

PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (<http://bmjopen.bmj.com/site/about/resources/checklist.pdf>) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below. Some articles will have been accepted based in part or entirely on reviews undertaken for other BMJ Group journals. These will be reproduced where possible.

ARTICLE DETAILS

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| TITLE (PROVISIONAL) | Implementation of the partograph in India's JSY cash transfer program for facility births: A mixed methods study in Madhya Pradesh province |
| AUTHORS | Chaturvedi, Sarika; Upadhyay, Sourabh; de Costa, Ayesha; Raven, Joanna |

VERSION 1 - REVIEW

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| REVIEWER | Romulo Paes-Sousa UNDP World Centre for Sustainable Development and Institute of Development Studies (Sussex) |
| REVIEW RETURNED | 20-Aug-2014 |

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| GENERAL COMMENTS | <p>Mixed investigation design demands a high capacity for producing a concise description. In many cases the reports end in superficial use and description of each used method.</p> <p>While performing policy evaluation, a key question must be considered by the investigators before to start a new investigation: is the observed public action relevant?</p> <p>Despite of the political narrative or international organizations recommendations, many commitments cannot survive to the complex - and many times hard - world of implementation. During the implementation process, many parts of a public policy can perish in one country and flow in another country. Many components may face inconsistent work conditions or cultural/educational barriers, etc, which limit their growing potential.</p> <p>Before to embark in a new investigation, policy evaluators should consider if the public action is relevant in terms of: coverage, capacity for solving a public problem, investments or social attention.</p> |
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| REVIEWER | Salvatore Gizzo, MD University of Padua, Padua - Italy |
| REVIEW RETURNED | 01-Dec-2014 |

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| GENERAL COMMENTS | I suggest to accept this manuscript in this form. Anyway, during proof correction (if accepted) some mistakes should be correct. Good Manuscript! |
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| REVIEWER | Heather Underwood University of Colorado Denver Anschutz Medical Campus, USA |
| REVIEW RETURNED | 17-Dec-2014 |

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| <p>GENERAL COMMENTS</p> | <p>The two most valuable contributions this paper makes to the ongoing discussion of partograph utilization in low- and middle-income countries: (i) it emphasizes the importance of environmental and contextual factors that affect partograph use and completion, and (ii) stresses caution when using partograph completion as an indicator of quality care. These two points were made in the Kenyan context in a similar study that took place in 2012 and 2013, and this paper illustrates important similar findings in the Madhya Pradesh province (possibly include Kenya study as a reference - Underwood. 2013. The Partopen: Using Digital Pen Technology to Improve Maternal Labor Monitoring in the Developing World. Ph.D. Dissertation. University of Colorado at Boulder.)</p> <p>The two most valuable contributions this paper makes to the ongoing discussion of partograph utilization in low- and middle-income countries: (i) it emphasizes the importance of environmental and contextual factors that affect partograph use and completion, and (ii) stresses caution when using partograph completion as an indicator of quality care. These two points were made in the Kenyan context in a similar study that took place in 2012 and 2013, and this paper illustrates important similar findings in the Madhya Pradesh province (possibly include Kenya study as a reference - Underwood. 2013. The Partopen: Using Digital Pen Technology to Improve Maternal Labor Monitoring in the Developing World. Ph.D. Dissertation. University of Colorado at Boulder.)</p> <p>Great paper. Well written, and well researched. Appropriate study design and use of a mixed methods approach. Adds to the growing body of partograph literature by contributing two key points: (i) emphasizing the importance of environmental and contextual factors that affect partograph use and completion, and (ii) stresses caution when using partograph completion as an indicator of quality care.</p> <p>Questions:</p> <ol style="list-style-type: none"> 1. Did you look at any other information in the record review stage besides the partograph? The paper draws the conclusion that "low partograph use in the context of the JSY program, indicates poor monitoring of labour within the program" however, labor is often monitored and recorded on other forms besides the partograph inside a patient's file. 2. It is implicit in the paper that factors such as staff shortages and women arriving late in labour are some explanations for why maternal mortality rates have not improved despite the success of the JSY program. Is this the case? If so, it should be more explicit. If not, do you have any insight into why more women coming to the hospitals has not equated with better outcomes? (And explain how the partograph does or does not fit into this relationship). 3. The authors touch on partograph training. Is there evidence from your study that increased and better quality partograph training programs would a) increase partograph use, b) improve quality of care, and/or c) reduce maternal mortalities at these facilities? <p>While I encourage this paper to be accepted without revision, I think there is an opportunity in this paper for the authors to start a more direct discussion of the real and perceived relationships between</p> |
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| | reducing maternal mortalities, quality of care, environmental and contextual factors, and how partograph use reflects (as an indicator) or promotes (as an intervention) these various factors. With so much recent literature on the partograph and its under-utilization despite overall improvements in care and reductions in mortality, the broader question that needs to start being asked is whether the partograph is necessary, and what a better labor monitoring alternative might look like. If the partograph is only useful and effective under ideal conditions, it is not a useful tool. |
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VERSION 1 – AUTHOR RESPONSE

Reviewer 1: No response required by the editor.

