Author's response to reviews

Title: Early identification and preventive care for elevated cardiovascular disease risk within a remote Australian Aboriginal primary health care service.

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Version: 2 Date: 21 December 2010

Author's response to reviews: see over
Wednesday, 10 November 2010

The Editors
BMC Health Services Research

Dear Editors,

Re: Manuscript 1485198907408397 - Early identification and secondary prevention of cardiovascular disease risk within a remote Australian Aboriginal primary health care service.

We are pleased to re-submit to the BMC Health Services Research a time series study investigating CVD risk detection and preventive care for CVD in a remote Aboriginal community with a very high burden of CVD. Please extend our thanks to the reviewers for their supportive comments regarding our original submission.

In the following pages (i) we respond to the reviewers’ comments and (ii) describe changes made to the manuscript where appropriate. We have also used ‘track-changes’ to assist the editorial review of our revised manuscript.

The manuscript has been read and approved by all authors, has not been published elsewhere, and is exclusively submitted to BMC Health Services Research.

Yours sincerely,

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Reviewer: Geoffrey Spurling

Response to Reviewer’s comments:

Major compulsory revisions

Methods

1: The relevant ethics clearances have been clearly stated in this article (Methods: last paragraph). Furthermore, this study was a collaborative participatory exercise, conducted with the PHC service where the data on mortality has been recorded over the past 25 years. PHC staff members (Aboriginal and non-Aboriginal) have been involved in the design, implementation, interpretation of the data and are recognised as co-authors on this manuscript. The decision to provide the background information on community-based mortality was made collaboratively with PHC staff members and we feel that this provides important contextual information regarding (i) the justification for the research in the first place and (ii) the potential to benefit from the intervention under study in this research. Finally, the Aboriginal community participating in this research is not named.

Results

2: We have included an additional table (Table 3) detailing the results for the ‘evidence based’ CVD services.

Discussion

3: The discussion section has been modified to state that this study is not adequately powered to detect changes in the mean number of CVD events prior and following the AHC (Discussion: Para 7, Line 13).

Minor essential revisions

Introduction

1: The AHC has now been described as annual. (Background: Para 2, Line 7).

2: We agree that this study describes a mixture of primary and secondary prevention depending on whether there had been an incident CVD event among those identified with elevated CVD risk during the AHC. We have now modified the manuscript to refer to ‘preventive care for elevated CVD risk’ rather than ‘secondary prevention’. (Several modifications to the manuscript – see track changes)

Methods

3: The sentences regarding estimation of absolute CVD risk have been clarified to explain (i) the timing of the health assessments and (ii) the difference between the expected and observed estimated absolute CVD risk. (See estimation of absolute CVD risk section).

Results

4: The statistical tests used in each of the tables have now been listed in the footnotes under each table.
Reviewer: Mark Harris

Response to Reviewer’s comments:

Minor essential revisions

Methods

1: Clearer explanation of the rationale for calculating the cohort’s mean estimated absolute CVD risk.

The rationale for determining if there were any changes in the cohort’s mean absolute CVD risk has now been stated more clearly. (Estimation of absolute CVD risk: Line 1)

Results

2: Presentation of data regarding the (i) 5yr absolute CVD risk and (ii) 5yr CVD risk category to enable comparisons with other studies.

We have included additional rows in Table 5 to provide the data requested by this reviewer.

3: The number and % of participants who were under 30.

The number and % of the cohort who were less than 30 years old on the day of participation in the AHC has been provided. (Estimation of absolute CVD risk: Para 1, Line 12)

4: Clarification of the number of participants included for each table.

The number of participants at each stage of the analysis has now been included in the title for each table. An additional footnote has been included under Table 4 to explain that the number of ITS participants at study end was 63 due to one death in the cohort.

Discussion

5: Comment regarding the limited changes within the cohort risk profile at repeat clinical review given the significant intensification of pharmacotherapy.

We have now addressed this point in the discussion section. (Discussion: Para 4, Line 11)

6: Comment regarding the significant reduction in numbers of cigarettes smoked.

We agree with this reviewer that: (i) the significant reduction in the self reported number of cigarettes smoked may also contribute to a reduction in CVD risk and (ii) that the Framingham equations will not pick up this reduction in risk. These points have now been included in the discussion. We have also included a reference to the INTERHEART study that demonstrated a decline in CVD events associated with a reduction in the number of cigarettes smoked per day. (Discussion: Para 7, Line 3)

Reviewer: Editorial comments & Dr Leighton Ku (Associate Editor)

Response to editorial comments:

Methods:

1: The procedure for obtaining written informed consent has been described (Methods: Para 2, Line 7).

2: Clarify the calculation of expected absolute CVD risk at review compared with the calculation of absolute CVD risk during the AHC.

This calculation has been clarified: stating the ‘expected’ calculation was simply due to the increase in age, as noted by this reviewer. (See estimation of absolute CVD risk section).

Statistical Methods:

3: Clarify the use of one tailed or two tailed t tests.

We have used two-tailed t-tests for assessing changes in means. This has been clarified in the statistical methods section and in the footnotes under each table where applicable.

4: Figures in parentheses in Table 5.

We have changed the figures in parentheses in Table 5 to standard errors – as requested by this reviewer. This is also now clearly stated in the caption to Table 5.

5: Clarify the use of the Holm-Bonferroni adjustment

We have clarified that the Holm-Bonferroni adjustment was only used to evaluate the multiple two-tailed t-tests used in the ITS findings. (Statistical methods: Line 11)

Results:

6a: Describe the baseline characteristics of the 6 ITS participants that did not have a clinical review.

Complete data for 64 participants was available for the ITS component in this study (Figure 1). We wish to clarify that none were ‘lost due to attrition’. However, six of the ITS participants did not have a repeat standardised clinical review and were thus excluded from the cohort’s clinical outcomes analysis at both the time of the AHC and at the review date. This explains why the clinical outcomes table (Table 5) describes data for 58 participants. In Table 5, the exclusion of the AHC data for the six participants (who did not undergo a repeat standardised assessment) was done to remove the potential for bias in our findings.

We have clarified this point in our manuscript. (Cohort CVD risk profile findings: Line 5)

6b: Did this bias the findings?

We don’t think that the non assessment of 6 ITS participants has biased this study. The clinical outcomes table (Table 5) reports on data only for those that completed both the AHC and repeated clinical assessment (N=58) (see Figure 1). Finally, the inclusion of new data in Table 5 (Mean NZGG 5 year CVD risk category), as requested by another reviewer, demonstrates the same mean NZGG category among the repeat clinical assessment cohort (N=58) as that for the entire ITS cohort (N=64).
7: Describe the statistical tests used in Table 5.

The statistical tests used in Table 5 have now been described in the statistical methods section and also listed in the footnotes under Table 5.

8: Explain the strength of the finding \((P<0.001)\) regarding the absolute CVD risk at the AHC and ‘expected’ absolute CVD risk at review.

As mentioned at point 2 above, the ‘expected’ absolute CVD risk was calculated on the assumption that the only clinical factor that changed was the age of the participant. Thus, this calculation would have resulted in a uniform shift (upwards) in the mean calculated absolute CVD risk. The uniformity of the increase among the 58 participants contributes to the strength of the finding. Although the two-tailed t-test difference between the two measures is only 0.73, the SE for the difference is 0.03. This point has also been clarified earlier in the manuscript – see point 2 above.