Reviewer's report

Title: Financing mode and expenditure related to deliveries in the 2004 Pelotas Birth Cohort Study, Brazil.

Version: 1 Date: 6 November 2007

Reviewer: Josephine Borghi

Reviewer's report:

General
This paper explores the methods of financing used by women during the time of delivery and in caring for the baby during 3 months after delivery, the cost of health insurance to the household and any direct payments for care incurred by socio-economic status. This study adds to the literature on household costs of maternity care, mainly from low income countries, and I understand it the first study to address this issue in the Brazilian context. It also explores levels of insurance coverage by wealth group and the impact of insurance coverage on payments at the time of service use. The paper is novel and adds new information to an area which has, to date, received limited attention, finding that social insurance in Brazil offers an equitable means of financing delivery care.

My recommendation that the paper should be published is dependent on the authors making the following changes/improvements to the paper.

The authors need to be clearer and consistent about the study objectives, and to address the discrepancy between their findings (that women incur very little direct payments) with the study by Xu that they describe in the Introduction, which reported high levels of catastrophic payment, as being the prompt for undertaking the study.

To make the relevance of the study more obvious to readers, the authors should also explain what the policy implications of their findings are. The authors should also indicate to what extent the findings are limited to delivery care, or are also applicable to other health services? It is also unclear to what extent these findings would be representative of poorer states, such as Bahia or Pernambuco.

More detailed description is required in the methods about the financing system in Brazil and maternity care use in Pelotas.

The results section is quite unclear in the way it is structured and suggestions are made for improvement below. Furthermore, the analysis undertaken is limited and only uses some of the data collected. It would add more value to the paper if the authors could consider affordability of insurance schemes, and combine pre-payments for insurance with direct payments to estimate total expenditures incurred by households. It is suggested the authors refer to the financing incidence literature to relate their findings and methods more closely to this body
of work.

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

Introduction
• You need to include a section describing the health financing system in Brazil. What is SUS, how does it work? What % of people have insurance cover (SUS; health plan) versus do not? Some indication of the scope of service coverage within these plans would also be helpful to help interpret the findings.
• Are the health plans private or SUS? How does SUS interact with private sector?
• The authors should make reference to the financing incidence literature as the study draws in part on these methods.
• Have there been any other studies looking at financing of health care in Brazil? Incidence of under-the-table payments; affordability of care. If not, state this. If so, what did they find?
• How generalisable are the study findings to the rest of Brazil, and other Latin American countries?
• To help understand the study context, the authors should show the use of maternal health services by wealth group in Brazil and Pelotas, what proportion have access to skilled attendance, deliveries in hospitals versus lower levels of care; public versus private sector?

Methods
• Would visits to the 5 maternity hospitals capture all deliveries? Do all deliveries take place at hospital?
• Was there any attempt to validate reported cost figures, by for example, reviewing patient records, hospital bills?

Results
• How do the plans/SUS cater for maternity services? What % of the plans cover maternity care and which aspects of care? Are all services paid for? What about complications? What about care for baby? It would be very helpful to show exactly how these plans cover for maternal health services.
• Authors should show expenditure by place where care was sought (public versus private facility). Do more women have to pay for care of baby because care is sought directly at pharmacies rather than from health facilities?
• Generally presentation of results is quite confusing: need to restructure to show:
  • Distribution of financing coverage (SUS, private; none) overall and across wealth groups;
  • If possible: show what % of insurance covers maternity care and which aspects
of care;
• Mean expenditure on delivery overall and by wealth group, for delivery care (ideally: normal/c-section; public; private; and by type of insurance cover: private; SUS; none);
• Mean expenditure on care for the baby (by place where care was sought; type of insurance cover; income group): is the different stat sig?

Discussion
• How does coverage of deliveries by the SUS compare to other health services? Is it especially high? Why is this likely to be and what are the implications?
• How do you explain the findings of the Xu study in light of your study? Is it that catastrophic payments arise for non-maternity services? Or that Xu’s study is flawed?

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Abstract:
• Background: clarify which event (i.e. deliveries); maybe better to say household out-of-pocket payment, rather than private health expenditure which could denote private health insurance contributions.
• Results: Even among those mother covered by a private health plan, nearly 50% of births were delivered or covered by the SUS?

