Author's response to reviews

Title: Voting with their feet - Predictors of Discharge Against Medical Advice in Aboriginal and Non-Aboriginal Ischaemic Heart Disease inpatients in Western Australia:

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Author's response to reviews: see over
Dear Sir/Madam Editor

Voting with their feet - Predictors of Discharge Against Medical Advice in Aboriginal and Non-Aboriginal Ischaemic Heart Disease inpatients in Western Australia

We thank you for the associate editor’s comments on our first revision.

Our first revision was approved by the reviewers and in this submission we have revised the manuscript in response to the numbered comments made by the associate editor. Your comments are in italics, followed by our response.

1. Please report a measure of pseudo-R-Square for the regression analyses. Also, please report the change in pseudo-R-Square between baseline model and adjusted model.

Usually the difference between R-square shows the effect of adding variables to a baseline model. In the case of the analysis reported in this paper, there was no baseline model, rather the full model was designed a-priori. Thus there is no change to report between baseline and adjusted models. The crude ORs reflect the models in which each variable was run on its own, so are not baseline models.

Thus an R-Squared has now been calculated for the model using the full cohort but no difference is shown. Prof Knuiman, co-author and the statistician advising our team, has recommended we use the Max-rescaled R-Square (Nagelkerke’s coefficient of determination with value= 0.1627), and this has been added to the table alongside the number of events and cohort size.

2. Please explain within the text why you conducted regression analyses for four particular sub-cohorts?? What is the rationale behind choosing these sub-cohorts and what is the value added?

The section on statistical methods in the methods section now explains why the same variables were applied to different sub-groups of the cohort. The results show the robustness of the OR estimates for the variables investigated. The paragraph is pasted below.

‘The consistency of the risk factors for DAMA was further evaluated by applying the models to different sub-cohorts of the full cohort. In the first instance, the cohort was restricted to patients who were emergency admissions due to the fact that DAMA was so rare among booked admissions. Second, a model was fitted to patients who were publicly funded at their discharge hospital due to the overwhelming protective factor of attending a private hospital. Because a history of DAMA has been shown to be strongly predictive of subsequent DAMA, another model was fitted on patients who did not have DAMA in the previous 10 years. To check that receipt of a procedure might influence the odds of DAMA, we also restricted the cohort to those who did not have coronary artery revascularisation procedures in their incident episode (these procedures are only available in 7 metropolitan hospitals). Logistic regression modeling was also applied separately to Aboriginal and non-Aboriginal patients to investigate whether the risk factors for DAMA were the same for Aboriginal and non-Aboriginal people.’
3. **Please explain Please split table 2. Currently it is very confusing to merely read all information. For instance, some text is spread over 5 or more lines**

I have cleaned up the confusing lines in Table 2 and have consolidated the table on to one page. Thank you for highlighting the need for improved presentation.

Can you please keep this as one table, now that the clarity has been improved? To split it would not be as effective in showing the results of all sub-cohorts together.

4. **Please change the following sentence in the discussion section:**

   > ?Thus, we were unable to establish the reason for and circumstances around the DAMA, although coding of DAMA status is based on evidence collected from hospital notes and discharge summaries.?

   The **although? implies that you are able to mitigate an important limitation of your study: that you are not able to explain reasons and circumstances around DAMA. This is not the case given the fact that you analyzed administrative data.**

I have reworded the confusing sentence in the discussion. The paragraph is pasted below.

‘Administrative data limit the type and quality of information available for analysis. Data are entered by trained clinical coders at each hospital from discharge summaries prepared by the discharging doctor, as well as from medical notes according to the Australian ICD coding standards manual. In addition, the Data Linkage Branch has its own internal data integrity and checking procedures for the various administrative datasets. Although we were unable to establish the reason for and circumstances surrounding the DAMA, we expect the coding to be accurate, reflecting strict hospital procedures for documenting DAMA for medico-legal reasons and due to the risk to patients.’

I hope these responses meet your approval for publication of the paper.

Yours sincerely

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