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: 19 May 2006

Reviewer: 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.

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.

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.

Detailed comments

As mentioned above, extensive editing is required. 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?)

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.

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).

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.

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.

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”.

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.)
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.)

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?

**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

**Statistical review:** No

**Declaration of competing interests:**

I declare that I have no competing interests.