



IMPLEMENTATION OUTCOMES AND EFFECTIVENESS OF E-MOTIVE POSTPARTUM HAEMORRHAGE TREATMENT IN NIGERIAN STANDARD CLINICAL SETTINGS.

BACKGROUND

Nigeria contributes the highest number of global maternal deaths, with PPH leading the the global causes of maternal mortality. The E-MOTIVE trial demonstrated the use of objective blood measurement and clinical bundle which reduced 60% of severe PPH and other related complications³. The trial results is followed by guideline changes at global and national levels.

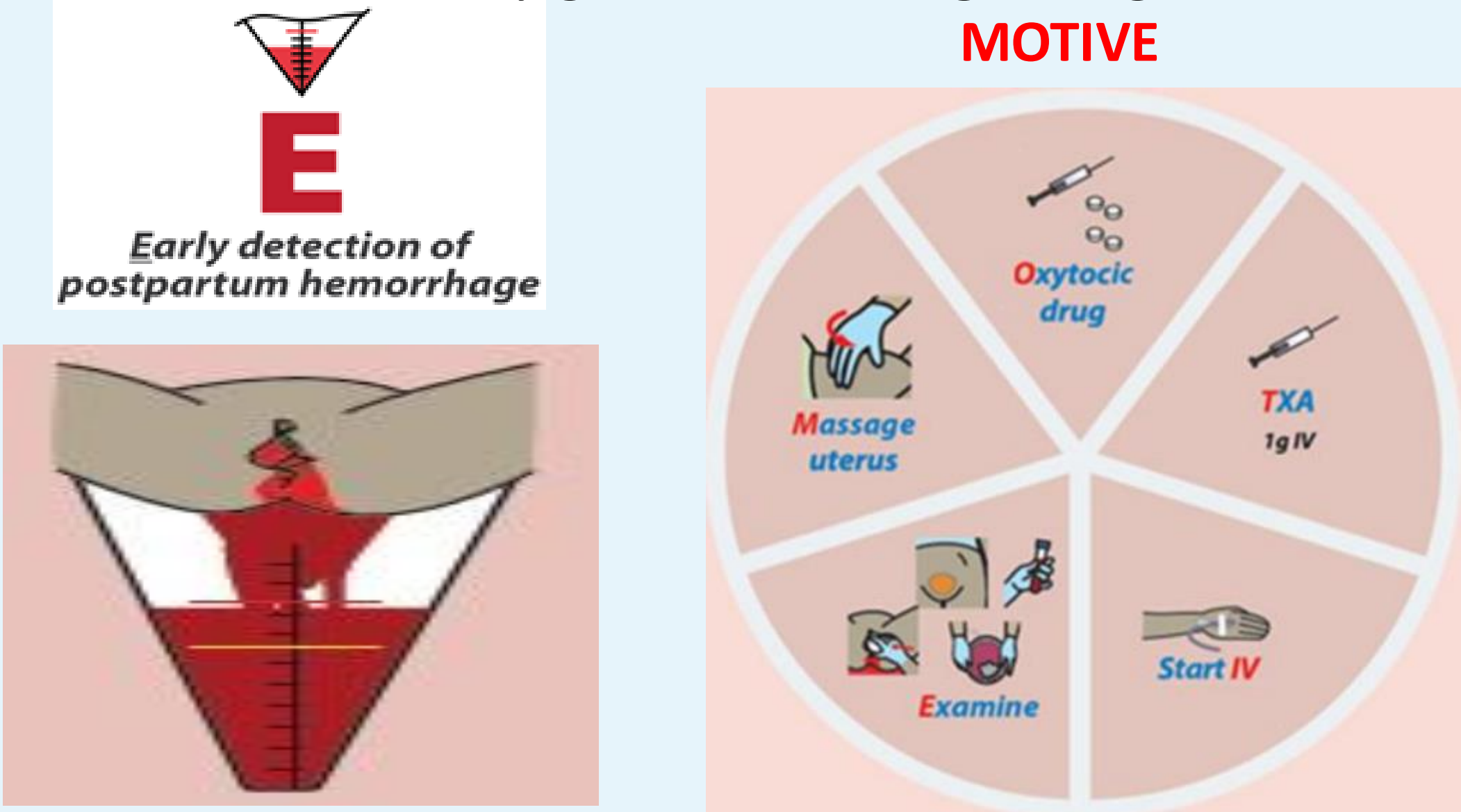


Figure 1: components of WHO E-MOTIVE treatment for PPH

OBJECTIVES

This study aims to determine the implementation outcomes and effectiveness of E-MOTIVE bundle treatment for postpartum haemorrhage (PPH) in standard clinical settings in Nigerian health facilities. We assessed the usage of the bundle components and the effectiveness of the bundle treatment in standard clinical practice and compared the outcomes with the E-MOTIVE trial results.

DESIGN AND METHOD

The E-MOTIVE was a multi-country, parallel cluster randomised trial with a baseline control phase that studied over 200,000 women across 80 health facilities. 41 facilities came from Nigeria with 19 intervention, 19 control, and 3 adaptive sites.

