Author's response to reviews

Title: Urban health insurance reform and coverage in China using data from National Health Service Surveys in 1998 and 2003

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Author's response to reviews: see over
Reviewers Reports

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Reviewer 2: Viroj Tangcharoensathien ........................................ Page 4-6
Reviewer's report

Title: Urban health insurance reform and coverage in China using data from National Health Service Surveys in 1998 and 2003

Version: 2  Date: 30 May 2006

Reviewer 1: Michael Ranson

Reviewer's report:

Major Compulsory Revisions

The study addresses an important policy question. There are a few problems that require revision:

1/ There are many grammatical errors – the paper will not be suitable for publication unless extensively edited. *We have done proof-reading to ensure the use of English language is appropriate in this paper.*

2/ The findings are purely descriptive, and should be made more analytical. For example, the standard deviation (or 95% confidence intervals) for point estimates should be provided. Statistical tests can be performed to assess the statistical significance of change between 1998 and 2003. While the descriptive results, alone, are fairly robust/convincing, there really can not be any reason for leaving out these measures of variance and statistical tests, as they will be quite simple to add. *We have conducted statistical analysis for all the data included in the paper, as shown in the tables and text.*

3/ The results tables can be made clearer (I have provided more specific suggestions in this regard, below) and a figure or two can be added to better illustrate inequities by income group. *See our comments below.*

Detailed comments

As mentioned above, extensive editing is required. *As mentioned earlier, the paper has undergone extensive editing to ensure the appropriate and accurate use of the English language.* Just for example:

> page 4: The health insurance systems in China express a high degree of complexity. (Does this mean the systems ARE highly complex?) In addition to the separation of urban and rural insurance systems, the urban health insurance prior to 1997 was seen as costly, fragmented and small risk pooling. (Does this mean it failed to pool risks because it was fragmented?) *We have rewritten this part and it now clearly states the problems linked to the old insurance systems (page 4).*

Figure 2 (NHSS sampling process). Villages are mentioned at several points in this flow chart. This is confusing for the reader, given that the paper is supposed to be focusing on urban areas. *We have edited the text and the figure to focus the survey procedure and methods on urban areas (page10).*

As already mentioned, I think that the “findings” section should include measures of variance (standard deviation or 95% CIs) for all of the point estimates. Estimates of variance must take into consideration the highly “clustered” nature of the survey data. One would expect much higher variance than in a simple random survey, as there is stratification (seven city groups, on the basis of SES) and clustering at the level of cities, then street offices/townships, then residential committees (i.e. clustering at three stages). *We have included 95% CIs for tables 3 to 7, where the statistical analysis is applicable.*

At the end of the methods section, authors state that 5% of sample households were re-visited. At the end of the findings section, authors should report the degree of test-retest reliability, for example, by reporting the degree of discrepancy in BHIS coverage between the first and second visits, among twice visited
households. We have added text to explain the degree of discrepancy between the first and second visits (page 12) and commented on the reliability of the data (page 12).

The “findings” section provides almost as much information about community-based (non-governmental) and private-for-profit schemes as it does about the GIS, LIS and BHIS. It would be helpful to the reader if, in the background section, one or two paragraphs describing these schemes were included. We have added paragraphs in the “Background” to explain what these schemes are (page 9).

Table 4 is a bit odd, in that it jumps from MHIS coverage to “no insurance coverage”, without telling us anything about coverage under commercial/non-commercial schemes. It could more clearly illustrate increased coverage amongst those of ages 15 to 34 under “commercial and non-commercial schemes” if the columns “no insurance coverage” were removed and replaced by “coverage under commercial and non-commercial schemes”. We have added two columns “non-commercial” and “commercial” to table 4, and show the change of coverage by these insurance schemes by age groups. However, we kept the column “no insurance cover”, as it provides an overall picture of insurance coverage across all age groups.

Similarly, in Table 6, I think authors should add rows for “other types of non-governmental insurance”, so as to complete the picture. (Note the Table 7 already does this quite nicely.) We have added two columns “non-commercial” and “commercial” to table 6. In fact, we have adjusted all other tables to maintain the consistency with other tables by separating/adding the data for “non-commercial” and “commercial” types of insurance schemes.

Table 6 could be replaced by, or supplemented with, some kind of figure which would nicely illustrate the disparities across income quintiles. (Authors could, for example, look at how the World Bank’s “Reaching the Poor” projects have displayed their benefit-incidence results using bar graphs and concentration curves.) We agree with the reviewer’s comments on use of other illustration format (e.g. concentration curves). However, we think table format would be appropriate as it allows the display of statistical analysis, as well as showing the relationship between income levels and insurance participation.

In general, I find the discussion section to be thoughtful and thorough. However, it seems a very important finding of the paper that there has been an increase in coverage under “commercial and non-commercial schemes”, and yet the authors seem to downplay this. Why has there been such a dramatic increase, from 11.1% to 16.2% according to Table 3? Perhaps devote a few paragraphs of discussion to this finding. Has government policy in any way contributed to this increase? We have added a subtitle in the discussion section, and the discussion on non-commercial and commercial insurance schemes has been largely expanded (page 20 to 21).

