Reviewer's report

**Title:** Maternal and Neonatal Health Expenditure in Mumbai Slums: A Cross Sectional Study

**Version:** 1  **Date:** 2 November 2010

**Reviewer:** Priyanka Saksena

**Reviewer's report:**

This paper presents evidence on the financial burden from maternal care services in a study from Mumbai. There are some interesting findings, which undoubtedly can provide further evidence for supporting policies that aim to increase equity as well as guide future policy. However, it may useful to shift the focus of the paper given the data that seems to be have collected to make these types of arguments stronger. In general, the use of a measure such as catastrophic health expenditure may not be suitable. In lieu, the other indicators of financial burden used in the paper can perhaps be developed further.

**Major revisions:**

**Background:**

The Background section of the paper is almost all focused on the measurement of catastrophic health expenditure and its theoretical basis. Whereas the section does this well, it does not provide an adequate introduction to the actual topic of research - the financial burden related to maternal health. The focus of the section needs to be reoriented to discuss problems related to out-of-pocket and maternal care more than the measurement of catastrophic health expenditure. Health financing, financing of maternal care as well as the situation of maternal care in the Indian context needs to be discussed. If additional data is available from Mumbai, that would improve the section as well.

**Methodology**

As mentioned in previously, I think the data collected may not be suited to the measurement of catastrophic health expenditure. Imputation of expenditure from a different source is not ideal in any situation. In addition, catastrophic health expenditure is often sensitive to the threshold used. As such the results presented for catastrophic health expenditure may be "doubly" sensitive. I would strongly recommend not presenting catastrophic health expenditure data in this context. If there is data on indirect and direct expenditure, as well as an asset index, then concentration index type measure can be used quite conveniently to measure concepts such as regressivity. For example, these will be further grounded in previous literature than a comparison of quintile 1 and quintile 5 or the use of catastrophic health expenditure in this context. As such it may be useful to consider presenting these types of measure instead.

That being said, if catastrophic health expenditure is retained, its calculation
needs to be more clearly presented in the methodology. For example, what imputation techniques were used? In fact, imputation statistics should be presented in an Annex. Additionally, was the measure of catastrophic health expenditure sensitive to the threshold chosen (e.g. 40% vs. 20%)?

The methodology should also explain the sampling strategy for the subsample for whom expenditure information is available. The format of expenditure questions should also be discussed. Were direct expenditure categories broken down further (e.g. drugs vs. consultation costs)? Information about the time periods for expenditure information should also be reported (this will play a role in the understanding of short-term vs. long-term effects of expenditure, for example).

Results

In general, the expenditure information should be accompanied by utilization information. For example, for many women in quintile 1 were using antenatal care or were using private facilities as compared to women in quintile 5. In the current format, it seems to only appear at the end of the section in regards to home/institutional deliveries.

Data on the use/expenditure at public/private facilities should also be presented in Figures or Tables.

Minor revisions:

Background

It is not quite valid to list 40% as the usual threshold for catastrophic health expenditure. This very much depends on what the denominator (and the numerator) contains. I would recommend removing it.

Discretionary revisions:

Results

It would be useful to define an inferior good. In addition, as income elasticity may be a foreign concept to some of the readership of the journal, it may be worth reconsidering if it adds anything to present it here.

In addition to the absolute values of expenditure being considered across quintiles, shares of indirect vs. direct expenditure could also be presented in the Tables/Figures. (The same could apply to components of indirect/direct expenditure). These may fit in well with the concentration index type measures.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.