Reviewer's report

Title: Costs of vaginal and caesarian section delivery at a public sector hospital in a major city of Pakistan

Version: 1 Date: 11 March 2009

Reviewer: Albrecht Jahn

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Major Compulsory Revisions

Methodology:

The authors use purposive sampling, without providing the rational for this approach. Furthermore, sample size calculations are based on the assumption of random sampling and are thus not applicable in this situation. Inclusion and exclusion criteria are not transparent and it is most unlikely that including all women awaiting discharge (at a certain day? over a range of days?) would result in 65 women with CS and 68 women with normal delivery as stated in the methodology. Thus, the process and rationale for the process of recruiting the respondents needs to be reported in a much more transparent way.

In addition, more needs to be known about the context: E.g. how many deliveries per year took place there, which proportion of the target population (e.g. thesil/district) delivers in this hospital. To which extend are the costs derived from this hospital representative for the average costs of a CS in Pakistan? According to a previous study by the Health Service Academy Islamabad (Saleha Abdur Rehman et al (2000): Unmet Obstetrical Needs in the Districts of Attock & Jhelum, Punjab Province, Pakistan) most deliveries take place in private facilities and this may have very different costs. The same study reports a population-based CS rate of less than 5% far below the 23% proposed in the methodology. If the current study was performed in the study area of this previous study, context data could be used from the former study, which was produced as book, edited by the health service academy.

There is very little information on how the data for the health service /hospital costs were gathered. Did the authors have direct access to the hospital budget data? There are many methodological aspects, which are not reported: e.g. mode of depreciation of capital costs, assessment of staff working time/work load for specific activities.

Results:

Concerning service costs, it is not clear from the methodology, which numbers used for capital and recurrent costs are based on real data (e.g. expenditure), on assumptions, on estimates from informants or from other sources. Thus it is
difficult to assess the validity of the figures presented in the tables.

Concerning the presentation, for an international readership, data on rupees should also be converted into an international reference currency e.g. 2008 US$.

The statistical analysis is too superficial – among others the variables included in the regression models and possible adjustments are not mentioned – and does not provide additional insight beyond the obvious.

Data on the education levels, mentioned in the text should be included in the table 4. Reference data on the general population of women from recent survey (e.g. Household Integrated Economic Survey or DHS) should be included or presented in the discussion, in order to address the issue of representativeness. The high level of women with secondary school education suggests that the situation is predominately a middle class setting. Given the fact that the CS rate in Pakistan is extremely stratified according to social status (high status – high rate of CS) this would be a possible explanation for the comparatively high costs observed in this study.

Discussion:

The limitations should refer to the data quality on service costs and its possible effect on the results. The costs presented in this study (e.g. provider costs vaginal delivery 43 US$ in 2008, CS 174 US$) are substantially higher than in similar studies from other low income countries countries. The reference # 30 is said to provide data for comparison, but the reference refers to "Health in the Americas (Paho 1998" and not on Ghana, Malawi and Uganda. This must be an error. Costing of Safe Motherhood interventions have been performed in this countries by WHO (e.g. http://www.who.int/countries/gha/publications/MPS_Report.pdf). The authors need to compare and discuss their findings on the overall costs.

Minor Essential Revisions

none

Discretionary Revisions

none

Level of interest: An article of limited interest

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

'I declare that I have no competing interests'