Introduction
• Second sentence should this read: the highest proportion of people suffering from catastrophic payments?
• Sentence 6: this study: which study?

Methods
• Second paragraph: Were age and skin colour used in the wealth index? If not, why are they not included in results?
• Why transform income into minimum wages and not keep it as a continuous variable? Was income collected on monthly or yearly basis, how was the question phrased?
• Provide some information on what the IEN is and how calculated (which assets does it include). How does the wealth ranking based on assets compare to the wealth ranking using family income?
• Who else is likely to have paid for the plan? Husband, parents?
• How was the question on under-the-table fees presented to respondents, how was it phrased?
• Were transport costs included and time costs for companions? If not, why not?
• Which analyses were conducted? It would be helpful to announce type of
analysis done and key research questions in the methods.

• Page 6 first table, what do you mean by ‘and indicated in the Table’?

Results

• Can you give examples of sorts of services that would require additional charges amongst the poor? Are these copayments? What are the direct payments for (drugs; informal payments; lab tests?)

• Do the health plans operate at the individual or household level? If at the household level, how is it impacted by household size?

• For all the statistics it would be helpful to present the mean for the sample as a whole before indicating the differences between lowest and highest wealth group.

• Could some of the women have had some of the costs paid by SUS and paid some costs directly themselves: i.e. the categories of financing presented on page 7, 3rd paragraph, starting the Brazilian public health system… are not mutually exclusive if deliveries could have been financed by a combination of direct payment and SUS or health plan.

• When you say that 49.2% of those with a health plan were financed by SUS, do you mean they delivered at a SUS facility? If so, would this not still be financed by their health plan (i.e. SUS facility reimbursed?). Need to clarify what you mean by this.

• What do you mean on page 8 by ‘about 90% of those deliveries that were paid directly were c-sections?’ what is paid directly? Paid by mother not covered by health plan? Does this mean c-section not included in health plans? What proportion of women had a c-section versus normal delivery.

Discussion

• The fact that only mothers were interviewed is an important issue, as they may not be aware of expenditures that took place. It would be helpful to comment on why this was (were husbands unavailable?) and to discuss non-response rates.

• If payment was unobserved for the poorest 40% then payment was not the same across all economic groups. Rather the poor paid little to nothing and the higher income groups paid more. When you talk about payment need to take into consideration contributions to health plan and SUS in addition to direct expenditure to assess how equitable the health system is, or the financing incidence of the system.

Discretionary Revisions (which the author can choose to ignore)

Abstract

• Background: clarify which event (i.e. deliveries); maybe better to say household out-of-pocket payment, rather than private health expenditure which could denote private health insurance contributions

Introduction
• Maybe helpful to define what you mean by catastrophic and provide a reference for the first sentence.

• Not sure of relevance of Bangladesh study to Brazil as health system, economic level is very different. Maybe better to emphasize that deliveries are potentially expensive events, especially when complications arise. That in low income settings, where government support for health are is minimal, households are often charged fees which can represent a large proportion of their income. Even when such official fees do not exist, informal payments may be charged. Then reference the Bangladesh study. Because of the impact of user fees, countries are exploring other ways of financing delivery care: general taxation or insurance.

Results

• Be helpful to specify what less than two minimum wages corresponds to, as a reminder

• It may be helpful to indicate the cost of the plan to the household if operate at household level, as can then present this against estimated household income.

• It may be better to present costs in chronological order: starting with costs for the delivery and following with costs for the baby

• How come only half of deliveries in wealthiest group were paid for by health plans when 78.8% of women were covered by such health plans?

• Why not look at affordability of services in relation to family income? This would add a very interesting dimension to the paper and you have the data to do it.

• Some discussion in results of the source of health plans may be necessary as this seems to be an important determinant of inclusion or not of hospital treatment.

Discussion

• Page 9: 2nd paragraph, that women with a health plan spent more than women without does not imply necessarily that SUS offers more comprehensive coverage, it could be a wealth effect: wealthier women are choosing to spend more on drugs, so the package of care they are receiving is different compared to the least poor etc.

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: Needs some language corrections before being published

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

I declare that I have no competing interests