Author's response to reviews

Title: Improving organisational systems for diabetes care in Australian Indigenous communities

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Point-by-point responses to reviewers' comments

Dear Editor,

Thank you for providing peer reviewers' comments and for the opportunity to submit a revised manuscript. We have addressed the reviewers' comments as outlined below.

Reviewer: Mark F Harris

Major compulsory revisions:

1. Firstly, the cut points that we have used are for the purpose of indicators of the quality of control of BP and HbA1c rather than as treatment guidelines. Secondly, at the time of designing this study the clinical recommendation was for a treatment goal of \(<130/80\) mmHg in this population at very high risk of renal disease. The international trend to recommend more stringent control of BP in renal disease in particular has generally occurred since the commencement of our study. We have revised the fourth paragraph on page 6 to clarify that the cut points are to reflect quality of BP and HbA1c control at the population level rather than to precisely reflect treatment guidelines (which are subject to change over time).

2. In line with the reviewer's suggestion, the intermediate outcome data were reanalysed with adjustment for age (Table 7). However, the data for duration of diabetes was not sufficiently complete to allow for adjustment in the analysis (29% of participants had no date of diabetes diagnosis documented in medical records). The reanalysis did not significantly change the results and their interpretation and we have added a footnote to table 7 to clarify this point.

3. The difficulties of obtaining comparative data and the limitations resulting from not having a comparative analysis have been made more clearly in the first paragraph of page 14.

4. In the Authors' contributions section, a minor modification has been made to the description of Ross Bailie's and Damin Si's roles to highlight the contribution that Damin Si played in relation to the data analysis for this study. The statement regarding the author contributions is consistent with the declaration that appeared in Damin Si's PhD thesis describing his own role in the work related to his thesis and the contributions of others. It also needs to be recognised that Damin Si's thesis comprised a significantly wider body of work than that reflected in this paper. The statement regarding his contribution to reviewing the international literature and contributing to the conceptualisation of the study should also be adequately recognised. A copy of the declaration that appeared in Damin Si's thesis is included below for your information.

Declaration

I hereby declare that the work herein, now submitted as a thesis for the degree of Doctor of Philosophy of the Charles Darwin University, is the result of my substantial contribution, and all references to ideas and
work of other researchers have been specifically acknowledged. I hereby certify that the work embodied in this thesis has not already been accepted in substance for any degree, and is not being currently submitted in candidature for any other degree.

My PhD study is part of the Audit and Best Practice for Chronic Disease (ABCD) project with which Professor Ross Bailie is the leading chief investigator. Professor Ross Bailie played the lead role in conceptualisation, design, management of fieldwork, and supervision of data collection and analyses. As a team member of the ABCD project, I played a major role in the development of study design and conceptualisation and performed all data analyses for the project. I have written all chapters in this thesis. Michelle Dowden, Lynette O’Donoghue played the major role in data collection and delivery of the quality improvement intervention to 12 participating health centres. My involvement in the intervention was limited to feedback of results to 4 health centres at the year 1 follow-up. Dr Christine Connors and Dr Tarun Weeramanthri contributed to conceptualisation and design and facilitated engagement with health services. Dr Gary Robinson and Associate Professor Joan Cunningham contributed to conceptualisation and design.

Reviewer: James Dunbar

Minor essential revisions:

The reference for the guidelines used to manage the risk factors (presumably such as hyperglycaemia, hypertension or hyperlipidemia) has been inserted in the fourth paragraph on page 6.

Discretionary revisions:

The reference provided for the guidelines also provides information on the guideline development process. In general terms the guidelines were based on available local and international research evidence and consensus among locally experienced practitioners.

Reviewer: Sandy Cook

Minor essential revisions:

1. Total number of the eligible diabetes population has been provided in the second paragraph on page 7, showing that the study sample accounted for 57% of the diabetes population. More detail on the numbers in each health centre are also provided in the second paragraph of page 7.

2. The randomisation process has been described in the second paragraph on page 7.

3. More detailed explanation of the purposively selected health centres and their representativeness of the full 53 centres have been added in the second paragraph on page 5.

4. The second paragraph on page 7 now explains that the sampling process was designed primarily to provide an adequate number of records to reflect the situation in each health centre rather than a representative sample of the population with diabetes.

5. There was indeed wide variation in experience across the 12 health centres. In our feedback workshops with health centre staff we did use the differences in implementation strategies and outcomes to generate discussion and understanding of factors that contributed to success. We have added to the second paragraph on page 8 to reflect this more clearly.

Discretionary revisions:

1. The point that the 12 participating health centres were not representative of all health centres in the region has been made more clearly as described above in point 3.

2. As indicated at the top of page 4, staff turnover presents a significant challenge for health services in this environment, and the approach used in this study to document performance, set goals and developing plans to achieve the goals was to some extent designed to address this challenge.
Reviewer: Martin Gulliford

A 3-level logistic regression model is possible in Stata. Stata commands for the analysis have been included in paragraph 3 on page 9.

All relevant units have been specified in Table 7.