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Title	**Utilization of the health care system by Ontario First Nations people with diabetes: a population-based study**
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Reviewer 1	Name withheld
Institution	University of Manitoba, Community Health Sciences
General comments and author response	1. The authors need to clarify the inclusion criteria. Are people with type 1 diabetes and gestational diabetes included? If so, how might this bias any comparison between First Nations and other people from Ontario? *Gestational diabetes is omitted from the Ontario Diabetes Database. However, all other types of diabetes are captured, so our study in fact includes people type 1 and other types of diabetes, in addition to type 2 diabetes. However, the overwhelming majority of diabetes in the population is type 2, so the inclusion of a small number of people with type 1 is unlikely to influence this study to a significant degree, especially since type 1 is particularly rare among First Nations people. [Dyck CMAJ 2010] We have added this on page 10.* 2. The analysis and results reported are only age- and sex-adjusted. Why not conduct an analysis adjusting for rural/urban/remote setting, and co-morbidities in the analysis since the authors report in Table 1 they are different between First Nations and other Ontarians? And setting and number of co-morbidities is likely associated with having a family physician and ambulatory care-sensitive conditions. This analysis would provide a more accurate representation of any differences in healthcare attributed to being First Nations. *Differences in place of residence may be part of the causal pathway explaining differences in healthcare utilization for First Nations people, so adjusting for this factor would be inappropriate as it would mask inequities in access to and quality of care. Instead, we have opted to present results stratified by location of residence, in Supplementary Table 2. As discussed on page 7, most differences between populations persisted even when stratifying by location; however, utilization of endocrinologists was an exception to this.* *Comorbidities have a complex relationship with healthcare utilization. Without question, comorbid conditions can drive healthcare use. However, comorbidities can also be a barrier to healthcare use, and healthcare use can also drive the detection of comorbidities. Because of the complex relationship between comorbidity and healthcare utilization, we have elected not to include it in this study.* 3. The authors need to provide more information on the missing data from Community Health Centres and Aboriginal Health Access Centre. Is this data missing from on-reserve or off-reserve? Also, how many First Nations people living in Northwestern Ontario travel to Winnipeg for specialist care/year? Or how many communities, of what size? or to what extent might this impact the results? *We agree with the reviewer that missing data regarding care provided in these settings are an important limitation to our study. We know that there are 10 AHACs and 3 First Nations-specific CHCs in Ontario, so the impact of this missing data is relatively small. These centres are located both within and outside First Nations communities, and in all locations from highly urbanized to remote. Unfortunately, we have no information on which First Nations people travel to Winnipeg for specialist care, so we cannot estimate the extent to which this care pattern influences the results of the study. We have provided further detail about these limitations on page 9–10.* *As noted in our response to the editor (above), we were able to conduct some preliminary analyses to respond to this question, and found that less than 4% of the First Nations people with diabetes in Ontario attended a CHC in 2014. Furthermore, nearly 60% of these people received core primary care services from a family physician outside of the CHC, and thus their care was "visible" in the available in OHIP data. Thus, we anticipate that the impact of these missing data on our ability to ascertain family physician utilization is minimal. Furthermore, we also evaluated hospitalizations for ambulatory sensitive conditions and emergency department visits for hypo- or hyperglycemia as surrogate markers for primary care access. The findings*

	for both of these outcomes mirror the findings for family physician utilization, which supports the robustness of the data. 4. There are a couple exceptionally long paragraphs that could be divided; page 5 and page 8. *We have shortened paragraph lengths where appropriate.* 5. Page 5: Please remove 'with' before 'triaged'. This sentence should read as, "We restricted these to unplanned emergency department visits and those triaged with a score of "urgent" or higher, to exclude…". *We thank the reviewer for noting this error, it has been corrected.* 6. Conclusions: The sentence about First Nations people being sensitive to power imbalances should be reworded. It suggests the issue is that First Nations people are just being sensitive. I suggest something along these line, "Given power imbalances in the patient-provider relationship, service providers ought to be sensitive to these circumstances, as miscommunication is a significant barrier to care". *We thank the reviewer for this suggestion, which we have implemented.* 7. Since the study only includes people with diabetes, the conclusion should only reference the prevention of diabetes complications. "Improvements to healthcare access and utilization are essential to reduce the burden of diabetes complications among First Nations people". *We thank the reviewer for this suggestion, which we have implemented.*
Reviewer 2	Name withheld
Institution	Department of Pediatrics, McGill University, Montréal, Que.
General comments and author response	1. Introduction: Authors have not explained what the gap in knowledge is and what gap this study will fill. The rationale for this study is not clearly outlined. *There have been no previous comprehensive evaluations of healthcare utilization by First Nations people with diabetes. Hence, we sought to fill this knowledge gap by describing primary, secondary and hospital-based care for this population. We have clarified this on page 4.* 2. Introduction: Aims of the study not clearly outlined – aims are too general- specifically what type of health care utilization will be examined and why *We have clarified in the Introduction what types of healthcare utilization are being studying in the paper.* 3. Methods: Why look at ambulatory care visits with an endocrinologist or internist? *We have examined specialists visits as a measure of utilization of secondary care, to complement our findings with regards to primary care. We have further explained this on page 5.* 4. Methods: How did the authors capture unplanned ED visits? *The National Ambulatory Care Reporting System (NACRS) database captures visits to all emergency departments in Ontario. One data variable that is captured for each visit is whether the visit was planned or unplanned. We restricted our outcome to unplanned visits only.* 5. Interpretation: I have concerns regarding the interpretation of the results in suggesting that First Nations people with diabetes have less primary care than non-First nation populations without diabetes as commonly primary care is provided by nurse practitioners and through nurses stations – This is a significant weakness of the study. *We agree with the reviewer that First Nations people, particularly those living in First Nations communities, may receive some primary care from nursing stations. We have therefore refocused the paper on family physician care. Providers at nursing stations can deliver many aspects of primary care, but not to the same comprehensive extent as would be delivered by family physicians.* 6. Interpretation: Not clear what new information this study generates and this may stem from the fact that the rationale and gaps in knowledge were not outlined in the introduction. *As noted above, there have been no previously studies examining healthcare utilization by First Nations people with diabetes across primary, secondary and hospital-based care. We have clarified in the conclusion what is novel in this study.*