

Reviewer Comments for Submission 1385

Title: "A system dynamics analysis about the relationship between ventilation and the spread of COVID-19 in indoor spaces"

Comments from Reviewer 1: This study raises a crucial question on the safeness of reopening indoor activities. The problem statement is clear.

However, I am not a specialist in airborne contagion. If the methodology includes information of previously published work in this aspect, it will help me better understand quanta. It is not clear to me why the authors mentioned: "literature re-view did not reveal published work about system dynamics models representing relationship between ventilation characteristics and pathogen transmission." Why?

The second question is whether the authors take into consideration of indoor room temperature and humidity.

Lastly, I saw that viral infectivity is used; I wonder if the model boundary includes the particular strains' virulence. Looking forward to see progress of your study.

Comments from Reviewer 2: The subject is very timely and likely to continue to be timely - how can we know spaces are safe. The authors describe these variables: 1) ventilation characteristics, 2) infectious pathogen characteristics, and 3) required social activity. The dynamic hypothesis is not clear, and I therefore wonder if another modeling methodology would be better suited to this problem. The physics have been demonstrated to be key in other research (including temperature and air flow actually increasing exposure in a confined space). In addition, stochastic modeling seems important here in any event because the key issue is risk mitigation and we want to know under what circumstances risk is best managed. The authors should address the specific contribution of SD.

(Only to Author): I appreciate the importance of the modeling challenge you have taken. I think your observation that there are no other SD models out there should lead you to ask why. I also think it is worth asking what other modeling methods have revealed, and why a better SD model will make a unique contribution. I'm not persuaded that I would be willing to make policy decisions based on such a model, but I may be wrong! Good luck and thank you for pursuing this important topic.

The comments above have been made directly by the reviewers and have not been edited by the Program Committee. Reviewers are generally happy to receive feedback on their reviews and you are welcome to send them an anonymous email with any feedback you would like to provide. To send the email simply specify the reviewer number and fill in the body of the email you would like to send.

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