

Review of “Modes of transmission of severe acute respiratory syndrome-coronavirus-2 (SARS-CoV-2) and factors influencing on the airborne transmission: a review”

This review aim at summarizing the latest (in 2020) literatures regarding the several aspects of COVID-19, which are 1) common symptoms 2) transmission routes, such as airborne, droplet, contact, fecal-oral 3) Effect of environmental condition and ventilation on the transmission, and 4) effects of projection approaches.

Overall, the manuscript is clear. The recent number of papers about COVID is overwhelming, therefore the clear summary is necessary. As a fluid mechaniscists, I can comment on the part regarding the transmission routes, and the environmental and ventilation part. There are still some very relevant and important papers should be cited. Before I recommend its publication, I have listed my comments about the missing literatures to further improve the manuscript to a nicer shape.

Minor comments:

1. The first few sentences about the origin of the outbreak are too controversial. That is not something we should comment too much as still a lot of debates over this topic. I suggest the authors to tune the sentences further down.
2. Line 61-63, when the authors talk about the transmission route of respiratory droplets, I think the classical work by Wells, Am. J. Epidemiol., 20 (1934) should also be cited. I understand that the authors would like to mainly cite papers in 2020. However, given that the authors have also cite some very relevant papers published before 2020, I suggest that this very relevant paper should also be cited.
3. Line 78-79, about the ventilation, there is recent review by Bhagat et al., JFM, 903 (2020) which is also very relevant. Different ventilation strategies have been mentioned in their work, eg mixed ventilation, displacement ventilations. The authors should comment on that to provide a more comprehensive review.
4. Line 148-149: About the droplet transmission route, there are recently significant progress on understanding the such route from fluid mechanics point of view. For example, 1) the work by Abkarian et al., PNAS, 117 (2020) about the jet-like transport in speech. 2) the work by Chong et al. (2020) arXiv:2008.01841 about the extended lifetime of respiratory droplets. 3) Bourouiba, JAMA, 323 (2020) about the respiratory droplets in turbulent gas clouds. 4) Balachandar et al. IJMF, 132 (2020) gives the overview of airborne transimission. I think these are also the very relevant new findings in this field.
5. Line 269-270: About the influence of environmental conditions on transmission, there are also recent progress 1) Ng et al. (2020) arXiv:2011.01515 about the fate of respiratory droplets in different ambient condition. 2) Chaudhuri et al. (2020) arXiv:2004.10929 about how to model the effect of ambient condition on droplets.