Reviewer’s report

Title: Does delay in planned diabetes care influence the quality of clinical management outcomes for Aboriginal Australians?

Version: 0 Date: 11 Apr 2018

Reviewer: Michelle Queally

Reviewer's report:

This is an interesting study on a relevant topic. I do have some concerns about this paper. Overall I think this paper needs to be restructured to read more clearly. There are a number of grammar and spelling errors that I have not commented in detail but have formulated general comments to the authors:

Title:

The title of the paper could be reformulated to a more focused title. It is a bit confusing whether the focus is specific to diabetes related health outcomes or a study regarding the quality of care. For example, the opening line of the abstract describes the study as examining the association between delay in planned diabetes care and measures of diabetes control, whereas the background section alludes to chronic disease care plans and the quality of disease management

Abstract:

Methods need to be more clearly written in the abstract section. For example a suggestion might be: This Retrospective analysis of x was conducted in y. Eligible subjects were x who received treatment at x enrolled between x and y. Logistic and Poisson equations were used to determine x and y

The conclusion section of the abstract addresses just two of the research questions (please include no evidence of delay and blood pressure finding)

Background:

Background section should make the points made by the authors more clear to the reader and also grammar must be corrected. The opening paragraph alludes to diabetes being a major health
problem in Australia. There are references to the improvement of management of chronic diseases and care plans and clinical outcomes and then the author reverts back to diabetes outcomes. Please clarify within the background section if this study is about healthcare outcomes more generally or diabetes outcomes or quality of care.

In general I feel the background is currently missing some important information and references, particularly: Studies that have examined the topic of planned diabetes care and diabetes outcomes. Systematic reviews in the area of diabetes care and related outcomes; Diabetes Conversation Map™ and health outcomes: A systematic literature review. More detail must be included on the background and rationale for the hypothesis of this study, including reference to the existing literature.

Author needs to check the tense used throughout the paper as there is a switch from past tense to present tense. For example Paragraphs 1, line 10: …"within the NT…there was a gradient in... prevalence increasing …

Paragraph 1, line 14 should be rephrased to more clearly specify what the complications of diabetes are and if there are any complications more specific to the Aboriginal and non-Aboriginal Australians.

It would be useful to know (where possible) what the prevalence of poorly controlled diabetes is within the study population.

Paragraph 2, please describe what is meant by "improved” primary care management.

In the background section the author reports states that there has been "limited assessment of the impact of planned patience care for chorine diseases…” , please describe what the findings of any studies or the "limited" studies that have examined diabetes outcomes and delay in planned diabetes care in the study population used for this analysis or indeed in the international literature.

Please rephrase Paragraph 2, line 27: "In a previous study we have described”

Paragraph 2, line 33 is missing some words. Please use the background section to indicate what if any studies have examined a documented care plan and diabetes control.
Methods:

This section needs to be rewritten to become more clear and concise. The explanatory variable selection is not clear. The hypotheses need to be set up and articulated in the introduction (prior to presenting these as objectives at end of Background or methods section)

How was the data stratified?

The author notes that "cases were selected on the basis of the ICPC-2R codes. Please elaborate on this selection process. Why were selection factors such as duration of diabetes omitted?. Please state the reasons for choosing this selection criteria?"

A table that lists and describes the outcome and explanatory variables coding and cut-off points would prove useful here. There are some words missing in the paragraph before "statistical analysis" : "At the time of implementation". Some of this section ought to be moved to discussion and limitations section

Results:

Results section needs to shortenned and written more clearly. For example there is no need to write "There was evidence for an association between x and y. Please clearly state the results

Has the socioeconomic and demographic characteristics of the aboriginal population have been reported elsewhere?

