Author’s response to reviews

Title: Evaluation of Risk Equations for Prediction of Short-Term Coronary Heart Disease Events in Patients with Long-Standing Type 2 Diabetes: The Translating Research Into Action for Diabetes (TRIAD) Study

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Author’s response to reviews: see over
June 14, 2012

Dear Editor:

In the enclosed, please find our revised manuscript entitled, “Evaluation of Risk Equations for Prediction of Short-Term Coronary Heart Disease Events in Patients with Long-Standing Type 2 Diabetes: Translating Research into Actions for Diabetes (TRIAD) Study” (manuscript #: 7821456267036022).

In this paper, we evaluated the performance of the U.K. Prospective Diabetes Study (UKPDS) and Framingham risk equations for predicting the short-term risk of coronary heart disease (CHD) events among adults with long-standing type 2 diabetes, including those with and without preexisting CHD. We have revised the manuscript to address the comments made by Dr. Donnan. Detailed summary responding to Reviewers’ comments is attached below. We have also slightly modified the title of our manuscript to acknowledge the support of the TRIAD study.

We hope you will find this manuscript suitable for publication in the journal of BMC Endocrine Disorders.

Sincerely,

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Response to the Reviewers’ Comments.
We thank the reviewers again for their comments and suggestions. Our responses to their comments are summarized below.

Reviewer 1. (Dr. Peter Donnan)

We thank Dr. Donnan for the insightful comments. We agree that the UKPDS and Framingham algorithms do not appear to be appropriate models for CHD prediction for modern-day patients with longstanding diabetes, such as those in the TRIAD study. We have revised the first sentence in the Conclusions of the Abstract to highlight this further:

“The UKPDS and Framingham risk equations may be inappropriate for predicting the short-term risk of CHD events in patients with long-standing type 2 diabetes, partly due to changes in medications used by patients with diabetes and other improvements in clinical care since the Framingham and UKPDS studies were conducted.”

Additionally, we have revised the first sentence of the Discussion in the main text of the manuscript as, “Our study showed that the UKPDS and Framingham risk equations may be inappropriate for predicting short-term risk of CHD events for adults with long-standing type 2 diabetes.” Throughout the Discussion and Conclusions in the main text of the manuscript, we have elaborated this point and emphasized the need for new and more refined risk equations, such as the prediction model of Donnan et al. and included this citation again on p11.

The other changes in the manuscript are summarized as follows:

1. The abstract does not reflect the changes made to the paper. It does not mention recalibration which can make the agreement good in any new population. The poor discrimination is down to medication and better management but is not mentioned.

   Response: We have incorporated these changes into the Results and Conclusions of the abstract.

2. The numbers differ between this version and the previous and not sure why. Previously n = 5516 for UKPDS and now n = 5914, Framingham-Initial n= 6064, now n = 5914, etc.

   Response: The n’s changed because previously we excluded TRIAD participants with missing covariates. However, following suggestions from prior reviews, we have added these participants back to the analysis and used the multiple imputation approach to handle missing data.

3. Typo in abstract with n = 8803 which should be 8303, I think.

   Response: We have corrected this typo.
Reviewer 2. (Dr. Han Kemper)

We thank Reviewer 2 for his review and recommendation of our manuscript. We have revised the manuscript according to Reviewer 1’s comments, summarized above.