Reviewer's report

Title: The Potential Oral Health Impact of Cost Barriers to Dental Care: Findings from a Canadian Population-Based Study

Version: 2
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Reviewer: inyang isong

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This is a well written paper that presents results from secondary data analyses using the 2007/09 Canadian Health Measures Survey. These are newly available data that the researchers used to assess the oral health status and dental treatment needs of Canadians reporting cost barriers to dental care.

Overall, this paper was well written, includes a solid introduction section, as well as an extensive discussion section that covers the policy implications of the findings as well as suggestions to help addresses issues identified in the study. The study findings are important and have the potential to move the field forward. I do have some questions that I would like clarified, as well as a few suggestions to help enhance the manuscript.

- Major Compulsory Revisions

1) A major concern I have is with the limited data analysis. The reliance on fairly basic data analysis techniques (chi square tests) is odd. Given the role of known and potential confounders on significant associations, I would urge that further analyses be conducted that control for these confounders. Based on the literature (or from analyses using your data), covariates for the model could be considered thoughtfully, and then logistic regression analytic techniques employed to test associations, holding these covariates constant. It is unclear why further analyses using these techniques were not used, as the sample size seems large enough to support this. Could it be related to the restrictions in accessing the dataset? Please clarify.

- Minor Essential Revisions

1) The introduction (or methods) section could be improved by providing some more background information about the CHMS survey (this does not have to be too extensive, for example, why the survey was fielded, was this the first time, or was it the first time it included oral health data, what are some other ways the data have been used to inform policy, etc.) This would help the reader who may not be familiar with these data, especially since the basis of the study (as presented by the authors) was to take advantage of the newly available CHMS data.
2) In page 7, you report that missing values were removed from the analysis. Please clarify if you conducted a complete case analysis. If so, how did those with missing values compare with those used for the analysis? How many observations were deleted? Did you consider imputing data?

3) Page 7, the authors report that the CHMS socio-demographic characteristics are reported elsewhere. This is unacceptable. The reader should at least be given some idea of who the sample population is – the age distribution, gender, race/ethnicity, socio-economic status, what percentage have dental insurance, who are those that report having cost barriers – are they mostly insured or uninsured, etc.

4) Page 11, the authors stated: “Thus, in order to reduce cost barriers to care and improve oral health outcomes, there is a need to improve the quality of dental insurance coverage…” It is unclear what evidence supports this statement. I do not think it is supported by the results of this study. It is not clear if insured individuals in your sample also had cost barriers, and so expanding dental insurance coverage may not fully address the issue. Also, I am not too familiar with the dental insurance system in Canada, but know that in the USA, having dental insurance does not preclude an individual from out of pockets expenditures or cost barriers to care. It may help the reader if you added some additional information on dental insurance coverage in Canada – does it cover 100% of the dental treatment? Although I understand the need to discuss policy implications of the findings, it would be important that these statements are supported by the data or by previous studies.

- Discretionary Revisions

NONE

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

'I declare that I have no competing interests'