The author is not describing all the other characteristics. It feels like some part of the results are currently lacking. I would recommend you to describe the results of all the models completely, since this is the core of your research

Please describe why the results presented according to age and gender

Please provide a descriptive analysis of the study population in table format including the total number of observations used in this study. Information is lacking on participant characteristics. Please add these in the beginning of the results. It would be good if the reader gets some insight in the generalizability of the findings

Some of the language used in this section ought best be used in the discussion section
I am wondering if all the variables referred to in this section are the final predictors? Were other explanatory variables used or explored. For example, there are several situations in which the level of HbA1c may not faithfully reflect the glycemic control in a given patient. Important among these is the use of certain non-diabetic medications, were these available or examined? Other explanatory variables that might prove useful include duration of diabetes, SES. Healthcare utilization, i.e., occurrence of diabetes related visits may also be affected by insurance schemes, healthcare access and income levels. Were these controlled for?

Please describe how you built your models and which variables were included in which model. Did you combine all the variables into one model? Or did you use a model per variable?

Please provide the table number and not "same table"

Please describe what is shown in the tables more clearly

A number of spelling errors: For example, Line 48, …Males were slightly more likely to be hospitalised than females (not that)

The titles of the tables need to be rewritten or explained better. The "Impact" of …..I would suggest another word like association or relationship.

The format of table 1 is not very clear to read. This table needs to be reformatted. For example, please describe why the differences in numbers, a more clear description on what this table describes

Table 2 has indigenous included in the title, which differs to the other titles, please specify why so (why not Aboriginal?)

The majority of tables do not include the total number of observations. Please include these

Discussion:

Overall the discussion is informative but lengthy. Please try to ensure that your discussion points are critical of the literature, or consider the ways in which the results have may influence your specific cohort. The discussion section should include a description of what the findings were, what they are in relation to the literature - ie. have the authors found something new along with a discussion on policy implications. As well as a clear section on strengths and limitations of the current study
It might be useful to use the initial lines of the first paragraph in the discussion section clearly describe what this study found and then compare the findings to other studies.

In paragraph 2 of the discussion section the author notes that this study's findings are consistent with others suggesting that a development of a disease care plan was associated with a reduction in the number of diabetes related hospital admissions. This is a sweeping statement and should be compared to other studies in terms of what each study controlled for. It is quiet suggestive to say from the findings in this study that a disease care plan was associated with a reduction of diabetes related admissions, given the number of explanatory variables omitted in this analysis. For example there may be other factors influencing diabetes related hospital admissions. Did the other studies control for other factors that I have previously alluded to that may affect hospital admissions (income, SES, access etc.)

The author also alludes to the results of this analysis to be consistent with the argument of improved primary care management leading to a reducing in health care costs. This analysis did not directly examine health care costs and should discuss this within this context.

The second paragraph in which the author notes the findings to suggest that a primary care plan could improve health outcomes and reduce complications. This must be discussed more clearly, for example, how can the care plan do this within this population?

Is the study population representative of the Aboriginal population? Please discuss generalizability of the study to this population and indeed how other studies findings translate to this population.

Strengths/limitations: please reflect on generalizability using characteristics of the sample.

Overall, I have problems with understanding your findings (because the models are not clearly describe) and that makes it also hard to follow your discussion. For me it is unclear whether the predictors you found are in separate models or in one model? Some limitations not mentioned are omitted explanatory variables (noted in comments in the methods section) Also, factors that Interfere with HbA1c Measurement affect interpretation of HbA1c results.

Please consider including further information on the limitations of this work or how yours differs from the literature, other than the cohort evaluated, in order to further highlight the need for this study.

There is a notable lack of referencing in paragraph 4.

A note on the public health implications might be useful within the discussion section and also in the conclusion section.
References:

Please check references. There are missing references in the methods section

The author often notes two points that require referencing but provides only one reference. Please check referencing throughout the paper. Please also include references in the methods section "outcome measures and explanatory variables"

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

No

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

Declaration of competing interests
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?
3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

1. No
2. No
3. No
4. No
5. No

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal

Do you want to get recognition for reviewing this manuscript? Add a record of this review to Publons to track and showcase your reviewing expertise across the world’s journals. Signing up is quick, easy and free!

Yes