

Article details: 2020-0253	
Title	Factors associated with COVID-19 positivity in 20 homeless shelters in Toronto, Canada from April to July 2020: a repeated cross-sectional study
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Reviewer 1	Abe Oudshoorn
Institution	
General comments (author response in bold)	<p>I have a significant concern with the conclusions and the data on which they are based. As you will see in my comments, the timing of data collection between outbreak and surveillance sites is highly significant. A lesser concern is the gender differential. A final consideration is what degree of outbreak needs to be detected before surveillance has utility? Ultimately, while the conclusion of the utility of outbreak testing is well supported, I do not feel you can take any strong position on surveillance testing. Until it is conducted in the midst of a wave or to such a vast extent that you can control for case rates (and gender), the overall utility of surveillance testing remains unknown. Secondly, if a position is going to be taken against surveillance testing, you need to justify why the detection of even a single outbreak is not worthwhile.</p> <p>The reviewer makes a good point which is even more relevant now in the second wave and with the availability of new rapid tests. We have modified our abstract, interpretation and conclusions as suggested. E.g. in the interpretation, we now write: “Our findings suggest that surveillance testing when there is no known positive case may detect outbreaks even when case counts are low, especially in settings with children. However, further research should examine other strategies for surveillance testing given scarce testing resources including sentinel surveillance testing and the use of rapid antigen tests or saliva sampling.” (Abstract, interpretation and conclusion)</p> <p>“It is still unclear what the best strategy is for detecting COVID-19 among people who are homeless who live in a congregate setting, especially as community case counts decrease.” Update this statement. This has been updated. (Introduction)</p> <p>“there are individual demographic or health characteristics associated with acquiring COVID-19.” I’m assuming you mean apart from those characteristics already identified among the general population? Yes, we have clarified (Introduction)</p> <p>“and laboratory capacity. Initially, testing criteria were restrictive. However, beginning March 18, testing was made available to symptomatic individuals” May or may not be worth mentioning that testing criteria have again tightened, or at least predicted ongoing variability in availability. We have made the requested change. (Methods)</p> <p>“As community case counts decreased, the focus shifted to identifying high risk settings with asymptomatic transmission.” Update this statement. This has been updated. (Methods)</p>

“We also performed a patient-level descriptive analysis and assessed the demographic, health, and behavioural characteristics of the shelter residents who were tested.” This feels redundant from above, is the descriptive analysis separate? Just seems like you could compress this.

We describe the shelter-level and individual-level analysts separately and we have left as such based on comments from other reviewers. (Methods)

“For the subset of shelters where there was more than one COVID-19 positive resident, we used the same patient-level data to compare the characteristics of residents who did and did not test positive.” Also feels redundant as it is identical to the sentence above.

We have removed the duplicate sentences (Methods)

“Surveillance testing was done between June 9 and July 23, 2020”. Flagging: Outbreak cases were tested during the first wave sub-peak, while surveillance cases were tested during the first wave decline

The reviewer’s description is accurate and illustrated in Figure 1. (Results)

“The mean age was 46, 82% were men, and 68% were able to provide a valid provincial health insurance card.” Flagging this significant overrepresentation (of men) and that this was skewed between the outbreak versus surveillance, and gender has been noted as a potential risk factor. Will see how (if) this has been controlled.

We have noted this overrepresentation of men in our limitations section. (Limitations)

“four 4 unique shelter locations where more than one individual tested positive.” Duplicate of four and 4.

This has been updated. (Results)

“We found that 14% of tests done in an outbreak setting were positive compared to 2% done for surveillance.” Note here: All of which coincided with a large outbreak in one shelter.

We believe this information is in Figure 1. (Interpretation)

Those who visited another shelter in the previous two weeks were less likely to test positive perhaps because they were spending more time outdoors.” I don’t believe you actually have this data, though? How do we know they didn’t arrive directly from another shelter?

Agree this is speculation and we use language saying “perhaps because” to clarify that we are indeed speculating. (Interpretation)

“We found only one of seventeen shelters tested for surveillance in our setting had any positive cases.” In which you detected an outbreak affecting 17% of a shelter, which is very significant. If even during a period of low case counts you can find 1 in 17 shelters where an outbreak is wide spread, is surveillance testing not of value?

We agree with the reviewer and have revised the abstract, interpretation, and conclusion accordingly. (Abstract, Interpretation and Conclusion)

“Together, these findings suggest that surveillance testing of all shelter residents is

	<p>of limited value when community case counts are low.” This is a very important qualifier and you should lead with this. The risk is that this is interpreted to indicate that surveillance testing in shelters is of limited utility at any time during a pandemic. The other qualifier is gender, which is not likely significant, but it may be.</p> <p>We agree with the reviewer and have revised the abstract, interpretation, and conclusion based on their suggestions. We have also added the skew towards males in our limitations section. (Abstract, Interpretation and Conclusion)</p> <p>“Our findings support testing of asymptomatic shelter residents for COVID-19 when a positive case is identified at the same shelter but suggest limited utility of surveillance testing of all shelter residents with the possible exception of shelters that include children.” Given the differential time periods and the fact that one large outbreak was detected, the first part of this sentence is supported but the second part simply can not be said with any degree of confidence. There is also a value judgement to be made in how many cases one would need to detect to make for “utility”.</p> <p>We agree with the reviewer and have revised the abstract, interpretation, and conclusion based on their suggestions. (Abstract, Interpretation and Conclusion)</p>
Reviewer 2	Vanessa Redditt
Institution	Department of Family and Community Medicine, University of Toronto, Toronto, Ont.
General comments (author response in bold)	<p>Page 4, line 41: typo with semi-colon instead of period This has been updated. (Abstract)</p> <p>Page 6, line 6: consider changing to “as community case counts change” (rather than “decrease”) This has been removed as per a suggestion from another reviewer. (Introduction)</p> <p>Page 7, lines 16-18 (“During COVID-19, non-permanent residents without OHIP also have free access to testing for COVID-19”): add reference: (e.g. INFOBulletin: Keeping health care providers informed of payment, policy or program changes, Bulletin No. 4749 (Ministries of Health and Long-Term Care, Toronto) Available: www.health.gov.on.ca/en/pro/programs/ohip/bulletins/4000/bul4749.aspx) We have added the reference. (Methods)</p> <p>Page 7, lines 28-40: If possible, it would be helpful to provide references for the testing criteria, or authority that defined the testing criteria (this is especially helpful for readers outside of Ontario). We have added the suggested reference. (Methods)</p> <p>Page 7, line 55- Page 8, line 3: Add reference for MOH definition of outbreak at the time of the study (e.g. COVID-19 guidance: congregate living for vulnerable populations. Version 1 — May 28, 2020 (Ontario Ministry of Health), Available: http://health.gov.on.ca/en/pro/programs/publichealth/coronavirus/docs/2019_congregate_living_guidance.pdf.) Thanks for this suggestion. The reference has been added. (Methods)</p>

Page 9, line 8-11 (“health insurance number was not available either because the resident did not have provincial health insurance (e.g. undocumented resident)): consider adding “e.g. undocumented resident, refugee claimant with Interim Federal Health Program coverage, etc”

This has been added. (Methods; data collection)

Page 10, lines 33-52 are repetition of the prior paragraphs.

We have deleted the repetitive sections (Methods)

Page 12, line 3: For the subset 348 individuals for whom there was additional demographic data available, how many of these individuals were in an outbreak setting versus surveillance testing context?

This has been added in the results section. (Results)

Page 12, lines 40-42 (“Outbreak testing and related positivity occurred between April and early June, when case counts in Toronto were highest”): Consider revising this sentence to contextualize the time period (e.g. “when case counts in Toronto were highest during the study period” or “during the first wave”).

This has been updated. (Results)

Page 13, line 1: typo in “were less significantly less likely to have a provincial health insurance card”; remove first “less”

This has been updated. (Results)

Page 15, line 6: consider changing to “A Canadian study...”

This has been updated. (Interpretation)

Page 15, line 11-13: consider adding a reference for “overall case counts have been much lower in Hamilton compared to Toronto.”

We have added a reference to the ICES dashboard where people can look up percent positivity by PHU over time. (Discussion)

Page 16, limitations section: consider adding a comment that symptom screening based on a list of fever, cough, shortness of breath, and “other” may underestimate the number of individuals with a broader range of symptoms (e.g. mild symptoms may not have been identified/reported, especially depending on how staff asked about “other” symptoms).

Screening was done by trained nurses and we captured a larger list of symptoms, however, we aggregated many of these into the category “other” as they were infrequent. (Limitations)

Table 1: Consider using consistent number of decimal places for percentages (currently differs for column 6: “Proportion of those eligible who were tested”).

This has been updated for consistent decimal places in all the columns. (Table 1 (now moved to the appendix)