Author's response to reviews

Title: Population attributable fraction of type 2 diabetes due to physical inactivity in adults: a systematic review

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Author's response to reviews: see over
March 29, 2014

Dear Editor,
We submit our second revision of manuscript, “Population attributable fraction of type 2 diabetes due to physical inactivity in adults: a systematic review”.

We thank the reviewers for their 2nd round of comments, which we feel, have further tightened up the manuscript. We have addressed each of the reviewers’ comments. These suggestions are addressed in the ‘Response to Reviewers’.

The manuscript revisions are highlighted using the ‘Track Changes’ function in Microsoft Word. We also attached a version of the manuscript with ‘Track Changes’ accepted.

We do hope the detailed response to reviewers is helpful in allowing you to accept this paper for BMC Public Health.

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Title: Population attributable fraction of type 2 diabetes due to physical inactivity in adults: a systematic review

Version: 2

Date: 14 March, 2014

Reviewer: Abiodun Oluyomi

Reviewer's Comments

Page: 3

Number: 1

I assume you are saying that 3.3 million of global annual mortality is attributable to physical inactivity. Right?
Starting out with the statement that "Approximately 3.3 million people around the world die each year" suggests that total global mortality is 3.3 million people. You may need to rephrase statement.

Action: the point is well taken and rephrased as per the suggestion

Number: 2

Perhaps there is a way to make this more contextual. 1-3% isn't necessarily "substantial"... you've got 97-99% left. Maybe reporting $ amounts might help provide some context.

Action: we reported country specific examples of direct cost of medical service by amount with year specific prices.

Number: 3

Which entity are you referring to by "our".

Response: we were referring to North American health care system.
Action: We have replace the term “our” with “North American health care system”.

Number: 4

Are these data global / OR / US? Especially since you started with "OUR" (which I think = global), and then gave a US example of age-adjusted incidence data. You may need to clarify

Response: We were referring to North America and have clarified this now. (See response to item 3 please)
Page: 4

Number: 1

Which population?

**Response:** we were referring to general people rather than specific population

**Action:** the term “population” was replaced by “people”.

Number: 2

?? - first time mentioned.
If by DM-2 you mean Type 2 diabetes mellitus, then keep the acronym consistent (T2DM).

**Response:** yes we meant type 2 diabetes mellitus.

**Action:** DM-2 was replaced by T2DM

Number: 3

The general interpretation of the word "ascertain" = to find out something. It may not be appropriate in this context, especially because - in a systematic review, you are essentially trying to report the state of the science around a specific issue/topic. Perhaps you may replace with "examined", "assessed", etc.

**Action:** the term “ascertained” was replaced by “assessed”.

**Revised text:** To our knowledge, no systematic review has assessed the PAF of T2DM attributable to physical inactivity in men and women.

Number: 4

You mentioned in your response to reviewer doc. that:
"We have now modified our introduction section to include a detailed rationale of why this systematic review is needed based on what is currently known in the literature". The idea that you have adequately addressed the absence of a robust and convincing rationale for this exercise.

Essentially, this introduction can be improved by doing two things:

(1) presenting a more deliberate discussion around the WHY of this review exercise, where you expand upon the statement that you made in rows 80 - 81. Yes, you mentioned that PAFs vary from 3% to 40%. But then, what about these variations are known BASED ON THE EXISTING literature - are these age-, gender-, domain-, region-specific PAFs? etc.

(2) SAYING why "examining the quality of... discrepant estimates...” IS IMPORTANT. The current statement basically says what you intend to do with the review, but not why it is of scholarly importance (per se)
Response: Thank you for this guidance that has allowed us to improve the rationale section.

Action: we incorporated two of the reviewer’s points essentially verbatim.

To date, PAF estimates for the excess cases of T2DM vary from 3% due to lack of exercise in Finland to 40% in Canada due to lack of moderate-vigorous physical activity.[13-15] Some of this variability is due to variation in calculating PAF based on age-, gender-, region-specific factors. But there has been no systematic review has assessed the PAF of T2DM attributable to physical inactivity in men and women. Also, none has used recent advances in PAF as outlined by Laaksonen [13]. Examining the quality of these discrepant estimates and underlying reasons for the observed variation is important as it will provide policymakers with a guide to which of the original studies should carry most weight. Hence, our primary objective was to quantify the PAF of T2DM attributable to physical inactivity and absence of sport participation or exercise for men and women.

Page: 5

Number: 1
First appearance of "PAR" - spell out acronym.
Action: PAR acronym was clarified by “population attributable ratio”

Number: 2
Consistent acronym for Type 2 diabetes mellitus (T2DM)
Action: the T2DM acronym was made consistent and paper was checked for consistency

Page: 6

Number: 1
(HAT, JCD, KMK)
Number: 2 Cross-Out
**Action:** HAT, JCD, KMK were crossed out

**Page: 7**

Number: 1
Revisit: "as" twice
**Action:** replicate term “as” was deleted

**Page: 8**

Number: 1
Add comma
**Action:** comma was added

**Page: 12**

Number: 1
Need space between words
**Action:** a space was added.

**Page: 17**

Number: 1
Please revisit.
**Action:** the prevalence of exposure was changed to prevalence of physical inactivity and abbreviation (Pe) was clarified between brackets as prevalence of exposure.

**Reviewer: Edward Archer**

Reviewer’s comments

**Minor revisions:** There are still few typos that need to be corrected.  
**Action:** We reviewed the paper corrected typos as highlighted in the marked up version. We had a native English-speaking professional medical journal editor check it.