

Peer Review Report

Review Report on Effects of Urban and Rural Resident Basic Medical Insurance on healthcare utilization inequality in China

Original Article, Int J Public Health

Reviewer: Henry Lucas

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EVALUATION

Q 1 Please summarize the main findings of the study.

In common with a number of similar studies, the main findings relate to the mixed outcomes resulting from a major health insurance reform in China. Changes in health service utilisation behaviour tend to be relatively limited and usually, though not always, in line with findings from other studies. The reform appears to encourage greater use of inpatient services by those over 45 (the chosen study population), though not those in rural areas, and a corresponding small decline in the use of outpatient services.

Q 2 Please highlight the limitations and strengths.

The study is well organised and clearly presented. The statistical analysis is capably undertaken and with unusual care to test the robustness of the findings. The data source used is generally well regarded and under-used for this type of analysis.

I have two major concerns. Firstly, the detailed implementation of this type of reform in China is almost always determined by local officials, resulting in widely varying cost and benefit packages. In the absence of at least some consideration of this variability, it is difficult to evaluate the findings. Secondly, there needs to be at least some explanation as to why data from a longitudinal study (covering for time periods) is treated as a one-time sample, especially as the article indicates that considerable efforts were made to match respondents over time periods.

Q 3 Please provide your detailed review report to the authors. The editors prefer to receive your review structured in major and minor comments. Please consider in your review the methods (statistical methods valid and correctly applied (e.g. sample size, choice of test), is the study replicable based on the method description?), results, data interpretation and references. If there are any objective errors, or if the conclusions are not supported, you should detail your concerns.

Abstract "URRBMI contributed to the pro-poor inequity in healthcare utilization". Given the title of the article, would it be better to simply say that URRBMI improved healthcare utilization equity?

Line 44 "the NCMS scheme was administered at a low level". Helpful to describe the actual level (township or county?) and provide an order-of-magnitude indication of the population size as compared to the URBMI.

Line 50 "URBM" should be URBMI.

Line 54 "URRBMI is intended to cover unemployed urban and rural residents, who are not eligible under UEBMI". To avoid misunderstanding, it would be better to say 'unemployed urban residents, who are not eligible under UEBMI, and all rural residents'.

Line 55 "The total premiums of URRBMI are higher than NCMS and URBMI". I would add 'and the population covered substantially larger'. As you indicate, the extent of risk sharing is a key aspect of health insurance. My experience of similar reforms is that the implementation details - e.g. premiums and benefits - are usually decided at local level? If so, it would be useful to indicate the extent to which the URRBMI schemes considered varied from province to province.

Line 63 "China with the largest population in the world and aging rapidly" should be 'China has the largest population in the world and is aging rapidly'.

Line 73 “could significantly improve”. Do the references not indicate that this should be ‘has significantly improved’?

Line 93 “While after” should be simply ‘After’.

Line 103 “Data Sources”. There needs to be some explanation as to why you treat this longitudinal survey as though it were a one-time sample? You indicate that you have matched respondents across the four time periods, which would seem to provide an excellent opportunity to analyse individual/household changes in behaviour after the introduction of the URRBMI. If this was not a possibility, you need to explain why.

Line 104 “The statistics for this study” should be ‘The data for this study’.

Line 112 “Based on the advantages of CHARLS, it can help us to identify”. Can you not simply say ‘the CHARLS data allows us to identify’?

Line 126 “We matched the data of each stage according to individual codes and focused on the valid records of respondents, who visited in four waves (Appendix Figure 1). A total of 47736 respondents remained”. I assumed this related to matching individuals across the four years of this longitudinal survey? That would mean that you cannot have matched more than 17,708 respondents (probably considerably less). Do you mean 47736 responses?

Line 133 “The final sample of 24816 respondents was divided into the 134 treatment group (21752 respondents) and the control group (766 respondents)”. As above, do these numbers refer to responses?

Line 161 “It equals one if participants come from the province that has implemented the URRBMI integration and the year in the post-integration period”. I assume this could better be expressed as: ‘It equals one if participants come from a province where URRBMI is active in year t’.

In table 1, the heading “Probability of outpatient visits in last month” should be replaced by ‘Number (percentage) of respondents making outpatient visits in last month’. With a similar change for inpatient visits. The heading “Number of outpatient visits” should be ‘Mean number of outpatient visits’. Again, with a similar change for inpatient visits. The number and percentage of respondents with no inpatient visits are clearly incorrect (should equal treatment plus control respondents).

Line 192 “Most respondents had fair self-reported health status and had chronic diseases”. This is technically correct, but I would prefer ‘Most respondents had fair self-reported health status but one or more chronic health issues’. In similar surveys musculoskeletal problems (e.g. back pain, joint pain) are often the most commonly reported chronic conditions.

Line 237 “Measurement of Inequity in Healthcare Utilization”. This paragraph sometimes uses ‘inequity’ and sometimes ‘inequality’. Either here or earlier in the article, there needs to be some discussion as to the relationship between these.

305–312 There seems to be some consensus that insurance reforms in China have not reduced the out-of-pocket cost of outpatient services (useful to add some more references that support this). This suggests that these reforms will not have increased the demand for such services. On the other hand, increased reimbursement for inpatient care might persuade some patients who would have previously have sought outpatient care to choose the more expensive option, possibly encouraged by hospitals seeking to increase revenues.

315–316 “Even though the reimbursement ratio increased, the received reimbursements for inpatient care were not increased”. This needs further explanation. Do you mean that the average reimbursement did not increase? This would vary by reason for admission to inpatient care.

323–324 “URRBMI has a higher reimbursement rate in inpatient care than NCMS, which should improve the outpatient care utilization rate”. I assume you meant the inpatient care utilization rate?

PLEASE COMMENT

Q 4 Is the title appropriate, concise, attractive?

Yes - in line with the aims of the article.

Q 5 Are the keywords appropriate?

Yes

Q 6 Is the English language of sufficient quality?

Yes

Q 7 Is the quality of the figures and tables satisfactory?

Yes.

Q 8 Does the reference list cover the relevant literature adequately and in an unbiased manner?)

I have indicated where additional references might be useful, given the many recent studies addressing similar reforms.

QUALITY ASSESSMENT

Q 9 Originality



Q 10 Rigor



Q 11 Significance to the field



Q 12 Interest to a general audience



Q 13 Quality of the writing



Q 14 Overall scientific quality of the study



REVISION LEVEL

Q 15 Please make a recommendation based on your comments:

Major revisions.