Reviewer's report

Title: Challenges to the Provision of Diabetes Care in First Nations Communities: Results from a National Survey of Healthcare Providers in Canada

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Reviewer: Sharon Bruce

Reviewer's report:

Summary
The purpose of the paper is to determine provider strategies on improving quality of diabetes care for First Nations people in Canada living in First Nations communities. The authors completed a two-phase study. Phase one entailed qualitative interviews to ascertain provider perceptions on barriers to diabetes care. In phase two a survey was developed based on the results of the qualitative interviews and then administered to providers of diabetes care in First Nations communities including physicians, nurses, community health representatives, dieticians and diabetes educators. Providers identified patient-level strategies as being the most important to improving diabetes care. Differences in strategies were found by isolation-level of community and provider type. The authors conclude with recommendations for practice, policy and research.

Strengths
1. The paper is generally well written and organized. Arguments are clear and flow logically.
2. The topic is important and deserving of attention. Quality of diabetes care varies considerably across geographies and types of health care systems. Environments such as First Nations communities offer unique challenges that require solutions developed by those involved.
3. The sample is unique. There are no other studies focusing on improving diabetes care for First Nations communities in Canada that have included communities from across the country. Therefore the paper could be an important contribution to the literature.
4. Main findings are interesting and have important implications as outlined by the authors.

Weaknesses
Many of the points below relate to clarity and can likely be addressed fairly easily. However, issues related to methods and analysis are of more concern, but can probably still be addressed with additional explanation.

Major Compulsory Revisions:
1. Although quality of care is the focus of the paper, the concept is not defined.
The authors seem to equate quality of care with lack of adherence on the part of health care providers to practice guidelines (p.5). However, quality of care includes much more than that. In addition, the authors seem to imply that the excess prevalence of diabetes and diabetes complications is the result of a lack of quality care. Quality of care is likely one of the factors associated with the excess prevalence but is probably not the sole contributor.

2. Survey Tool – There is a potential bias with the survey tool. The authors have defined “no impact”, “large impact” and “don’t know”. However, “some impact” and “small impact” are not included in their instructions to participants. Such an omission could have resulted in over- and under-response in some categories. Therefore, it would be important to see the full distribution of responses. The authors should include a table that includes the proportion of responses in each category for each survey item. In addition, the proportional distribution of responses will be of interest to readers.

3. Analysis - Repeated chi-square tests were completed to assess differences among communities in terms of level of isolation and among health care provider types. Were any corrections done for repeated tests? It is also difficult to understand how the analyses were undertaken, given that only “positive results” were presented. For example, were responses from physicians compared to nurses, CHRs and other providers separately? Were nurses then compared to the others in separate analyses? It is difficult to interpret how the analyses were conducted. The analysis requires a more detailed explanation and presentation.

4. Factor Analysis – the confirmatory factor analysis is not particularly informative. That the questions grouped into the three areas from which they were drawn is not surprising, nor is it especially informative as presented. The strategy “address staff shortages” grouped with patient factors. It would be informative to know what the alpha score is for that grouping with and without the “address staff shortages” strategy. It is not unusual to have items included in a grouping that don’t seem to be conceptually related. If the alpha score is not all that different with or without the item, then it can be removed without compromising the grouping. However, if the alpha changes considerably when the item is removed (i.e., is reduced) then the item should remain.

Minor Essential Revisions:

1. Dates of data collection and development of survey tool should be included.

2. The selected timeframe of September 1 through November 30, 2008 should be explained. Why was this timeframe chosen? A three month time frame seems short and could have potentially affected responses.

3. Qualitative Results – I would recommend removing this section. A brief description of the three main categories developed from the qualitative data (i.e., patient, provider, system) could be provided in the Survey Development section. The qualitative results are not part of this research. In addition, as presented the authors are presenting more of a different researchers results (i.e., Brown et al.) than their own.

4. Although not minor, I would recommend that the authors expand upon the
“blaming the patient for their own illness” aspect of the findings in the discussions section. The authors have presented this point in the briefest of ways in the Conclusion section. However, I think the implications of the finding are critically important for work on quality of care from a provider perspective. Is there potential for practitioners to change practice patterns when they believe that the impetus should come from the patients themselves? The lack of discussion of this finding also seems to contradict the authors’ focus on practitioner adherence as a measure of quality of care.

Overall, the paper is interesting and has some important findings. Addressing the issues identified above will strengthen the findings.

**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