Reviewer 2 and 3: We thank the reviewers for their comments.

Reviewer 4: We thank the reviewer for the comments.

Our responses to the three questions are as below:

Question 1: Did you look at any other information in the record review stage besides the partograph? The paper draws the conclusion that "low partograph use in the context of the JSY program, indicates poor monitoring of labour within the program" however, labor is often monitored and recorded on other forms besides the partograph inside a patient's file.

Response: In this paper we used data from the record review that was specific to the partograph. We agree that there could be other ways of monitoring labour and recording this information besides using the partograph. However staff responses on reasons for poor recording in the partographs include fewer opportunities to monitor labour due to late arrival of women and staff shortages indicating that monitoring labour is not feasible as a routine practice in the program. Also our other studies conducted during the same period, referred to in the discussion section of the paper, indicate the same.

In recognition of the reviewers question, we have now reworded the sentence in the conclusion section to read “ [This study finds low utilization of partograph for monitoring labour in the JSY program and limited abilities of staff to use this tool in an environment where staff show poor buy-in to the routine use of the partograph](#) ”.

Question 2: It is implicit in the paper that factors such as staff shortages and women arriving late in labour are some explanations for why maternal mortality rates have not improved despite the success of the JSY program. Is this the case? If so, it should be more explicit. If not, do you have any insight into why more women coming to the hospitals has not equated with better outcomes? (And explain how the partograph does or does not fit into this relationship).

Response: Based on various studies on the JSY program where we studied different aspects such as staff competence, referral services, staff practices during intra partum care we find that an important reason for poor outcomes despite high institutional birth coverage is poor quality of care in the program.

The partograph use was actively promoted in the JSY program as one of the measures to improve quality of care and was supported with a nation wide training program for Skilled Birth Attendants. Low use of the partograph could be considered as an indicator of poor quality of care, while our findings also show how this could be a poor indicator given the way the partograph is currently used (retrospective and incomplete). These points have been mentioned in our discussion section under the subheading 'routine partograph use as an indicator of quality of normal delivery care'.

Question 3: The authors touch on partograph training. Is there evidence from your study that increased and better quality partograph training programs would a) increase partograph use, b) improve quality of care, and/or c) reduce maternal mortalities at these facilities?

Response: Our findings allow us only to conclude that poor training is one of the potential reasons for poor competence of staff at partograph use and for its underutilization. While this indicates that improved training could raise staff abilities at partograph use, our contextual findings such as late arrival of women, staff shortages, and poor staff buy-in to partograph use indicate that training at partograph use alone would be inadequate to improve quality of care. This point is included in the discussion section.

We have now added the following text to the discussion section in the paragraph on potential ways forward on page 18, preceding the limitations section.

Findings from recent research by Underwood et al [51] demonstrating the use of digital pen technology to address training barriers to partograph use at a Kenyan hospital offer innovative solutions that could be considered in other developing country contexts.

VERSION 2 – REVIEW

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| REVIEWER | Heather Underwood University of Colorado Denver Anschutz Medical Campus, USA |
| REVIEW RETURNED | 19-Jan-2015 |

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| GENERAL COMMENTS | <p>This paper is well written and researched, and a valuable contribution to the literature on partograph use. The main contribution of this paper - stressing that partograph benefits are only realized when other infrastructure, training, and staffing barriers have been addressed - is valuable to the ongoing conversation about the utilization and utility of the partograph, and should be accepted for publication. More literature that illustrates specific issues in implementation and usage will hopefully promote reforms in policies (e.g. required partograph use) in inappropriate contexts (e.g., hospitals that are understaffed, undertrained, etc.).</p> <p>In the "way forward" section, the authors note that partograph use may not result in a reduction of maternal mortalities because obstructed labor accounts for so few deaths. I would urge the authors to consider here that only proximate causes of death are usually reported, and obstructed labor is often a precursor to PPH</p> |
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| | and sepsis cases. Finally, there are some grammar and spelling errors (check "its" versus "it's"), but they do not significantly impinge on the contributions or writing of this paper. |
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VERSION 2 – AUTHOR RESPONSE

Response to reviewer: Underwood H

We thank the reviewer for important comments and suggestions to this manuscript.

In light of the reviewers comment, we have reworded the sentences in the paragraph 'potential way forward' in the discussion. The revised sentences in the paragraph on page 18 read as below:

It is important to note that obstructed labour is often a precursor to maternal deaths from haemorrhage and sepsis, and that classification of causes of maternal mortality is based on the proximate causes of death. Hence although the leading causes of maternal deaths in India are haemorrhage (38%) and sepsis (11%) [49], routine and correct partograph use that can prevent deaths from obstructed labour, appears to be important to dent maternal mortality.

We have rechecked the manuscript and corrected the spelling and grammar errors.