Reviewer’s report

Title: Impact of leaks and ventilation parameters on the efficacy of humidifiers during home ventilation for tracheostomized patients: a bench study.

Version: 1 Date: 27 Dec 2018

Reviewer: Masaji Nishimura

Reviewer’s report:

In the study, Haziot et al. compared humidification performance of five heated humidifiers under several respiratory conditions. Revised manuscript is better than original one, however there still are several important issues in the study.

Response of hygrometer is 30 sec. So when humidity changes 0 to 30, your hygrometer exhibits correct value at 30 second after the signal. Humidity changes according to inspiratory flow. All hygrometer has this limitation, and we should be careful to evaluate data of hygrometer. I don't think the authors understand the limitation. I am sure the reaction time has significant impact on the measurement. The aim of the study was to make it clear if leak or tidal volume influenced humidity. Even vapor output from humidifier is stable (it is not actually stable), humidity fluctuated according to flow, so reaction time has significant impact on the measurement. As the authors claimed, humidity is stable and reaction time has little impact, leak should have not had any impact on humidity.

At least the authors should describe reaction time of the hygrometer in the text.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

No

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

No
Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

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