Author's response to reviews

Title: Health care workers in Pearl River Delta Area of China are not vaccinated adequately against hepatitis B: a retrospective cohort study

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Author's response to reviews: see over
Dear Reviewer and Editor,

We are very pleased to learn from your letter about revision for my manuscript R2 entitled “Health care workers in Pearl River Delta Area of China are not vaccinated adequately against hepatitis B: a retrospective cohort study. (Ms. No. 201191363145142)”.

First of all, we wish to thank you and reviewers for your attention and the constructive comments and advice. We have revised again the manuscript according to the comments from you and the reviewers.

Point-by-point reply to Reviewers and Editor as following:

Editorial request:
Please change the name of the section "AIM and BACKGROUNDS" in the Abstract section to "Background".

Answer to Editorial request: we have changed the name of the section "AIM and BACKGROUNDS" in the Abstract section to "Background".

Reviewer: Maria Ganczak
Reviewer's report:

Comment 1: The paper would benefit from thorough editing. The authors have to decide if to insert full stops before or after references in the brackets in the end of the sentence. The same refers to references, in some volume numbers are in bold, in some they are not. The Authors claim in the Cover Letter they revised the references, however they did not:
- Ref. 1, 2, 4, 5, 7, 9, 12, 14, 15, 17, 19, 21, 22, 26 use the abbreviations of journals’ titles, the rest do not
- Some references use commas after the year of references, some semicolons,
- In some references all pages are cited, e.g. 944-937, some use the last page abbreviation, e.g. 1315-41
- Some use spaces between year of publication and the volume number, some do not

There is a terrible mess and chaos in the Reference section.

Answer 1: We thank the reviewer for helpful comments. As recommended by the reviewer, we have revised the references of our manuscript according to the journal style of BMC Infectious Diseases (http://www.biomedcentral.com/info/ifora/medicine_journals). Modified sections has been incorporated in references section of revised version of the manuscript. (done highlight section).

Comment 2: Abstract
The CIs for vaccination and HBs carrier rates would be of value.

The Authors did not refer to this comment.

Answer 2: We thank the reviewer for helpful comments. As recommended by the reviewer, we have revised above conclusion of Abstract and Discussion: The HBsAg positive rate found for HCWs in Pearl River Delta Area of southern China in this study was lower than expected. However HCWs working in infectious diseases departments and technicians were at particularly likely to have been infected with HBV. A concerted effort is needed to bring vaccination rates up among Chinese HCWs in Pearl River Delta Area of southern China. And above modified sections has been incorporated in conclusion of Abstract and Discussion of
Comment 3: Conclusion: “the rate of vaccination is disappointing low” should be written with the use of proper grammar.
The Authors did not refer to this comment.
Answer3: We thank the reviewer for helpful comments and good advice. We have revised Conclusion: the vaccination rate was disappointingly low among HCWs in Pearl River Delta Area of China. And above modified sections has been incorporated in conclusion of Abstract of revised manuscript.

Comment 4. The terminology and the methods used should be clarified, e.g.
Comment4-1: The question still remains as to why that very hospital was selected for the study.
Answer4-1: We wish to thank the reviewer for pertinent comment which definitely help improve our manuscript. Why that very hospital was selected for the study?
The Third Affiliated Hospital, Sun Yat-sen University is a Liver Disease Center of Pearl River Delta Area of Southern China. And there were usually many Medical workers of most Health care facilities including mainly the People’s Hospital of Tianhe District, GuangZhou and the TianHe Maternal-Child Health Hospital in Pearl River Delta Area of south of China who have slected our Liver Disease Center(hospital ) for routine physical examination including hepatitis B inspection and vaccination. So above those hospitals were slected for the study.

Comment4-2: One of how many? The authors still have not explained how many different hospitals/which types are there in the region in which the study was conducted?
Answer4-2: We wish to thank the reviewer for pertinent comment which definitely help improve our manuscript. And our study was based on a retrospective cohort that included 1420HCWs were recruited from the Liver Disease Center in Pearl River Delta Area of China(820HCWs), the People’s Hospital of Tianhe District, GuangZhou(390HCWs) and the TianHe Maternal and Child Health Hospital(210HCWs), respectively.
And 2338 HCWs were recruited initially from our Liver Disease Center(1390HCWs), the People’s Hospital of Tianhe District, GuangZhou(586HCWs) and the TianHe Maternal and Child Health Hospital(362HCWs), respectively between 1988 and 2008. And 918 HCWs were excluded, and there were the remaining 1420 HCWs in our study. We collected information of vaccination status of subjects by the routine medical examination every year. The exclusion criteria were: those HCWs had no precise material on vaccination, declined the questionnaire and declined written informed consent(as figure).
So our modified sections“And our study was based on a retrospective cohort that included 1420HCWs were recruited from the Liver Disease Center in Pearl River Delta Area of China(820HCWs), the People’s Hospital of Tianhe District, GuangZhou(390HCWs) and the TianHe Maternal and Child Health Hospital(210HCWs), respectively” has been incorporated in Study population of Method section of revised version of the manuscript.
2338 of Health-care workers (HCWs) from a database of the Third Affiliated Hospital, Sun Yat-Sen University (1390 HCWs), the People’s Hospital of Tianhe District, Guangzhou (586 HCWs) and the TianHe Maternal and Child Health Hospital (362 HCWs), respectively, between 06/1988 and 02/2008

918 HCWs excluded:
- no precise material on vaccination (n=753)
- declined the questionnaire (n=98)
- declined written informed consent (n=65)
- Other causes (n=2)

1420 HCWs included

Figure. A flow diagram of study participants.

Comment 4-3: The reader still does not know how many HCWs live in the country/region? How many of them work at hospitals?
Answer 4-3: According to the statistics of the Health Management Department of Pearl River Region, there are approximately twenty-one thousand HCWS live in Pearl River Delta Area of China.

Comment 4-4: In other words, to which extent the study population is representative of the region, of the country? There might be a large generalizability problem. Since the study was conducted among HCWs from 1 university hospital, the results may not be generalizable to all HCWs in the region/in China.
Answer 4-4: We wish to thank the reviewer for pertinent comment which definitely help improve our manuscript. And we are sorry that our descriptions on study population were not sufficiently clear. And our study was based on a retrospective cohort that included 1420 HCWs were recruited from the three different hospitals, So the results of the research may not be completely generalizable to all HCWs in China or the south of China. This point
may be a limitation of our study to some extent. 

Even so, the HCWs enrolled in the present study from three different hospitals can represent local area of the HCWs in the Pearl River Delta Area of China to a certain extent. Hence, 2338 of Health-care workers (HCWs) from a database of the Third Affiliated Hospital, Sun Yat-Sen University (1390 HCWs), the People’s Hospital of Tianhe District, GuangZhou (586 HCWs) and the TianHe Maternal and Child Health Hospital (362 HCWs), respectively, between 06/1988 and 02/2008. 918 HCWs excluded: no precise material on vaccination (n=753) declined the questionnaire (n=98) declined written informed consent (n=65) Other causes (n=2) 1420 HCWs included HCWs vaccination should be further assessed by future large-scale retrospective studies. And this elaboration have been put into the “Limitations” section in Discussion of the revised version of the manuscript. (done highlight).

Comment 4-5: The authors still have not explained how many different hospitals/which types are there in the region in which the study was conducted – i.e. are the 3 hospitals they studied, the only three in the region in which the study was conducted? The reader still does not know how many HCWs live in the country/region? How many of them work at hospitals and how many in other health care facilities?

Answer 4-5: We wish to thank the reviewer for pertinent comment. There were ten different types of hospitals including the liver diseases hospital, the Maternal and Child Health Hospital and the District Comprehensive hospital and so on. And there were approximately twenty-one thousand HCWS in those hospitals. Due to the time, funds and personnel limitations, we selected only three different representative hospitals to study. And 2338 HCWs were recruited initially from three different representative hospitals (our Liver Disease Center (1390 HCWs), the People’s Hospital of Tianhe District, GuangZhou (586 HCWs) and the TianHe Maternal and Child Health Hospital (362 HCWs), respectively) for our study.

Comment 5: The authors still have problems with interpreting anti-HBs and anti-HBc results. They claim that: “the presence of anti-HBs (with anti-HBc positivity) was interpreted as indicating history of vaccinated successfully individuals”. What about individuals who were vaccinated for HBV and did not gain immunity? They could have been infected after vaccination and present anti-HBs without anti-HBc positivity).

Answer 5: We wish to thank the reviewer for pertinent comment which definitely help improve our manuscript. And we are sorry that our descriptions on interpreting anti-HBs and anti-HBc were not sufficiently clear. The presence of anti-HBs (with anti-HBc positivity) and prior vaccination was interpreted as indicating history of HBV infection in individuals after vaccinated successfully. The presence of anti-HBs (without anti-HBc positivity) was interpreted as indicating history of vaccinated successfully individuals. So above elaboration have been put into the Data collection section in METHODS of the revised version of the manuscript. (done highlight).

Comment 6: Fifty percent (13 out of 26) of references used in the paper were published 10 and more years ago. It could be a result of the fact that the study was completed 7 years ago. While publishing in such a prestigious medical journal as BMC Infectious Diseases the
authors should cite much more up to date references.

**Answer 6:** We thank the reviewer for helpful comments and good advice. As recommended by the reviewer, we have revised the references of our manuscript. We have searched and read carefully the relevant papers published in the last 5 years, and we have cited up to date references. Above modified sections has been incorporated in references section of revised version of the manuscript. (done highlight section).

With many thanks for your email, I am looking forward to your reply at your earliest convenience.

Best wishes,

Yours sincerely,

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