Reviewer's report

Title: The geographical and urban-rural disparities in the total prevalence of neural tube defects and its subtypes during 2006-2008 in China: a study on the hospital-based birth defects surveillance system

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Reviewer: Babak Khoshnood

Reviewer's report:

The authors have addressed many of my previous comments and questions, particularly those related to the statistical analyses (what was done and how it was reported). A few remaining issues are noted below.

I still find that their use of the term “without regard to GA” can be confusing. Why not just say that previous reports on the prevalence of NTDs in China did not include TOPFA and hence did not accurately reflect the total prevalence of NTDs or the regional and/or rural-urban disparities in the prevalence of NTDs, whereas this report does include TOPFA?

In addition, since this is the major (really the only) new contribution of this paper compared with what has already been published on the subject, I think it would be worth saying a bit more about the TOPFA (e.g., the % of all NTDs they represented, overall and in different regions / urban-rural areas).

It may also be worth adding some (even if very summary) information on disparities in live vs. total prevalence of NTDs so that the reader can know what may have been the impact of TOPFA in the different regions / rural vs. urban areas. The authors actually allude to this question (Introduction section, end of page 1 and page 2) – but do not show explicitly the corresponding data in their study.

Regarding the Conclusion (e.g., in the abstract), it is true that more efforts should be made to reduce north-south and urban-rural disparities but taken literally the conclusion can be taken to suggest that no further efforts are needed in the areas (Southern region and urban areas) that have lower but a far from negligible number of NTDs.

The fact that as the authors state in the Introduction: “The decline has moved NTDs to be ranked fourth among all congenital malformations [in China] does not imply what is stated right after: “As such, it is no longer the most serious congenital problem in China”. If the latter is true, the authors should explain what exactly they mean by “serious” in this context and perhaps also state what they consider to be the most serious CA in China.

The manuscript still needs quite a bit of editing to clarify certain statements and to correct typographical or other errors. A few examples of statements that need
to be re-phrased or otherwise revised are:

Data Collection: “For cases of abnormalities diagnosed by prenatal diagnosis and terminated before 28 weeks of GA, was reconfirmed after birth.”

Discussion: “More possibility to consumption of aflatoxin contaminated wheat and corn-based food among the northern women…”

Discussion: “Most rural pregnancies will choose the county-level hospitals to delivery…”

References 19 and 21 are duplicates.

Table 2 is much improved but the term “Layer” is not suitable here and it is not clear why the authors have labeled the last two lines in each section as “Subtotal”.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests.