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Title	COVID-19 in a remote First Nations community in British Columbia, Canada: an
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Reviewer 1	Stephen Mac
Institution	Institute of Health Policy, Management and Evaluation, University of Toronto, Toronto, Ont.
General comments (author response in bold)	1. Introduction – the rationale for this descriptive study of an outbreak in April 2020 is not included… why study this outbreak in particular? Have other outbreaks in Canada (as mentioned this was one of the first in Canada) not been studied? What is the motivation in describing those infected? **The second paragraph of the introduction on page 3 now includes a statement on the rationale of the describing this outbreak.** 2. Methods – similar to the abstract comment, a lot of the methods described the situation and testing, but would be nice to preface the reader with what types of descriptive analyses were conducted (any stratification, on what variables, what variables are available in this dataset, any statistical analysis completed, etc.?) Is it possible to describe what social network analysis is, and how it is often used? **Additional detail has been added to the "Data analysis" section on page 5 to describe the analysis (e.g. what was done, and the frequency of SNA). More detail on the variables available in the dataset have been added to "Data sources" section on page 4, in addition to a citation for the case report form which includes an extensive list of variables collected (reference #6). Figure 2 has been revised to more clearly demonstrate the cases and contacts included within the SNA.** 3. Table 1 a. Are there any data on length of hospitalization, requirement of ICU or ventilators? **Results on length of hospitalization and ICU admission have been added to the "Epidemiological findings" section on page 6. Of the five cases that were hospitalized, the length of hospitalization ranged from 5 to 41 days (median 9 days). Of the 5 hospitalized cases, 2 were admitted to ICU. Unfortunately we are not able to report on use of ventilators.** b. For the clinical outcome, how long did you consider the recovery and mortality rates over? Is that recovered over 1-month, 3-month, 1-year? **Recovery and mortality rates were considered over a 3 month time period. This was added to the "Data sources" section on page 4.** c. For age mean, is there a standard deviation? **A standard deviation of 18.5 has been added to Table 1 on page 6.** 4. In the interpretation, while it is plausible that hospitalization is much higher in this community, the focus on symptomatic testing lowers the eligible denominator for the proportion of cases hospitalized, which would increase the proportion. Canadian hospitalization of 8.4% includes asymptomatic people who are tested. Let's say that 1/3 of patients are asymptomatic (https://www.acpjournals.org/doi/10.7326/M20-6976), then instead of 5/30, you

	may be truly looking at 5/45 = 11% which is closer to 8.4% than 17%. That caveat should be highlighted, it is still completely plausible that hospitalization is higher, but I think "differs greatly" is very strong (suggest re-wording?), and the caveat that the Canadian hospitalization includes asymptomatic cases, should be highlighted **We have modified the interpretation of this finding on the second paragraph of the Interpretation section on page 7-8. The original comparison was to Canadian hospitalization rates in December 2020 (when the paper was originally drafted). To make the comparison more meaningful, we have adjusted the Canadian case fatality and hospitalization rate to reflect the data as of April 2020, to align with the timing of the current outbreak. With this comparison, the hospitalization values of Cormorant Island and Canada are similar. We do still mention, as the reviewer stated above, the caveat that these numbers might not be comparable due to the inclusion/exclusion of asymptomatic cases (in addition to the low threshold for hospital transfers used in this outbreak).** 5. In the interpretation, what is the key takeaway message/what was learned from doing this social network analysis? That social gatherings between and within families are important to account for in contact tracing and also a key mode of transmission? Does social network analysis in real-time aid contact tracing? **Additional content has been added to the third paragraph of the interpretation section on page 8 to discuss what was learned from the social network analysis (i.e. transmission patterns to inform public health action, and real-time evaluation of completeness of contact tracing).** 6. Abstract a. Methods – identification of first eight cases when? The first few sentences seem more like background for context, and the section needs a bit more description of what type of descriptive analyses (e.g., on what variables, time period which these cases were accrued, setting, etc.) **The background and methods of the abstract have been revised based on feedback from the editor.** b. Results – what was the variance in the age, or range if using median? What was the proportion of the most common symptoms? Similar comment for the social gatherings and household sentence (what proportion of cases?). "At the time" – maybe more clear to just list the month/year? **The results section of the abstract has been revised based on feedback from the editor. Range for age has been added. "At the time" has been revised to "April 2020". Unfortunately we do not have enough space in the word count to add proportions for all symptoms and SNA results.** c. Interpretation – The current interpretation seems to be re-iteration of the background in the first sentence. The community-response wasn't a product of this study. What does this descriptive and social network analyses show? [Editor's note: please see specific directions for the Abstract content in the Editors' comments.] **The interpretation section of the abstract have been revised based on feedback from the editor.**
Reviewer 2	Han Ting Wang
Institution	Medicine, Hôpital Maisonneuve-Rosemont, Montréal, Que.

