Reviewer's report

Title: Deposition of respiratory virus pathogens on frequently touched surfaces at airports

Version: 0 Date: 04 Apr 2018

Reviewer: John Lednicky

Reviewer's report:

This is a much needed contemporary study; the information provided therein using PCR-based methods establishes a new baseline for future studies.

For the sake of the international research community, a few details would be very helpful:

(1) The PCR-based tests for the different viruses could be mentioned: Either provide references for the tests or if the tests were designed by the authors, tell the reader which primers were used and the targets of the primers.

(2) The authors should mention why they did not attempt virus isolation. Had viruses been isolated in cell cultures, one could make a stronger argument that infectious viruses were present on high-touch surfaces and thus pose a potential risk for self-inoculation and subsequent infection. The infectious dose is difficult to measure when it comes to viruses deposited on environmental surfaces; the authors are thus correct in stating it is not a simple task to correlate virus quantity on a high-touch area, quantity of virus picked up by touch of the contaminated area, and amount of virus that gets self-inoculated and leads to illness. By airborne routes, some viruses including human influenza A viruses can cause infection at very low delivered doses (example: one to five infectious virus particles when inhaled can cause an infection in humans). Nevertheless, if the viruses on the environmental surfaces are non-viable, there do not pose a biohazard.

Readers of this paper will probably assume that to keep the experiment focused, and to reduce overall costs, the viruses chosen for detection were limited to those listed on page 5 (lines 14 to 16). Is that the case? Regarding the PCR-based tests that were used:
(3) Which adenoviruses are detected by the PCR assays? Since adenoviruses are DNA viruses, the statement made in line 14, page 5 (reverse transcriptase PCR) is of course not correct for those viruses.

(4) Do the tests used by the authors detect rhinovirus C?

(5) Do the tests used by the authors discriminate RSV types?

Finally, did the authors consider sequencing the virus genomes to confirm ID and also reveal which virus strains were in circulation?

(6) Was there a reason paramyxoviruses such as metapneumovirus and parainfluenza viruses were not tested for? And what about echo-, entero-, coxsackie -, and related viruses?

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

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

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

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