

## Peer Review Report

# Review Report on Mitigating SARS-CoV-2 transmission in hospitals: A systematic literature review

Systematic Review, Public Health Rev

Reviewer: Gage Moreno

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### EVALUATION

#### **Q 1** Please summarize the main theme of the review.

The authors presented their meta-analysis of published SARS-CoV-2 outbreaks involving healthcare workers. Their analysis relied on manuscripts published and shared in 3 databases: PubMed, Embase, and Scopus. Using this combined data, the authors provide insights into the transmission dynamics of SARS-CoV-2 in hospitals, and recommendations to better control nosocomial spread as the pandemic progresses.

#### **Q 2** Please highlight the limitations and strengths.

The authors were able to comb through the literature to narrow in on their set. They were selective in only ensuring that the manuscripts that fit their threshold made it into the meta-analysis. Using this combination of data, the authors were able to ask questions about what worked and what didn't work in preventing SARS-CoV-2 healthcare environments.

However, their filtering was likely too early and stringent, as it is missing many papers that were published on this very topic, later in 2021. Two to include are Braun et al. CID (2021) Viral Sequencing to Investigate Sources of SARS-CoV-2 Infection in US Healthcare Personnel, Meredith et al. Lancet ID (2020) Rapid implementation of SARS-CoV-2 sequencing to investigate cases of health-care associated COVID-19: a prospective genomic surveillance study.

The authors did a really nice job listing their limitations at the end of the discussion.

#### **Q 3** Please provide your detailed review report to the authors, structured in major and minor comments.

Major comments:

The authors used an endpoint of July 27, 2021 for publications to include in their analysis. Many countries around the world were still working on vaccinating their populations, which has key implications for their findings. I suggest incorporating more recent publications to their meta-analysis in order to strengthen their results.

The authors claimed that this is the first meta-analysis of its kind. However, I was able to find a few that were on the same subject. Consider rephrasing, or further clarifying how yours is the first of this kind.

Results: Your abstract and paper start off by saying "Despite mass vaccination", however, I did not see any mention of vaccination rates in hospital settings in your results. Please add this in so that readers can get a sense of how much vaccination there was in the face of these outbreaks.

The most provocative claim in this manuscript is that ancillary staff should be given the same infection control precautions as patient-facing staff. This was buried in the discussion, but is probably the strongest point of your paper. Consider highlighting this throughout the manuscript.

The authors do not include long-term care facilities, or outpatient clinics. However, these settings are just as likely to have uncontrolled outbreaks. The addition of these settings into the analysis would further strengthen their findings and claims.

Minor comments:

Lines 43–44: clarify that these numbers are at the time of writing/submission

Lines 62–64: There is increasing evidence that the surge in Delta was due to waning immunity and a highly transmissible variant. Consider citing Bushman et al. “Population impact of SARS-CoV-2 variants with enhanced transmissibility and/or partial immune escape”.

Line 133: In your index case section of your results, please add further clarification for how these index cases were ascertained. It has been shown many times that genomic sequencing can rule out transmission between pairs. This has important implications for how your index cases were defined.

Lines 179–181: The Dutch paper is not included in your meta-analysis. Please consider adding.

**PLEASE COMMENT**

**Q 4** Is the title appropriate, concise, attractive?

Yes

**Q 5** Are the keywords appropriate?

Yes, however, consider adding nosocomial spread and potentially infection control

**Q 6** Is the English language of sufficient quality?

Yes

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

Yes.

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

Yes, however, there are many conclusions gleaned about vaccination in healthcare workers from a small set of publications. Consider incorporating more recent publications that will cover vaccination.

**Q 9** Does this manuscript refer only to published data? (unpublished data is not allowed for Reviews)

Yes.

**Q 10** Does the manuscript cover the issue in an objective and analytical manner

Yes.

**Q 11** Was a review on the issue published in the past 12 months?

Yes.

**Q 12** Does the review have international or global implications?

I believe that this review has the potential to have global implications. The papers that they currently bring in for their analyses are predominantly found in high income countries. I can see a scenario in which a high income country could use this information and adapt their practices, where it might not be as easy to do in low income countries.

**QUALITY ASSESSMENT**

**Q 13** Quality of generalization and summary



**Q 14** Significance to the field



**Q 15** Interest to a general audience



**Q 16** Quality of the writing



**REVISION LEVEL**

**Q 17** Please take a decision based on your comments:

Major revisions.