Author's response to reviews

Title: Mortality and potential years of life lost attributable to alcohol consumption in Canada in 2005

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Author's response to reviews: see over
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BMC Public Health
Attn: Victorino Silvestre

Dear Dr. Silvestre

Thank you for your efforts in reviewing the manuscript entitled "Mortality and potential years of life lost attributable to alcohol consumption in Canada in 2005" (Manuscript ID: 1016468540510351). Please find attached for your consideration, in accordance with your e-mail dated September 15, 2011, a revised version of this research manuscript. I am also attaching detailed responses to the reviewers' comments, which I have completed in boldface type.

Thank you for your consideration of the attached manuscript for publication in BMC Public Health.
Reviewer: Kerena Eckert

Reviewer’s report:

This is a well written paper. The authors use new methodology to estimate the deaths caused and prevented by alcohol and potential years of life lost due to alcohol consumption in Canada in 2005. The results clearly build on their previous work in this area. However, given the sophistication of several of the statistical techniques used I wonder whether this paper would be better suited to BMC research methods. Notwithstanding, all my comments are minor.

Thanks!

Major compulsory revisions: None

Minor essential revisions:

Abstract

The second ‘were’ in the sentence beginning ‘Indicators for alcohol consumption has...’ should be removed.

The word ‘were’ has been removed.

In the results section the word ‘represents’ should be replaced with ‘represent’.

The word ‘represents’ has been changed to ‘represent’.

Introduction

Page 4: (2nd paragraph), the word ‘Canada’ is repeated twice.

The sentence has been changed so that ‘Canada’ is only mentioned once.

Page 4: There is some duplication in the text with the objectives reported on page 4 and again on page 6.

The objectives reported on page 6 have been deleted.

Page 6: The overall weighted participation rate in the CADUMS (one of the main data sources used for the study) is very low 36.5%. Although this is considered as a limitation later in the paper it would be useful to have some information on why the rate is so low.

A section has been added that describes what led to the low response rate in the CADUMS, as well as how this affects our analysis.
Page 7: Need to insert a reference for the Canadian NESARC study.

A reference to the NESARC study has been added.

Page 14, paragraph 1 – Several of the numbers in the text do not correspond with those reported in Table 2.

There was a summing error in the table as well as some rounding errors; the table has been corrected so that the numbers are now accurate.

Discretionary revisions:

Page 5: As most of the text in the paragraphs on this page describes methodological techniques they should perhaps be inserted in the methods section.

This text has been moved.

Page 7, Did the authors give some consideration to the proportion of women who experience fetal loss earlier in their pregnancy?

As there is no meta-analysis that provides a Relative Risk for this event, we have included a statement noting this limitation.
Reviewer: Anders Eriksson

Reviewer’s report:

This is an interesting and important paper, contributing to the estimation of alcohol related deaths. I have no major objections to any part of the paper.

Thanks!

I have, however, the following suggestions to the authors;

- In the Abstract and in the Discussion section, the authors state that "The mortality burden is... unnecessary, and could be reduced in a short period of time if...". In my opinion, this statement represents an unacceptably naive opinion, which must be modified to comply better with the real world situation.

To clarify and provide evidence for this statement, a section has been added to the Discussion providing specific examples of how different public health policies affecting alcohol consumption in Canada would affect the incidence of certain events, such as drinking and driving. In addition, in order to provide a real world situation, we have added commentary on the association between the Gorbachev anti-alcohol campaign in Russia and mortality rates. We have also slightly changed the statement in the Abstract.

- I suggest that the authors do not limit themselves to comparisons to Canada only, but include comparisons also to other, similar countries, e.g., Sweden (cf e.g. Sjögren H, Eriksson A, Romelsjö A. Alcohol-related mortality in Sweden; The Natl Board of Forensic Medicine, 2001 - contact rmv@rmv.se for a copy of this monography)

We agree with this suggestion that a section comparing the number of deaths and PYLLs across various regions in the world (i.e. in the America region and in the world as a whole) should be added. Accordingly, we have added estimates for the WHO regions of America A and the Americas and for the world as a whole for comparative purposes. We have not included specific countries to compare to Canadian estimates as there are many different methodologies used to calculate the alcohol-attributable burden of disease upon which the calculation of the AAF is dependent (see Rey et al. 2010 Estimating the number of alcohol-attributable deaths: methodological issues and illustration with French 2006 data).

Additionally, there are over 40 publications that estimate the burden of disease for comparable countries. As there is a substantial amount of literature on this topic, we believe it requires its own paper and sensitivity analyses using data from many countries. We are currently in the process of writing such a paper which will discuss the study outlined in: Sjögren H, Eriksson A, Romelsjö A. Alcohol-related mortality in Sweden; The Natl Board
of Forensic Medicine, 2001.

- The authors are encouraged to comment further on a mere ~30% response rate of the CADUMS.

A section has been added that describes what led to the low response rate in the CADUMS, as well as how this affects our analysis.

- Abbreviations should be explained the first time they are used (GBD) - or avoided.

We have added abbreviations where required.
Reviewer: Joanna Stewart

Reviewer’s report:

The authors have made what are probably the best assumptions they can with the available data to estimate the effect of alcohol on the Canadian population. However these assumptions will be very influential. It is therefore important that they make it very clear in the discussion what these assumptions were and the likely effect on the results.

We have clarified the importance of our assumptions and their likely effect on the results in the Discussion section.

Major

1. In the limitations of the study the limitations of AF’s where RR’s have been estimated from observational studies rather than RCT’s need to be discussed. It is misleading to imply that the RR is reflecting a totally causal effect.

A section has been added to the paper which discusses the limitations of RRs from observational studies.

2. The limitations should also discuss the fact that the very substantial upshifting that was done to the estimates of alcohol consumption within each age/sex group assumed uniform underreporting across these subgroups and across the drinking distribution within them. This is in conflict with the discussion about why there is discrepancy between reported alcohol use and alcohol sold where reference is made to high consumption in specific portions of the population not sampled. This would imply the under representation of a relatively small number of very high consumers rather than everyone consuming much more than they report. The influence of this needs to be discussed. Because of the very major difference the upshifting will have made to estimates of the effects of alcohol perhaps it would have been useful to produce the net attributable deaths based on the unadjusted survey data as well, as a bottom limit.

We have added a section noting the effect of shifting the estimates of consumption on the estimated Canadian mortality attributable to alcohol consumption, and have included in the Discussion the mortality estimates if there had been no standardization of alcohol consumption.

Minor 1. Results p15 4th line from the bottom. Is the 2008 meant to be 2005?

2008 was changed to 2005.

2. Some of the tables have footnotes that don’t appear to have a corresponding * in
the table.

Tables have been changed so that footnotes are used correctly.