All the facilities from Nigeria were used for this implementation. The control and adaptive sites were trained on the intervention at the onset. The E-MOTIVE bundle treatment (uterine Massage, Oxytocic, Tranexamic acid, IV fluids, Examination, and Escalation) and the use of calibrated drape for early detection of PPH were implemented in routine clinical settings in the facilities using the **implementation strategies of training, PPH trolleys, and champions**. Data summaries on bundle usage and PPH outcomes for all women having vaginal deliveries in those facilities were collected monthly from the sites. Implementation started in December 2023 through December 2024. The trends of the outcomes were analysed using Excel and R and presented graphically from the baseline period to implementation and compared with the trial results.

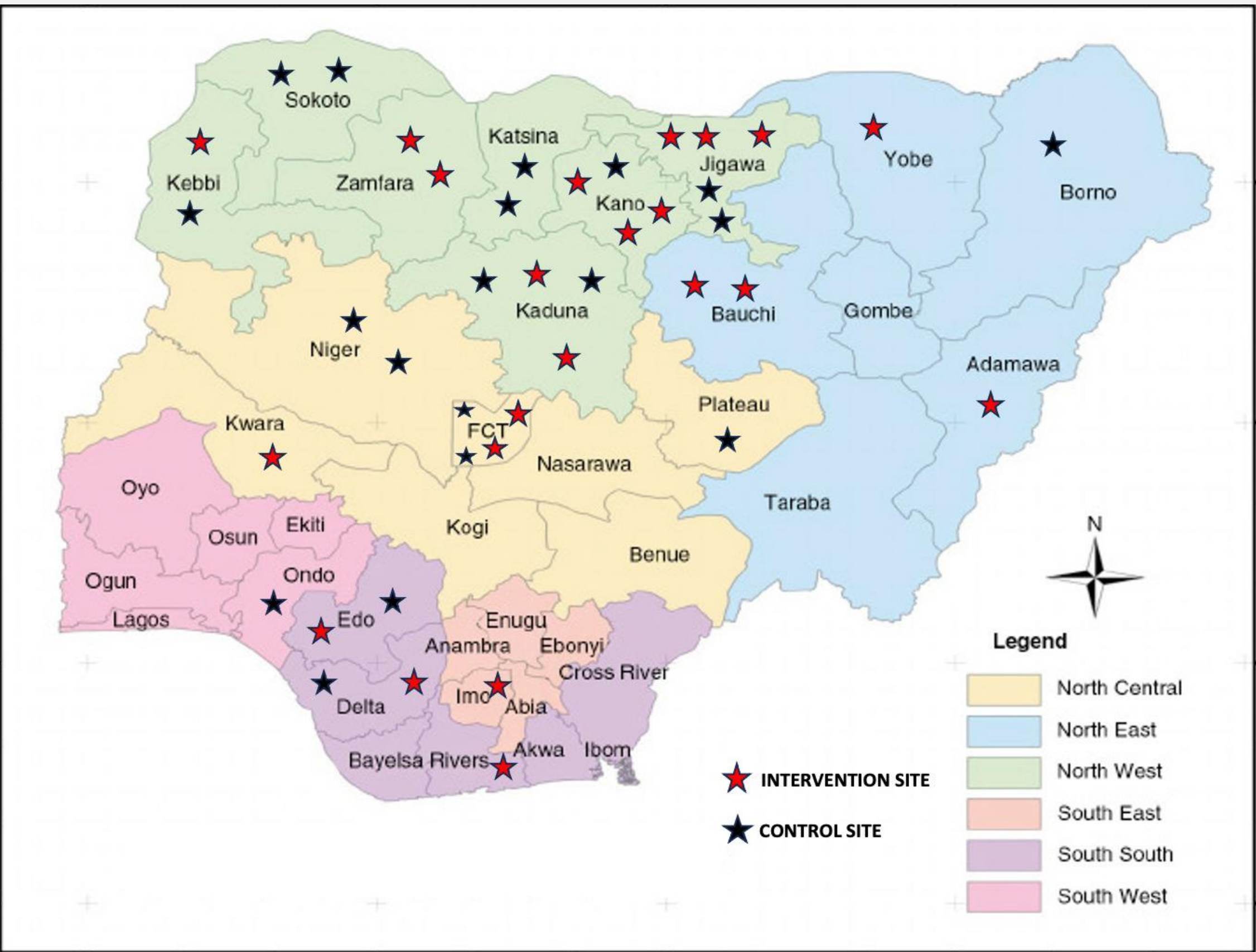


Figure 2: Map of Nigeria showing the distribution of the implementation facilities

RESULTS

Outcomes	E-MOTIVE (N = 49,101, Clusters = 39)	Implementation (N = 73,206, Clusters = 41)
Key Implementation Outcomes		
Calibrated drape usage	48,678/48,678 (100)	71,677/73,206 (98)
Compliance with MOTIVE bundle	3,791/4,158 (91.2)	3,695/3,558 (104)*

1: Key implementation outcomes, E-MOTIVE trial vs real world implementation.

