Reviewer's report

Title: THE EFFECT OF KENYA'S FREE MATERNAL HEALTH CARE POLICY ON THE UTILIZATION OF SKILLED DELIVERY SERVICES AND MATERNAL AND NEONATAL MORTALITY RATES IN PUBLIC HEALTH FACILITIES

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Reviewer: Cheryl Moyer

Reviewer's report:
The authors have presented an assessment of the impact of Kenya's free maternal health care policy on the utilization of skilled delivery services and institutional maternal and neonatal mortality in the country by looking at data from 24 months before the implementation through 24 month after the implementation. Overall, the manuscript is sound and presents reasonable data and conclusions. My comments to improve the paper are as follows:

1) There is a very important distinction between overall maternal/neonatal mortality and institutional maternal/neonatal mortality. The latter is limited to those events that occurred within a facility, within the narrow window in which - especially for newborns - they would be observed by health care providers. Neonatal mortality extends to 28 days after birth, and many babies die after being discharged from the hospital. I bring this up not to challenge the metric by which the authors assessed institutional mortality for this paper - it was clearly comparable before and after the policy and was methodologically sound - but to urge the authors to be extremely clear in their usage of the phrases 'maternal and neonatal mortality' to use terms like 'institutional maternal and neonatal mortality' instead. For those of us whose research focuses on community-based maternal and neonatal mortality, this distinction is extremely important. It also might be worthwhile to add a section in the discussion for how institutional measures of neonatal mortality in particular may MISS significant (positive) changes in mortality that occur after discharge - yet that still may be attributable to facility delivery. For example, it is possible that increased facility deliveries may mean that fewer newborns may develop sepsis and die - a condition that might not make itself manifest until after mothers have left the hospital with their
babies. And we know that care seeking for newborns is often not as prompt as for mothers, thus those babies may not be brought back to a hospital to be 'counted' as deaths. Thus if there were fewer (or more), the statistics would not necessarily reflect the improvement.

2) The methods could use expanding. Was this intended to be a nationally-representative sample? How exactly were data collected? Were data collected via visits to the facilities? Or via some sort of centralized database? Who collected the data? What were the cut points for "high risk, medium risk, and low risk"? Where did those data come from? Only 77 of the 97 eligible facilities were included - why?

3) I found Table 2 to be confusing. Column 2 is mislabeled, I think, as pre-policy, when I think it ought to be post-policy. I think the table would be improved if it were structured more like Table 6 - showing the change over time chronologically.

4) On page 12 the authors refer to Ljung-Box test statistics without an explanation of what that means.

5) I would put Table 10 in the same format as Table 6 as well.

6) Page 16, first paragraph - This would be an ideal place to temper the conclusion about non-effect on mortality in light of the challenges of institutional mortality as an outcome measure.

7) I would have liked to have seen a limitations section in the Discussion. Specifically, what are the potential limitations of the data? And how might this affect conclusions?

8) The authors frame other challenges to obtaining skilled delivery as delays. While delays are certainly important - fundamental quality of care that has nothing to do with delays is equally important. (If high-quality of care is simply not available (e.g. no supplies, ill-trained providers, no providers on site, no CEMONC or BEMONC available), one can argue there is not a 'delay' at play, it is instead an absence. While the last paragraph on page 16 alludes to this issue, I think it is worth using the words "quality of care" - pushing beyond "health system gaps" to be very clear
that some women and babies get to facilities without delay and may die anyway because of poor quality care - not delays in getting good care that is not available to them. I would also add "quality of care" to the conclusion paragraph.

9) On a more minor level, on Page 3 - It would be helpful to add a citation for the statement about the maternal and neonatal mortality rates in Kenya. And at the bottom of the page I think the word "to" is missing: pregnancy related mortality due TO the following 'three delays'...

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.
Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.
Yes

Are the conclusions drawn adequately supported by the data shown?
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