Reviewer's report

Title: HIV and HCV prevalence among entrants to methadone maintenance treatment clinics in China: a systematic review and meta-analysis

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Reviewer: jun jie xu

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This study shows an important public health problem for China as it evaluated the trends in the prevalence of HIV, HCV and HIV-HCV co-infection among MMT entrants since 2004 and it also provided a better understating on Chinese MMT program. The study results mainly showed that China MMT clinics should targeted higher risk population such as injecting drug users and IDUs who shared needles. This study also brought an insight to the readers that prevention program of HCV infection is also important and should be scaled up among Chinese drug users.

The aims and strategies in this study were clear and with detailed inclusion and exclusion criteria included. Analyses were performed systematically and appropriately. In my opinion its results and conclusion were reliable.

It is particularly worth mentioning that authors noticed the criteria for MMT entrants have been changed since 2006. Although, high heterogeneity was observed across studies, there was no association between time period and HIV prevalence showed in the meta-regression results. Hence, it was appropriate to pool all the prevalence estimates.

Lastly, that there was a rapid increase of MMT programs established in 2010 across the country. However, there were only 19 provinces covered in this study. The Authors should pay more attention to the geographical variations of HIV epidemic in China.

Major Compulsory Revisions:

1. In the introduction section, 5th paragraph, the authors should add some information about the limitations of previous studies to the prevalence of HIV or HCV among MMT clients in China. Additionally, the authors should explain the main advantages of this study compared with other previously published articles.

2. In table S1, the variable title of included literatures is described in Chinese, the authors should amend it to English language.

Minor Essential Revisions:

1. In abstract section, authors used “HIV-HCV” to represent the expression of HIV and HCV co-infection; however, the expression “HIV/HCV” was used throughout the main text. Please have a consistent expression in the abstract and main text.

2. In Introduction section, 3rd paragraph line 3 and Table 4 footnote: the name of
the province “Xingjiang” should be “Xinjiang”. Please check the correct spelling throughout the text.

3. In Method section, Validity assessment: authors mentioned “The following seven items were assessed to calculate a total quality” but there were EIGHT items mentioned. Please clarify. Add more information on how you score each study.

4. In Method section, Statistical Analysis. Please explain why random effect models were used.

5. In Method, Statistical Analysis. “Meta-regression was performed in STATA 10” should be “Meta-regression”.

6. In Method section, Statistical Analysis. What was the significance level of p value for the Begg and Mazumdar rank correlation?

7. In results section, Trial Flow / Flow of included studies. “… and 17 through other sources”, please identify what were the other sources.

8. In results, study characteristics. “The sample size of the selected studies ranged from 38 to 8662 (median: 300; 95% CI: 363-854)”. 95% confident interval is not appropriate, the authors should calculate its interquartile range.

9. In Table 4 footnote and study location, does “HPP” equivalent to “HTA” and “LPP” equivalent to “LTA”? The author should have consistent terminologies in the text.

10. In Table 4 subtitle. Change “Pool estimate %” to “Pooled estimate %”.

11. More information of the establishment on MMT clinics in the Introduction (such as number of MMT clinics in 2010; was the distribution of the clinics corresponding to the level of epidemics / drug users?)

Level of interest: An article of outstanding merit and interest in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests.