Author's response to reviews

Title: The influencing factors analysis of the outpatient workload of Chinese health center

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Author's response to reviews: see over
Cover Letter

Dear Editors:
Thank you for sending us the reviewers’ comments and your requirement to revise the paper.
We have revised the manuscript accordingly in the following manner:

一. Reply to Editor’s requirements:
1. Please ensure that your revised manuscript conforms to the journal style and copyedit the paper to improve the style of written English:
   We revised the paper according to the instructions to the authors. We also revised the parts of Background, Method, Discussion, and used the new reference style according to the requirement of the journal. We also made language improvements.

2. Explicit the permission to use data:
The data set used in the paper comes from the Ministry of Health’s “the Baseline Survey of “The National City Community Health Service System Building Project” carried out in 28 cities during the period August - December in 2007. The survey was funded by the Ministry of Health, and was done by the Department of Social Medicine and Health Management of School of Public Health of Tongji Medical College of Huazhong Science and Technology University. The MOH was responsible for the management of the project while our team was responsible for the technical part. Thus, Professor Lu was one of the chief managers of the project while Xu J, Wang WX, Li YB and Zhang Juan were some of the assistants of Professor Lu. The dataset was not publicly available, but the researchers obtained the MOH’s permission to use the data. By the data analysis of this project, we can provide the policy recommendations for the MOH on the future development of Chinese community health service.

二. Reply to Reviewer 1  Masatoshi Matsumoto
1. This is a cross-sectional study, and it is quite difficult to detect causal link between what authors called "influencing factors” and outpatient workload. For example, more patients may come to health centers with better equipment, but why not health centers improve equipment because of their high outpatient volume?

   In China, the primary community health institutions are newly transformed from the former health institutions at the first level and some at the secondary level. The problem for them is not because they have too much high workload and need to improve the equipment, but because they have too low workload due to the competition to win patients. Therefore, the low workload of primary community health institutions cannot be simply solved by improving the equipment, and it is closely connected with the Chinese heath system reform. Therefore, in the revised manuscript, we added a more detailed description of the Chinese health care sector.

   For example, the competition among the health institutions at the different levels is an
unfair competition for them because the qualification of health personnel, the equipment and investment of the government, etc. are favorable for the health institutions at the higher level at the start point, therefore, that’s why there appears the desertion of traditional gate-keeping role of the primary health institutions, the high concentration of superior health resources and patients on the third-tiered health institutions, and the decline in the use of the primary and secondary health institutions after the implementation of health reform in 1980s. This results in a serious equity problem for patients without high income who cannot afford to pay directly to physicians. Therefore, the Chinese government decided to develop a convenient and affordable primary health care - community health service - for the city residents at the end of 1990s.

Although the community health service system is now established, the utilization of the community health institutions is low due to the lack of gate-keeping role by the primary health provider and due to referrals among the three-tiered health institutions. In addition to this, patients who can afford to pay, often seek best services in big hospitals to guarantee the quality of care because in the current competitive health service market in China, the large scale health institutions often have enough financial resources to renew the facilities and equipment and have comprehensive specialized department; and the physicians with a long standard medical education and excellent medical skills are abstracted by the upper-levels of the health system by high salary and benefits and good working conditions. At the same time, the medical staff in the primary health institutions are mainly the ones who received a 2-3 years medical education (see table 2), which can not meet the high expectation of the patients. Thus, the need of guiding the patients to the community health services and increasing the utilization of the community health institutions is becoming an urgent problem, which hiders the development of community health services. The aim of the Chinese government when developing the community health service, is to guide the patients with common diseases to seek the health service in the CHIs. However, the role of community health institutions (CHIs) cannot be played without the guarantee of a rational health system planning. Thus, there is a need of a referral system between institutions at different levels in order to increase the OW of the HCs.

2. There is little background information described in this paper with regard to Chinese healthcare system and insurance system.

Figure 1 shows the Chinese city health system including insurance system.
In China, the city health care system consists of medical health system, community health system, and public health system. The medical health system includes the general hospitals and specialized hospitals at the third level or at the secondary level which provide the specialized health services, including both outpatient service and inpatient service. The newly built community health system includes community health centers and community health stations which aim to provide six community health services—health prevention, treatment, care, etc.
rehabilitation, health education and family planning; some health stations belong to some health centers while some are independent stations. The public health system includes the CDCs at the provincial, city and district levels, which supply the immunization, etc. to the local population served.

Patients freely choose any health institutions in medical health system or in community health system, and pay for the main part of the cost. All the health institutions can compete with each other to win the patients, thus, there is neither the gatekeeper role of primary health institution nor referral system among the health institutions at the different level.

