PEER-REVIEW REPORT

Name of journal: *World Journal of Virology*

Manuscript NO: 83048

Title: Demographic and Risk Characteristics of Healthcare Workers Infected with Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) from Two Tertiary Care Hospitals in the United Arab Emirates

Provenance and peer review: Invited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 04227304

Position: Peer Reviewer

Academic degree: MD

Professional title: Doctor

Reviewer's Country/Territory: Israel

Author's Country/Territory: United Arab Emirates

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Reviewer chosen by: AI Technique

Reviewer accepted review: 2023-01-05 08:14

Reviewer performed review: 2023-01-06 20:01

Review time: 1 Day and 11 Hours

Scientific quality	[ ] Grade A: Excellent [ ] Grade B: Very good [Y] Grade C: Good [ ] Grade D: Fair [ ] Grade E: Do not publish
Novelty of this manuscript	[ ] Grade A: Excellent [ ] Grade B: Good [Y] Grade C: Fair [ ] Grade D: No novelty

Creativity or innovation of this manuscript	[ ] Grade A: Excellent [ ] Grade B: Good [Y] Grade C: Fair [ ] Grade D: No creativity or innovation
Scientific significance of the conclusion in this manuscript	[ ] Grade A: Excellent [ ] Grade B: Good [Y] Grade C: Fair [ ] Grade D: No scientific significance
Language quality	[ ] Grade A: Priority publishing [Y] Grade B: Minor language polishing [ ] Grade C: A great deal of language polishing [ ] Grade D: Rejection
Conclusion	[ ] Accept (High priority) [ ] Accept (General priority) [ ] Minor revision [Y] Major revision [ ] Rejection
Re-review	[Y] Yes [ ] No
Peer-reviewer statements	Peer-Review: [Y] Anonymous [ ] Onymous
	Conflicts-of-Interest: [ ] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

Comments to authors: Thank you for the opportunity to review this interesting manuscript. The authors describe an observational cohort of health care workers that were infected with COVID-19 and address its associated risk factors. This is a very important topic and the paper is overall well written. There are still some major issues which should be addressed.   #1: Introduction – This part is comprehensive and describes well the main topic. The authors state that the study is prospective. However, I don't think this is the case as all data regarding the infection, transmission, and other contacts were retrospective and based on participants memory. The data were not collected during the events and therefore in my opinion it is not prospective.   #2: Results: This section has major issues which must be addressed.   In general – if you have data only on infected HCW – you can't perform any analysis on risk factors for infection – because those who were not infected are not included in your study. - There

is a major issue of recall bias. The questionnaire was administered about a year after the infections. Are all your data based solely on the questionnaires? Did all participants remember minor things such as the date their housemates or co-workers were infected in relation to them? Is some information missing and not reported (Table 1)? I find it hard to believe that all participants remember the entire data. - In Table 2 the infected HCW group includes only the participants which filled the questionnaire and compared with all the HCWs in general. How do you have all this information on the rest of the HCWs which were not infected or not performed the questionnaire? If you have this information on all HCWs, why not including all the 346 HCWs that were infected in the infected group and just compare them to those who were not infected? Regardless of the issues above, the HCW that were infected but did complete the questionnaire must not be a part of the non-infected HCWs for comparison. This group should be extracted from all comparisons if you don't have the information on them. If you do have – include them in the infected group. - The second part of Table 2 is wrong as well! By comparing only frontline to non-frontline infected HCW you cannot make any conclusions on general risk factors for infection – a conclusion you did in the abstract, results and discussion. For example, the fact that males had more infections in the frontline group only means that among infected HCWs, being a male was associated with being a frontline worker. - How did you analyze the correlation figure 1? Did you just assumed it by looking at the graph or was a statistical test performed? - P value should not be reported as 0.00. #3: discussion: The importance of vaccine in COVID-19 should be more highlighted. In this regard I recommend the authors to use the following paper which extensively describe the impact of vaccinations on severe infections: https://doi.org/10.1371/journal.pone.0268050

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Creativity or innovation of this manuscript	[ ] Grade A: Excellent [ ] Grade B: Good [Y] Grade C: Fair [ ] Grade D: No creativity or innovation
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Re-review	[ ] Yes [Y] No
Peer-reviewer statements	Peer-Review: [Y] Anonymous [ ] Onymous
	Conflicts-of-Interest: [ ] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

This is a survey study of analysis the risk factors and characteristics of transmission of SARS-CoV-2 infection among HCWs. It is a novel study with good writing. However, there are some small parts need to be further editing. First, is there any infected HCWs who got reinfected ? Couldn't tell from the data. This situation should be listed that might interfere the results . Second, the data is showed by different month in figure 1. There are obviously 3 peaks of the infection number. What do we get from this data? It is deserve to make a good discussion. Thirdly, it is a little confusing to read the part of Frontline HCWs and Non-Frontline HCWs in Table 2.   Are they infected or not?

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Conclusion	[ ] Accept (High priority) [ ] Accept (General priority) [Y] Minor revision [ ] Major revision [ ] Rejection

| Peer-reviewer statements | Peer-Review: [Y] Anonymous   [   ] Onymous |
| | Conflicts-of-Interest: [   ] Yes   [Y] No |

SPECIFIC COMMENTS TO AUTHORS

Thank you for the opportunity to re-review this interesting manuscript. The authors have addressed all of my quarries and the paper has significantly improved.   There are still some minor issues that should be addressed: - Minor grammar issues should be corrected. For example – "staying in the shared" in the abstract, unneeded commas (after "Besides" in the intro), and so on.   - The authors stated in their revisions letter, the demographic and clinical characteristics were available for all HCWs in both facilities from the human resources. This should be included in the methods for the readers to understand how data was available for all HCWs. - Many of the findings refer to frontline HCWs, while this definition does not appear in the text. How did you decide which HCW is in the frontline? Are they only those treated COVID-19 patients? Those that treated any patients on a daily basis? - The authors describe the issue of vaccine hesitancy among HCWs and their perceptions toward it. In this regard I recommend the authors to use the following work which directly addresses this issue: DOI: 10.12998/wjcc.v11.i4.821 This work describes the perceptions of HCWs towards vaccine hesitancy. It can be used to show that still most HCWs are in favor of the vaccine and conceive vaccine hesitancy to be a key factor for the continuation of the pandemic.