General comments (author response in bold)	1. Are the cases in the on reserve population (49%) or on the total population? If this case study only describes on reserve population, it would be interesting to have other data (cumulative incidence, covid-19 testing for example) also specific for on reserve population. Transmission rate might be different for on reserve and off reserve. **This paper describes cases from the total population of Cormorant Island - both on and off-reserve. Table 1 breaks down the cases by First Nation status (the majority of cases (90%) identified as First Nations).** 2. I think a timeline figure similar to epi-curve with the major infection control events added might help visualise the transmission of covid-19 and preventive measures undertaken by the public health officials. **The major preventative measures undertaken by public health (i.e. state of emergency, travel restrictions, curfew) are annotated in Figure 1**. 3. I do believe understanding transmission in First Nation community is definitely important and also how to manage covid-19 in terms of preventive measures. I think there is a missed opportunity in the discussion. I would have liked the authors to discuss in more details how transmission differed compared to the rest of B.C (if it differed) and also how the First nation community changed the way this outbreak was managed. The authors hinted at the importance of communal meals in terms of culture. Maybe there are other data pertinent to the management of this outbreak that can really be helpful for other provinces who might get a similar outbreak. [Editor's note: this would be helpful in comparing your study findings to other literature in the Interpretation.] **There are not robust, publically available, data in BC to definitively comment on how transmission in a First Nation community might differ from that of non-First Nations peoples. That said, to address the reviewer's comment, additional detail has been added to the fourth paragraph of the interpretation section on page 8 to discuss in more depth the strategies used to successfully stop transmission in this community, specific to the First Nations context. Additional references to the literature have been made as well, including a mention of the lack of available comparisons to published work on other outbreak response measures taken to address COVID-19 outbreaks First Nation communities in Canada (although literature certainly exist on outbreak response preparations and existing health inequities).**
Reviewer 3	Nguyen Trieu
Institution	
General comments (author response in bold)	1. How many people did you survey to find the 30 mentioned cases? **As of the date the outbreak was declared over (May 26, 2020), 153 symptomatic individuals were tested in the community. The number of individuals tested has been added to the "Laboratory findings" section on page 7. The 30 cases included in this outbreak report encompassed 100% of all those that tested positive for Sars-CoV-2 from March 1, 2020 to the present time (June 22, 2021).** 2. How many people have close contact in each household? **Unfortunately with the data collected at the time of the outbreak, and with our current privacy restrictions with the community's data, we are not able to report household-level results.**

	3. What is the percentage of infected in that household? **Unfortunately with the data collected at the time of the outbreak, and with our current privacy restrictions with the community's data, we are not able to report household-level results.** 4. The rest of those in those households have no symptoms but do they have antibodies to SARS-CoV 2? **We did conduct antibody testing after the outbreak had included, in June 2020, however, the analysis of this antibody data is quite extensive and out of the scope of the current paper.** 4. I want to know what were the control measures you've used? For example, blocking the source of infection; the number of people with autoimmunity in each household. **Population level control measures are outlined in the "Setting and population" section on page 3 and include travel restrictions on the ferry (essential travel only) and a nightly curfew using the local tsunami siren. Individual level control measures are outlined in the "Case and contact monitoring" section on page 5 and describe the quarantine for close contacts identified through contact tracing (14 days from last exposure) and isolation for confirmed COVID-19 cases (10 days from onset date).** 5. Did you quantify the antibodies to SARS CoV 2 after 3 months and 6 months of 30 cases? **We did conduct antibody testing on Cormorant Island in June 2020, however not all cases volunteered to submit a sample. Of those that did, 100% showed antibodies to Sars-CoV-2. The testing was conducted 2-3 months after case onsets (timing varies depending on case onsets). These results are outside of the scope of the current paper so they have not been included.** 6. Were antibodies to SARS-CoV 2 found in a random selection of asymptomatic close exposures? **The antibody results are out of the scope of the current paper.** 5. Did you spot any fatal flaws? That is, errors you do not believe the authors could overcome. Please explain clearly. **The authors do list several limitations in the Limitations section on page 9. We do not believe any of these are fatal per se, but as with all limitations we do believe they should be taken into account when interpreting the results of the study.** 6. Through monitoring, are there any cases of SARS-CoV 2 infection with no symptoms? Without these antibodies, the virus still exists in these people's bodies, will they be the vectors for disease transmission and facilitate the creation of mutant viral sequences? **At the time of this study, the guidance in BC was to only test those with symptoms compatible with COVID-19. As such, we cannot speak to SARS-CoV-2 infection among those who were asymptomatic. This outbreak also occurred at a time prior to mutant viral sequences appearing in Canada. In**

	spring 2020 the wild-type strain was the only strain documented in BC, Canada.