Author's response to reviews

Title: Epidemiology of dyslipidemia in chinese adults: meta-analyses of the prevalence, awareness, treatment and control

Authors:

Yuanxiu Huang (huangyx02@qq.com)
Lin Gao (373276421@qq.com)
Xiaoping Xie (XiaoPing.Xie@pfizer.com)
Seng Chuen Tan (sctan@sg.imshealth.com)

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Author's response to reviews: see over
Dear Dr Kate Muller,

Thank you so much for your and reviewers’ comments on the manuscript that was submitted in March, 2014. We have reviewed the comments and made suggested changes accordingly.

As advised, below I summarized each of the comments in point-to-point form followed by authors’ responses.

Reviewer 1 Comments:
Authors have performed a systematic review of cholesterol prevalence and treatment in China. Most papers found where in Chinese. They found 38 papers covering 380,000 individuals. They have good coverage across ages, sex, and subnational regions. They use standardized categories for diagnosis and appropriate statistical methods for meta-analysis. They find prevalence and awareness similar to other middle-income countries. Discussion and summary are appropriately restrained and do not make claims beyond the reported data. This work provides an important contribution to the literature on prevalence of high cholesterol.

Major Compulsory Revisions
None

Response:
Thank you for your positive comments above. Yes, indeed 36 out of the 38 included studies were published in Chinese so this systematic review study which we aim to publish a manuscript in English would allow the authors to share the findings to researchers and policy makers who do not read Chinese.

- The statement on page 3 "overproduction or deficiency of the cholesterol, which could cause more fats to block the blood vessels" is not an accurate description of lipoprotein metabolism or coronary artery disease. It may be appropriate for a non-clinical audience to adopt lay language in the introduction but the authors should revise this statement for increased accuracy.

Response:
Thank you for your suggestion. Yes, we have checked and replaced the above statement accordingly. Please check the revised manuscript.

- On page 4 the term "hyperglyceridemia" should be changed to hypertriglyceridemia.

Response:
Thank you for pointing out the typo. Yes, we have made the change as suggested above.

- I recommend a careful review of multiple grammatical errors, of which there are several.

Response:
Thank you for highlighting the above. Yes, we have checked and revised the manuscript accordingly. Feel free to let us know if there are any contents could be better expressed.
Reviewer 2 Comments

- Search strategy should be described more including exclusion criteria.

  Response:
  Thank you for highlighting this. Yes, the identified publications in our search were indeed further filtered through our pre-determined exclusion criteria. Please check our revised manuscript for the relevant contents under search strategy.

- Please explain what the source of heterogeneity is and how it can be controlled.

  Response:
  Thank you for raising this important point. The source of heterogeneity could be many possibilities which include different population characteristics such as age, sex, ethnicity or geographical region, etc. Subgroup analyses and sensitivity analyses were performed to eliminate potential heterogeneities and to test the potential influence to the results of meta-analyses. This also includes the impact of different quality of the studies on the analyses. Please see the revised manuscript for the results of subgroup and sensitivity analyses. We have also added a paragraph to address and discuss the limitation and interpretation of heterogeneity test results. Please check the revised manuscript.

- Please explain how the difference between study results can be explained by the geographical distribution of study sites.

  Response:
  Thank you for the suggestion. We have included the analysis findings by different regions as presented in Table 3. Consistently with well established association between urbanization and dietary changes that explain observed increase in dyslipidemia prevalence, our subgroup analysis indicates similar observation in population living in the Eastern region of China which is highly developed. We have added this discussion in our revised manuscript.

- Is there any evidence about similar level of dyslipidemia in different regions in China? If not, how concepts such as publication bias is explained in this context.

  Response:
  This is a good question. Our study is the first meta-analysis on dyslipidemia prevalence as well as awareness, treatment and control rates among Chinese population. Yes, similar levels of dyslipidemia prevalence were estimated through our subgroup analysis for eastern (42.5% 95%CI: 36.1~49.2%), central (40.6% 95%CI: 33.9~47.7%) and western (41.0% 95%CI: 30.0~53.0%) regions of China. However, there are many other factors could influence the level of dyslipidemia such as age and sex distribution, local diet tradition, life style, etc. The potential publication bias, as suggested by asymmetrical funnel plots, could still possibly exist despite similar levels of dyslipidemia were observed across different regions as authors may tend to report ‘desired’ or significant results for different interests e.g. to create awareness, seek attention and influence relevant decision-making of policy makers on dyslipidemia.

- There was only one study for the control rate analysis, so how was the heterogeneity between studies calculated?

  Response:
  We apologize for the confusion caused by our typo error. The reported heterogeneity findings were actually meant for the pooled treatment rate. Please check the revised manuscript for our amendment.
It may be helpful to analyze by geographical regions. The difference between studies is so much that should be discussed or controlled in the analysis by spatial analysis, or including factors such as method of measuring dyslipidemia or urban/rural study site.

Response:
Thank you for raising the question above. Yes, we have further addressed and discussed our subgroup analysis by different regions. Please check our relevant responses above and also revised manuscript. Also, we would like to also highlight that due to limited region specific information reported in the studies e.g. no specific information on study sites i.e. urban vs. rural, so it is unlikely to further conduct the analyses as suggested.

This paper has not been published previously and is not under consideration elsewhere. All authors are responsible for the reported research, and have participated in the concept and design, analysis and interpretation of data, drafting or revising of the manuscript, and have approved the manuscript as submitted.

On behalf of all the authors, I hope the revised manuscript including its accompanying figure and tables would be acceptable for publication in the upcoming regional issue of PHM.

Please find enclosed for consideration of the revised manuscript entitled: “EPIDEMIOLOGY OF DYSLIPIDEMIA IN CHINESE ADULTS: META-ANALYSES OF THE PREVALENCE, AWARENESS, TREATMENT AND CONTROL”.

Thank you for considering this paper for publication. Feel free to contact me for any questions and comments that the reviewers might have.

We look forward to your reply.

Sincerely,

Tan Seng Chuen
Health Economics & Outcomes Research,
IMS Health Asia Pacific
8 Cross Street, #21-01/02/03 PWC Building
Singapore 048424
DID +65 6412 7310
email: sctan@sg.imshealth.com

Document Files attached:
Revised Manuscript (Dyslipidemia Epidemiology in China)
Table 1 to 5
Figure 1
Figure 2
Appendices