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article of importance in its field

Quality of written English: Not suitable for publication unless extensively edited We have done proof-reading to ensure the use of English language is appropriate in this paper.

Statistical review: No

Declaration of competing interests: I declare that I have no competing interests.
Reviewer's report

Title: Urban health insurance reform and coverage in China using data from National Health Service Surveys in 1998 and 2003

Version: 2  Date: 30 May 2006

Reviewer 2: Viroj Tangcharoensathien

Reviewer's report:

General
This is an interesting paper reflecting the stagnate and deteriorating insurance coverage in urban population despite government interventions. The paper compares household survey in 1998 and 2003 the level and profile of insurance coverage prior to (for the GIS and LIS) and after the reform (BIHS).

The paper is difficult to understand, some parts are not very clearly described and discussed. Further analysis on the insurance profiles and its dynamicity between the mandatory BHIS and the voluntary non-commercial and the commercial schemes.

Major Compulsory Revisions

1. Detail description on the differences between GIS and LIS versus BHIS on the following
   (1) benefit package and co payment,
   (2) the contribution, and
   (3) eligibility of dependants
   as all these has a major impact on the changes, deteriorations in insurance coverage between 1998 and 2003 We believe these features have already been explained on page 8. However, we have revised the text to clarify the above issues (page 8 to 9).

2. Description of the non-commercial and commercial insurance schemes on benefit package and co payment, the contribution and premium, eligibility of dependants, We have added text to explain this in the “background” section (page 9). However, it would be difficult to provide detailed description on these schemes, as they vary from city to city. Additionally, as the paper mainly focuses on the impact of the insurance reform, detailed description about the other non-commercial and commercial would divert the focus of the paper.

3. Description on the enforcement capacity by insurance management agencies We believe the issue has already been discussed in the discussion section (page 17). However, we have added a short paragraph in the “background” to help in understanding.

4. Further analysis of tables to include insurance coverage by the employees and their dependants, and gender. We think table 4 and text related to this table (page 13 to 14) would to certain degree illustrate the insurance coverage for dependent children; and table 5 and 7 address the issue for employment and gender.

Minor Essential Revisions
This paper does not address the issue of access to and use of health services between gender, income groups and employment status (P11). Insurance coverage is the only focus of this paper. *We would like to explain that, although the access to medical/health care is closely related to the participation of health insurance schemes, due to limited space, we have focused on coverage alone for this paper. We have planned our next paper which will be dedicated to the analysis and discussion of access issues and use of health services by different age, gender and economic groups participating/not participating in health insurance schemes.*

Describe the possible routes of transforming GIS or LIS to BHIS and other non-commercial and commercial insurance e.g.

1. The child and spouse dependants of either GIS or LIS, or both GIS and LIS were excluded, this results in reduction in size of coverage. *This has been partially addressed through examining insurance distribution among age and gender groups.*
2. The transformation of GIS/LIS to other non-commercial and commercial insurance schemes, this is just a shifting, no changes in size of coverage,
3. The termination of some LIS and not join in BHIS, this results in reduction in the size of coverage
4. The private enterprises who do not have LIS (the uninsured) did not join the BHIS, this results in a small pool of new-entrants.
5. etc.

*We acknowledge the above commentary items are important and need to be addressed. We have added text in the discussion section to include these issues (page 21-22). However, we cannot include detailed discussion on the issues related to the above points, as data and information on the transformation of GIS/LIS to other non-commercial and commercial insurance schemes are lacking.*

Comparing 2003 and 1998 can give figures on total coverage, but does not reflect the dynamic transformation among GIS and LIS to BHIS, other non-commercial and commercial schemes. There is a need to elaborate discussion this point as it is the central focus of the paper. In addition, table 3 should be broken down by employee, retiree, spouse and child dependants. *We believe we have included the discussion on the transformation of GIS/LIS to BHIS and other insurance schemes in the paper, although information on detailed shifting between these insurance schemes over time is not available from NHSS data. We kept table three as it is (but added statistical analysis), given that the insurance distribution among employee/retiree and children will be dealt with by the following tables.*

Table 6, it is not clear if the income is household annual income, or it is per capita annual household income. *We have revised the title of table 6, clarifying it is per capita annual household income.*

Discretionary Revisions

- The Month that the NHSS 1998 and 2003 was conducted *We have added text to indicate the months in which three NHSSs were conducted (page 9).*
- What are the seven groups of socio-economic conditions of cities and counties? *We have explained this on page 9-10.*
- If proxy respondents are allowed for the non-presenting members on the survey date. If proxy respondent are allowed, comment on accuracy of information given. Comment on potential bias when doctors at community level were interviewers of this survey. *We have added the percentage of proxy respondents as 22.2% (page 11) and made comments on the information accuracy when proxy respondents were used to provide information and local doctors as interviewers (page 12).*
What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article of importance in its field

Quality of written English: Not suitable for publication unless extensively edited. *The paper has been revised to improve the presentation.*

Statistical review: No

Declaration of competing interests:

'I declare that I have no competing interests'