Most of health institutions are autonomous in their management, but they belong to the government, thus, the local health bureaus on behalf of the government administrate and subsidize the health institutions directly according to their scale, budget and their needs. The government subsidy includes two parts: one part comes from the budget of the Ministry of Health, the provincial, city and district health bureaus, and another part comes from the provincial, city and district governments through the provincial, city and district Bureaus of Finance.

For the new financing way for the health institutions at the different levels is the health insurance compensation of city health insurance under the charge of the provincial, city and district Bureaus of Labour and Social Security, but city health insurance system has not been fully set up, thus, it mainly compensates the third-tiered health institutions.

The comment of the reviewer is quite right. We have rewritten the background part and add a new discussion part to introduce more background of Chinese health system and its reform.

三. Reply to Reviewer 2  Gaener Rodger

First of all, we are thankful to Gaener’s careful correction of paper in language, and the encouragement in paper writing.

1. Abstract - Results pg 2: "The 11 indicators identified in this study which contributed to an increase in the outpatient workload of Chinese health centers are as follows: "patient referred to the ......"
   We have changed the sentence as recommended.

2. Title pg 1: The title has been changed “Analysis of factors influencing the outpatient workload of Chinese health centers”.
   We have changed the sentence as recommended.

3. Abstract - Background pg 2: The authors mention a comparison between Finish health centers and Chinese health centers. However, the study identified the main influencing factors that had an impact on the outpatient workload in Chinese health centers by comparing a 'high outpatient workload' group of health centers with a 'low outpatient workload' group of health centers. This rather than the former should be the focus of this section otherwise the abstract does not convey what the study was about.
Gaener’s comment is quite right. The background in the abstract has been changed. The comparison between Finish HC and Chinese HC was skipped.

4. Methods- variables pg8: Change "Total 36 indicators probably influencing the OW of HC have been chosen and are.." to "A total of 36 indicators probably influencing the OW of HC have been chosen and were."
   We have changed the expression of this sentence as recommended.

5. Discussion pg 11 - In paragraph 3 change "This implies that patient are more willing to the HC owned by the government" to "This implies that patients are more willing to use the HC owned by the government".
   We have changed the expression of this sentence as recommended.

6. Discussion pg 11 - In paragraph 4 change "The qualification of health personnel is the key to improve the quality of care" to "The qualification of health personnel is the key to improving the quality of care"
   We have changed the expression of this sentence as recommended.

7. Conclusion pg 13 - Change "Thus, in order to guide the patient to see the doctor in the primary HC, it need implement the gatekeeper and referral for the HC, to improve the quality of the HC health personnel and to increase the HIC to the HC" to "Thus, in order to guide the patient to seek treatment in the primary HC, the implementation of a 'gatekeeper' and referral process is needed, as well as improvements in the quality of the HC health personnel and an increase in the HIC to the HC."
   We have changed the expression of this sentence as recommended.

8. Background pg 4: Overall in this section the writing is not acceptable and poorly presented to the reader.
   We have rewritten this background part according to the reviewers’ comment. The new background includes: the Chinese health reform in 1980s and its problems, the appearance of community health service and what it is in China, its financing ways, the low utilization of community health institutions and the need of the study, the literature review of factors influencing the outpatient workload of Chinese health centers; the theoretical framework of investigation, and the aim of the study.

   a) Reviewers Comment - The following sentence should be reworded. "Comparing to a decade development of Chinese HC, the HC of the developed European countries can provide the mature experience to be learnt from since they started from 1970s."
      I have deleted this sentence in order to make the new background introduction more logical to be understood.

   b) Reviewers Comment - Why is Finland comparable to China in this context? Should this be better explained?
      In the literature review, we can only find that Finland used the same indicators as
we do (e.g. the total HCs, the annual outpatient visits of the HCs), so we can directly compare Chinese HC with Finish HC easily. The result of comparison between Finish HC and Chinese HC can clearly show the problem that the utilization of newly-established Chinese primary health centers was low; therefore, there is the need for us to do the study to find out how to increase it.

c) -- e) Reviewers comment- the above sentence does not make sentence, please rewrite to clarify.

We have rewritten the background and discussion parts, therefore, the meaning these paragraphs have been included in them.

9. Methods pg 7- In paragraph 2 the methodology needs clarification. I can not make out what the authors are trying to say. The use of the wording “investigation form” is confusing. What do the authors mean? What are the investigation form, survey scheme and questionnaire?

Paragraph 2 explains how the questionnaire was made. We gave a description of how the indicators were collected and how they were screened, and the pretest of questionnaire.

I have changed the different expression of questionnaire as the same word “questionnaire”.

We express our gratitude to the hard works of two reviewers to see our paper and put forward their comments on the paper! We appreciate the revision ideas of the editors very much, too!

Yours sincerely

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April 12th, 2010