Reviewer's report

Title: Inequality in provider continuity for children in Australian General Practice

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Reviewer: nikki turner

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The comments below I would suggest all need to be considered under major compulsory revisions, to make this article more understandable for the reader and hence easier to interpret the findings:

1. Aims and originality:
This is an important topic with little data to date published on the issue around GP continuity and access to care within the Australian context.

The aims as posed by the authors are well described in the introduction. However I do not think this methodology can adequately respond to the second aim which is to describe equity of access. Measuring parental recall of their current GP can be posed as a proxy measure for equity, but there may be other variables to consider as well. Hence I would suggest the authors may need to reconsider their second aim.

2. Methodology
Generally the methodology is adequately described though there are areas that need further explanation and development.

• The response rate of 85-89%.
There needs to be some consideration as to whether this may be a representative group or not i.e. is there background data for the region for this age group to compare the demographics with? Is there anything known on the 9 – 15% who did not respond. I am unclear if all children in the region are enrolled in kindergartens, or is there another group of children outside this population who do not attend kindergartens which may be a very important group to know about?

• Definitions
I am not clear that the definitions reliably translate through to their explanations.
- “A GP left the area” is defined as a GP who was not named in a current year and never again. However I assume there are other reasons for a GP to be not named e.g. the family may have chosen to move to another GP.
- “A GP displayed transient care” is defined as a GP who was not named in a current year but was named in subsequent years. Once again I am concerned there are other reasons for this such as the family chosing to shift GPs, not the GP shifting.
• Page 6 paragraph two discussed a measure from six general practices between parents naming a GP and practice in the Kindergarten screen. I assume this is a quality check of the accuracy of the data; however there is no data presented on the outcome of this.

3. Are the data sound?

Clearly obtaining accurate data via this methodology is difficult and the authors do acknowledge many of the limitations of the data.

I would particularly like to know more about the limitations of the data collection, is this questionnaire undertaken by all school-entry children in the ACT region. It would be useful to know how many are missed. The questionnaire has an 85-89% return rate, is there any data available on the demographics of the non-returners.

• The results section refers to a sample size of 30,789. It would be useful to know the overall population base this sample is taken from to give this size meaning.
• The number of practices is not listed.
• I cannot interpret Table One. I am unsure of what the percentages listed are a percentage of. I assumed it would be the total sample population; however the text reports there are 1.8% of the sample of Aboriginal or Torres Strait Islander descent whereas in Table one the range is 11% - 20%. This needs clarification for the reader.
• I would like clarification on the paragraph around parents naming an average of 2.68 GPs per practice per year. Does this mean the parents named a single practice and multiple GPs in practices?
• Page 8 paragraph two discussed different methods used to measure the number of GPs. I am unsure which of these data the authors used as their denominator, and concerned about significant inaccuracies due to these problems.
• Page 8 paragraph 4 referring to figure one, I would request the authors to review as I am finding this difficult to understand. I am unsure about Figure 1 and whether I am interpreting it correctly. Does the Y axis refer to the percentage of GPs named by parents versus the total percentage of GPs in the area (and which measure was used for this)? I assume the x axis is measuring the number of the same GPs reported by parents over 8 years but I am not clear and would request a clearer explanation of the x axis. Furthermore the authors may wish to consider why there is such a sudden difference to year eight, I would be concerned there is some data instability issue as it seems unlikely to have a sudden jump to 39% from seven years to eight years. The text states that this is a measure of continuity of care. However as per my concerns with definitions above there may be other explanations for this data.
• Page 9 the first paragraph discusses GPs displaying ‘transient care’, however note my concerns above over definitions. This may suggest there is an issue with transient care but I cannot see how this makes it a definitive finding of transient
care.

- Table two – there is very little data available for the numbers of primary care practitioners so I am not sure if (e), (f) and (g) add usefully to this table. The small amount of data and the differences in reporting may be more usefully discussed in the text.
- Table four – there is really no change over time across all the 8 years in this data so I would suggest this does not need a table, but could be adequately expressed in the text.

4. Does the manuscript adhere to the relevant standards for reporting and data deposition?

- I would suggest the above issues around interpretation of definitions and clarity around how tables are interpreted could be usefully improved to enable the reader to more clearly interpret what the authors are saying.

5. Are the discussion and conclusions well balanced and adequately supported by the data?

- As I had some difficulty being sure I was accurately interpreting the tables and figures I would request there is a need to clarify many of those aspects to be able to feel the discussion does support the data.
- While the data has some interesting trends I feel the authors may be over interpreting the findings. I do not feel confident that these findings are describing continuing of care or transience in GPs, though it is describing data that may suggest connections with these issues.
- I am concerned over the data describing 39% of GPs present in the ACT region from one year to the next, based on parental naming of GPs, considering the range of biases possible in this data.
- Paragraph 3 in discussion discusses a “small level of GP turnover”. It would be interesting to discuss what is a ‘small level’; is there other international literature in other areas looking at level of GP turnover and what would be considered small?
- Page 10 paragraph two referring to NZ study that a “minority of GPs provided longitudinal continuity of care” – it would be useful to have a figure on what the size of this minority is.
- The discussion around disparities in equity also needs to consider whether the definitions are a fair measure of disparities in equity. It may be a proxy measure but the biases need to be acknowledged. Is the difference in ability to name a GP a direct reflection of equity of access, maybe there are family, cultural or language barriers that may make Aboriginal and Torre Strait Islanders and immigrants less likely to name a GP.
- I would also suggest reviewing the conclusions based on the comments above, that these findings are pointers towards continuity of care and equity of access.
but not definitive.

6. Are limitations of the work clearly stated?

- Need to acknowledge data limitations more, particularly around the limitations of a survey that is not capturing 9 – 15% of the children.
- The discrepancies in the total number of GPs/Practices are confusing and I am unclear which measure is used in the data interpretation.

7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished?

- Some international work is discussed, however it would be good to see more international comparison and discussion around GP retention rates, continuity of care

8. Do the title and abstract accurately convey what has been found?

I believe this article would benefit from a rename as I am not sure the methodology is capable of reaching a clear conclusion around a a measure of inequality in provider continuity.

The abstract has no aims listed in it.

9. Is the writing acceptable?

In its current form I find this article difficult to critique. This analysis could be useful in an area where there is limited research. However I think it would benefit from a review of the aims and definitions and the ways of presenting the data to make it easier to interpret to the reader.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Needs some language corrections before being published

**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