Outcomes	Implementation (N = 73,206, Clusters = 41)	Usual Care (N = 50,558, Clusters = 39)	Risk Ratio (95% CI)	P value
Primary outcome				
Composite of severe postpartum haemorrhage (blood loss $\geq$ 1000 ml); laparotomy for bleeding; and maternal mortality from bleeding	1097/73,206 (1.5)	2,139/50,044 (4.3)	0.35 (0.33 to 0.38)	<0.001

Table 2: Primary outcome, Trial usual care vs real world implementation.

Compliance with drape and bundle components usage during the implementation period was comparable to those from the E-MOTIVE trial (100% vs. 98% and 91% vs. 104%, respectively). The primary outcomes occurred in 1.5% of the women during the implementation as compared to 4.3% baseline in the control facilities and 1.6% in E-MOTIVE intervention arm, showing a significant reduction by 65% - showing that -

Similar results were achieved while implementing in routine clinical settings outside research trial. Other key secondary outcomes such as PPH, severe PPH and blood transfusion for PPH were found to be comparable to those achieved during the trial.

Primary outcome over time

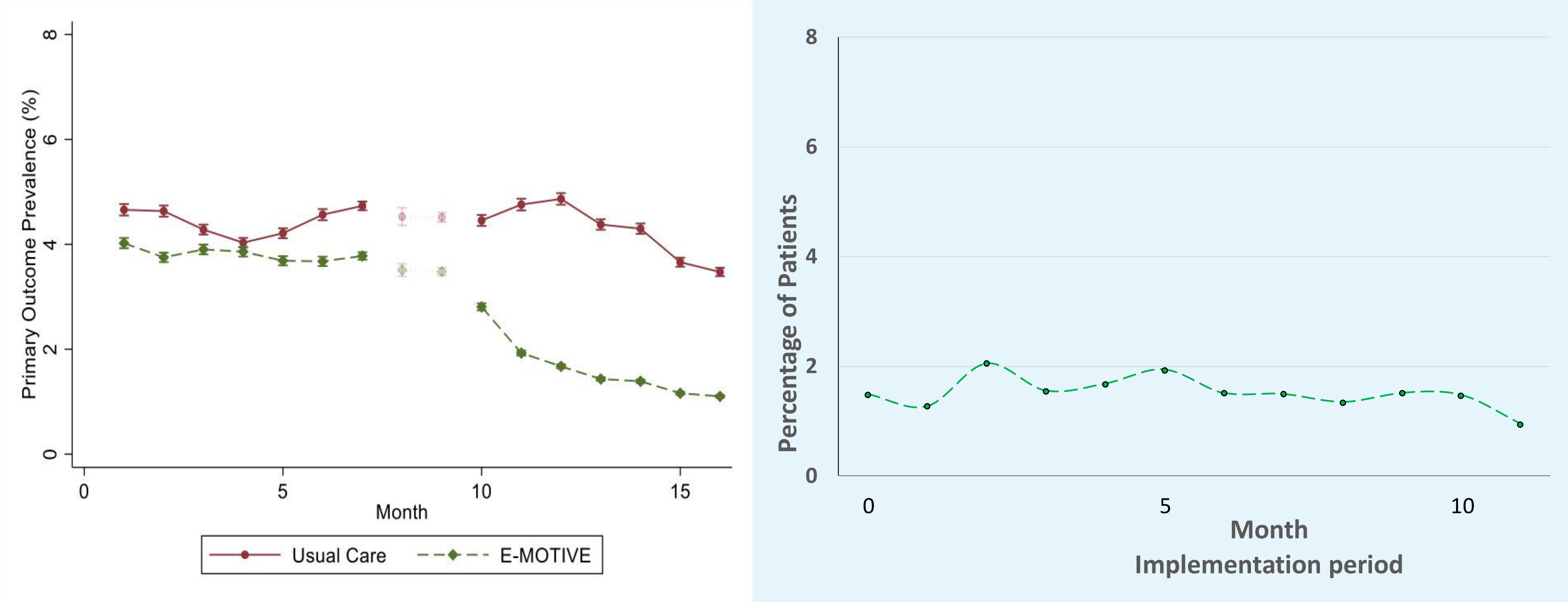


Figure 3: Prevalence of primary outcome over time from trial to implementation period.

CONCLUSION

Early detection and bundle treatment for PPH has demonstrated a notable decrease in unfavourable maternal outcomes when implemented in standard clinical settings in Nigeria, with comparable and better trends than seen during the trial period. The intervention, if implemented and scaled up, can help to reduce adverse maternal outcomes associated with PPH in Nigeria.

AUTHORS AND REFERENCES

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3 Gallos I, Devall A, Martin J, Middleton L, Beeson L, Galadanci H et al. Randomized Trial of Early Detection and Treatment of Postpartum Haemorrhage. N Engl J Med. 2023 May 9. <https://www.nejm.org/doi/full/10.1056/NEJMoa2303966>