

# Increased Documentation of Maternal Vital Signs Following a Longitudinal Mentorship Intervention in Blantyre District, Malawi

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## Background

- Staff shortages along with insufficient training and support limit maternal and neonatal health (MNH) quality of care (QoC) and documentation of maternal vital signs
- We partnered with the Ministry of Health (MoH) to engage midwives in MNH short-course training followed by 12 months longitudinal bedside mentorship (“the intervention”)



## Study objective

To assess the impact of the intervention on documentation of maternal vital signs.

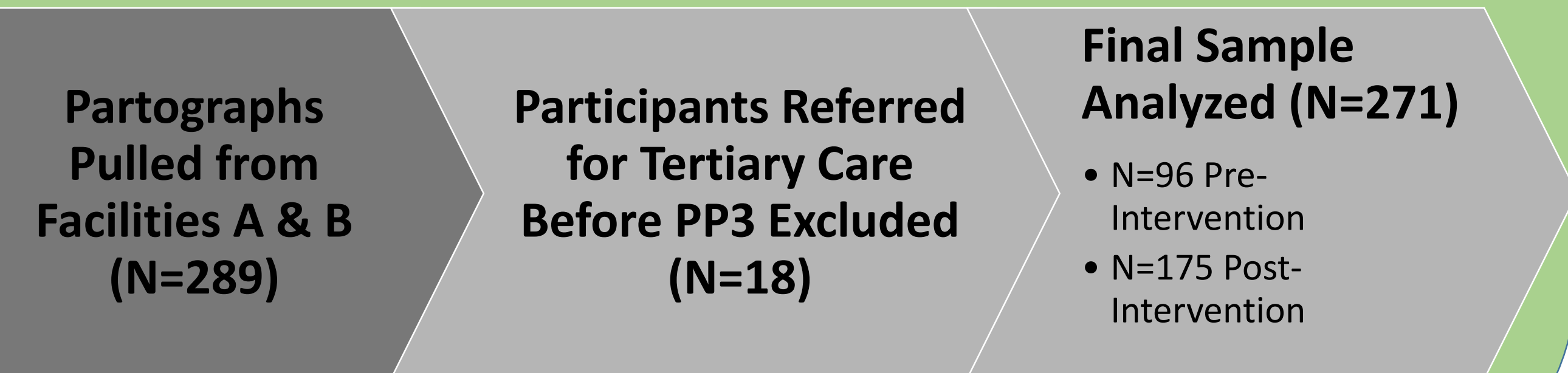
## Methods

- We assessed documentation of three key vital signs—heart rate, blood pressure, and temperature—at “Pause Points” (PPs) defined by the World Health Organization (WHO) Safe Childbirth Checklist (SCC):

PP1: Admission    PP2: Before Birth    PP3: Immediate Postpartum



- Data collected via CommCare and analyzed via R studio for differences pre- & post-intervention



## Key Results

### Documentation of Key Maternal Vital Signs by Pause Point

	Total (n=271)	Pre (n=96)	Post (n=175)	p-value
<b>On admission (Pause Point 1)</b>				
All recorded	11 (4.1%)	2 (2.1%)	9 (5.1%)	0.017
Two recorded	125 (46.1%)	35 (35.4%)	91 (52.0%)	
One recorded	19 (7.01%)	8 (8.3%)	11 (6.3%)	
None recorded	116 (42.8%)	52 (54.2%)	64 (36.4%)	
<b>Before pushing or caesarean section (Pause Point 2)</b>				
All recorded	4 (1.5%)	1 (1.0%)	3 (1.7%)	0.546
Two recorded	34 (12.5%)	10 (10.4%)	24 (13.7%)	
One recorded	7 (2.6%)	4 (4.2%)	3 (1.7%)	
None recorded	226 (83.4%)	81 (84.4%)	145 (82.9%)	
<b>Immediately after delivery/within 1hr postpartum (Pause Point 3)</b>				
All recorded	6 (2.2%)	3 (3.1%)	3 (1.7%)	0.002
Two recorded	97 (35.8%)	21 (21.9%)	76 (43.4%)	
One recorded	9 (3.3%)	3 (3.1%)	6 (3.4%)	
None recorded	159 (58.7%)	69 (71.9%)	90 (51.4%)	

### Overall documentation differences:

- ↑23% in documentation in post intervention period (*esp. PP1 & PP3*)
- >50% recorded heart rate and blood pressure in post intervention period
- ↑documentation was most significant at Facility B (*less busy*)

### Differences related to medical devices:

- ↑documentation on admission even if vital sign devices partially stocked
- No significant association between individual vital sign documentation and related vital sign device (*i.e., temperature and thermometer*)

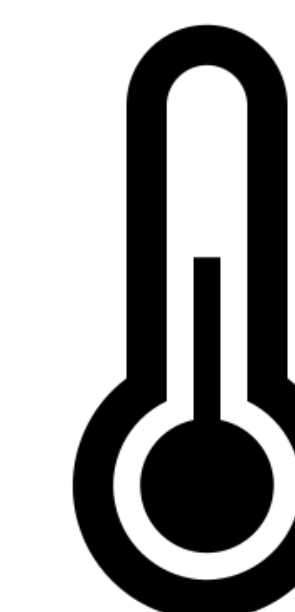
## Discussion & Conclusions

Overall increase in documentation post-intervention period, suggesting effectiveness. Increased documentation may improve prevention and management of maternal and neonatal complications.

We still need:

- Additional study to understand impact on quality of care and patient outcomes
- A multidisciplinary approach to ensure sustainable access to vital sign devices
- Continued and expanded training with longitudinal mentorship models

Further study is underway to measure vital sign documentation after the provision of devices and a sign in sheet.



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