Author's response to reviews

Title: Growing Old Before Growing Rich: Inequality in health service utilization among the mid-aged and elderly in Gansu and Zhejiang Provinces, China

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Author's response to reviews: see over
Reviewer 1: Teh Wei Hu

a. The CHARLS data has 2,555 individuals of Gansu and Zhejiang provinces. It would be useful to provide a separate sample size figure for each province in Table 1.

Table 1 reports information on sample size for Gansu (1198 observations) and Zhejiang (1357 observations) and the data are also reported on page 5 top.

b. Given a detailed sub-sample categories, such as age/gender (6 subgroups), the study may not have enough statistical power to calculate “CI” values in Table1 for each subcategory.


We also note under ‘Limitations’ (p. 15) the need for larger sample sizes.

c. Are all of the values reported in Table 1 weighted by the sampling probability?

All the values reported in Table 1 were weighted by the sampling probability, which is reported on page 8.

d. Since a very large proportion of respondents are under “Farmer or no job” category, it would be useful to separate these two categories. The data section did not address the missing value and non-response issue.

In rural areas of China, it is difficult to distinguish the “farmer” and “no job”. And as for CHARLS sampling, no job has a very small proportion, so we combine them as one category. This is reported on page 6.

e. There is a huge disparity of income level between the two provinces. Even though the samples are divided into 4 income quantities within each province, it would be useful to show the range of income within each quartile for each province.
2. Empirical Analysis

a. The calculated CI values in Table 1 are for ‘health services determinants’. Are the CI values calculated with respect to the health variable? How is the health variable used to do the calculation?

All of the CI values in this paper are calculated with respect to income level (socioeconomic status), rather than health variable.

b. I Presume results in Table 3 are calculated for Table 4?

This is correct. The word ‘summary’ has been used on page 10 to describe Table 3.

c. Within Table 4, the most important and statistically significant variables are the ‘self-rated health status’. In the inpatient and outpatient services utilization equations, this is expected. Because there is a causality issue, most of the other variables are not statistically significant, except for the income variables.

We discuss the issues around self-rated health status variables in the ‘Limitations’ paragraph. (see p. 15)

d. Explain the meaning of ‘Prop’ under Table 4. Why do some values exceed 100%, either in negative or positive sign? May delete this column.

Prop equals “contribution divided by the each outpatient or inpatient CI”. Contribution of each determinant could be negative or positive. Overall CI is the summation of determinants’ contribution. Some powerfully influential variables could exceed 100% (contribution is bigger than overall inpatient or outpatient CI.) This is referenced in Table 4.

e. An explanation is needed for Figure 1, (2) contribution in percentage.

Figure 1, (2) contribution in percentage is where the “absolute value of each contribution is divided by the summation of all four absolute values.” This is reported in Figure 1.

Reviewer 2: Yan Ding

Major Compulsory Revisions
I felt that the discussion is a little shallow, somehow.
The paper has been extensively revised (see track changes) to address this query.
1. Have not pointed out some interesting results, consequently without further discussions; Eg: 1) not mention the different result implications of CI and HI for inpatient services in Zhejiang;

The original paper addressed the pro-poor inpatient utilization (last sentence page 8- 9) and also the first paragraph after the ‘Discussion and Conclusion’ section there is a discussion of CI and HI in Zhejing. Of course, CI and HI measure different things.

2) “In Figure1, the sum of the bars would be zero if utilization had been equal across all income groups, and the need bar would be the only bar to appear. Our data in Figure 1 reveal substantial inequities in health care utilization?---However, inpatient services in Gansu is an exceptional one, not mention it;

In the original paper, Gansu inpatient is discussed in paragraph 2 after Decomposition of inequality page 9.

2. Have not related the main findings from the study to the wider literature. Need further comparison with other literatures to see the difference and similarity;

The wider literature is addressed, with international comparisons, on pages 10-13.

3. Shorten the three level suggestions to governments---Discussion-paragraph5, 6, 8, 9 and 10 seems to be all about it.

The policy discussion on page 13-14 has been revised and shortened.

Minor Essential Revisions
1. Needs more references---many opinions are not supported by references, both in introduction part and discussion part. Eg: Introduction-last 3 sentences of paragraph1; Introduction-paragraph3, 4 and 5; discussion-paragraph2,3,7?

References have been added to Introduction, covering original paper paragraphs 3-5.

References have been added to the Discussion (pages 10-13), especially original paragraphs 2 and 7. Paragraph 3 reports data from the survey and this paragraph has been revised to make it clear that the data comes for the survey.

2. Need full name and short form when first mentioned---Abstract-Method: Add “CI” which is short for Concentration Index; state with Horizontal Inequity Index

(HI) to approach the decomposition;
Completed
3. Introduction part is too long. Eg: 1) It seems not necessary to introduce the insurance history (Introduction-paragraph4);

The Introduction has been revised and shortened and the insurance discussion integrated into the discussion section.

2) the matter that should be put in the discussion part are presented here---Introduction-last paragraph except its first sentence;

4. Integrated some content in the discussion part---The situation for Inpatient care is different from that of outpatient care, but no further discussion on it in paragraph1. Suggest integrating paragraph7 into paragraph1;

The Introduction has been revised and shortened, with the descriptive material integrated into the Discussion.

5. Clarify and be consistent in self-rated health scale—Data and variable—“a four Point”4-5 points for good health?, also in table 1; 6.

These changes have been made on page 5 and Table 1.

In table 1, the sum of each proportion of the age categories in each province is not 100%;

7. In figure 1, not consistent in numbering----with “a, b “or “(1), (2)” Besides, no No. signs beside those figures.

Figure 1 has been corrected.

8. Add study limitation.

See new paragraph page 15.

9. Language revision. Eg: 1) abstract-result, the first sentence intertwines the provinces and outpatient and inpatient services in expression; second sentence, repeated the provinces twice;

CORRECTED

2) Methodology-Paragraph 2? If the health variable is a “bad” such as visits to outpatient or inpatient facilities, a negative value of the concentration index means ill health is higher among the poor? (I can understand it but it needs to be polished.)?

This has been revised.
Discretionary Revisions 1. Add result on need contribution to inequity; 2. Change the order of table 1 and table 2—the result part starts from table 2;

Table 1 has been retained since it provides a description of the data, which is discussed first. A new Table 2 has been added (See Reviewer 1 comments).

3. Put NCMS and URBM premium in introduction part instead of in discussion part (Discussion-paragraph3).

Completed.