methods (statistical methods valid and correctly applied (e.g. sample size, choice of test), is the study replicable based on the method description?), results, data interpretation and references. If there are any objective errors, or if the conclusions are not supported, you should detail your concerns.

Please consider my comment from "Limitation and strengths"

PLEASE COMMENT

Q 4 Is the title appropriate, concise, attractive?

The title should be revised to consider the study design and the key findings. Since when the authors are talking about "Persistence" in the title that mean despite cleaning those surface are remaining infected continuously. Which is not the case in the current study.

Q 5 Are the keywords appropriate?

Yes

Q 6 Is the English language of sufficient quality?

Yes

Q 7 Is the quality of the figures and tables satisfactory?

No.

Q 8 Does the reference list cover the relevant literature adequately and in an unbiased manner?)

Yes

QUALITY ASSESSMENT

Q 9 Originality



Q 10 Rigor



Q 11 Significance to the field



Q 12 Interest to a general audience



Q 13 Quality of the writing



Q 14 Overall scientific quality of the study



REVISION LEVEL

Q 15 Please make a recommendation based on your comments:

Major revisions.