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Title	**Uncorrected hearing loss and unmet hearing needs among an adult homeless population: a prospective cross-sectional study**
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Reviewer 1	Dr. Peter George Jaminal Tian
Institution	University of Alberta, Department of Family Medicine
General comments (author response in bold)	Overall, this is an interesting study. Kudos to your work on a disadvantaged population. Here are my comments/suggestions for your consideration. 1. Toning down words which suggest cause-effect. A cross-sectional study does not establish any cause-effect. The following words suggest effect: "impact" (proof: page 3, line 2) and "interplay" (proof: page 4, line 13). **Your point is well made, we have revised and toned the language down (p2 2, p3 12)** 2. Limiting the estimates to prevalence in Toronto (not Canada). The study only sampled shelters in Toronto. This might mean changes in the title, abstract, body, and conclusion. **We have revised to make it clearer we are estimating the prevalence in Toronto (p 3 22-29, p 7 17)** 3. Specifying the population to those in shelters only. Homelessness encompass a varied population. The study only sampled those persons in shelters. This might mean minor changes throughout the document. https://www.homelesshub.ca/sites/default/files/COHhomelessdefinition.pdf **We have highlighted that shelter users only represent approximately 70% of the Toronto homeless population in our limitations section (p 9, 17-19).** **We've revised this manuscript to make this message clearer (p. 3, 22-29; p7 18)** 4. (Page 5, line 6-7) The first stage of the sampling is not truly random. It is made proportionate to housing capacity. I suggest rewording the sampling technique to reflect this. Only the second stage is truly random. This might mean changes in several sections of the document. **At the suggestion of the statistical reviewer – we now refer to this as a 'two-stage sampling' technique and have revised the manuscript in various sections (p 2 9, p4 1, p8 1)** 5. Was the definition of hearing loss and tympanometry results adopted from Reference # 21? Kindly cite. **Done** 6. Page 6, Line 8-9. Kindly rephrase the following sentence: "Middle ear bone conduction was also assessed through tympanometry." This could be misinterpreted as having bone conduction hearing thresholds assessed through tympanometry. **Tympanometry can provide evidence of things like ossicular chain discontinuity, and otosclerosis – hence why we originally phrased it like that. We recognize CMAJOpen readership encompasses a more general medical audience, and to avoid confusion, we have removed this sentence (p5 10)** 7. Page 7, Line 14. Kindly cite the reference for the standard population used (in direct standardization) in the methods section, as was done in Table 3. **Done (p 5 24)**
Reviewer 2	Mr. Steven Wang
Institution	Population Health Research Institute, Statistics
General	1. Methods - Participant Selection:

comments (author response in bold)	(1) It is not quite clear to me what stratification factor the authors used for random sampling. From the description in this section, I think it should be a "two-stage random sampling" instead. Please clarify. **We now refer to this as a ‘two-stage sampling’ technique and have revised the manuscript in various sections (p 2 9, p4 1, p8 1). The other reviewer took issue with us referring it to it as a random sample so we removed the work ‘random’ as well.** (2) The authors should also address what approach they implemented to prevent selecting duplicate participants (i.e. the same patient enrolled more than once). **The same interviewer CN completed assessment on all participants and ensured there were no duplicates. We have elaborated (p5 3-4)** 2. Methods - Statistical Analysis (1) How was the sample size of 100 patients determined for this prevalence study? The author should provide a justification. If this is a pilot study as indicated in STROBE statement and therefore formal sample size calculation is not mandatory, the authors should make it clear in the main body. **We have made it clear that this was a pilot study (p3 22).** (2) In the result section, the authors indicated that gender was potentially associated with hearing loss. Do we know if the gender distribution is comparable between general population and study population? If not, the analysis should be standardized by gender as well. **We have performed an age-sex standardization as requested. It did not sustainably alter our results (adjusted speech frequency rate 40.7% -> 39.5%) and our interpretation remains the same.** (3) Please add a reference for "general Canadian population". **Done** (4) I did not see the data related to Cochran-Mantel-Haenszel test in the results section. Please clarify. **Our apologies, this was a mistake. Our initial analysis plan included a CMH test. We stratified our 2x2 contingency table (housing status x hearing loss) by age, though we later decided to not include it. It is of particularly limited value now that we have done an age-sex standardization. Thank you for noticing this. We have removed it.** 3. List o Abbreviations Typo: "IQ" should be "IQR" **Noted and revised thank you (p11 6).**
Reviewer 3	Dr. Peng You
Institution	London Health Sciences Centre, Otolaryngology Head & Neck Surgery
General comments (author response in bold)	This is a very interesting paper examining the prevalence of hearing loss in an adult homeless population. The study was well designed with a relatively high participation rate (76%). The findings showed a higher rate of hearing loss as measured by portable audiometric testing when compared to a previously published population-based study. Overall, nineteen out of 100 randomly sampled participants were hearing aid candidates. Results of this study would be important in advocating outreach initiatives for this marginalized population. 1. Another aspect of the authors' discussion is the underutilization of social assistance programs within the homeless population. The authors found the majority of those found to have met hearing aid candidacy do not have hearing aids despite having there being a provincial social assistance programs where hearing aid costs were covered. For readers unfamiliar with the Ontario system, I think it would be prudent to point out that Assistive Devices Program coverage through the Ontario Disability Support Program does not cover the full cost of hearing aids. According to the ADP Ministry of Health and Long-

Term Care manual, the maximal coverage for a monaural hearing aid is $500, and it is $1000 for binaural. Exceptional Circumstances Policy exists but reserved usually for those whose needs cannot be met by a mid-level hearing aid. While this does not take away from the results of the study, it may be relevant to clarify as underutilization of hearing aid is a key part of the authors' narrative.

Thank you for your feedback Your point about the importance of discussing benefit structure within this manuscript is well made. We have revised our manuscript to reflect this (p8 29-31, p9 1-2).

We have a slightly different understanding of benefits provided for through ODSP and OW and have cited relevant literature for your reference.

1. Ontario Disability Support Program (ODSP): patients have full coverage of mid-level hearing aids. They may even receive funding for advanced level hearing aids as long as it is approved by their caseworker. The Assistive Device Program (ADP) only provides $500/ear every 5 years (which every Ontario resident is eligible for, regardless of ODSP status); however, ODSP will cover the remaining amount owing towards the cost of the hearing aids.

Below is a link that details hearing aid coverage on the ODSP website.
https://www.mcss.gov.on.ca/en/mcss/programs/social/directives/odsp/is/9_11_ODSP_ISDirectives.aspx

2. Ontario Works (OW): Those who are on OW, may apply for hearing aids through the extended health benefits. In order to apply, they need to receive a cost estimate/prescription from a hearing aid clinic. The maximum amount, however, that OW will contribute is $1600 towards the cost of a pair of hearing aids. Therefore, hearing aids must be priced at a maximum of $2600/pair ($2600- $1000 ADP subsidy = $1600). In practice, it can be difficult to prescribe hearing aids at the exact price point of $2600. At St Michael's Hospital in Toronto, we lower our dispensing fee accordingly to accommodate, so that there is no charge for these patients. That being said, we are not aware of the policies of other hearing aid clinics and whether they provide a similar service for their patients.

Further information can be found below:
https://www.toronto.ca/community-people/employment-social-support/health-support/medical-supplies-and-devices/