



# Multi-country implementation pilots on safe and appropriate use of post-partum haemorrhage medicines

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## Background

Postpartum haemorrhage (PPH), defined as a blood loss of 500 ml or more, is the leading cause of maternal death worldwide, accounting for about a quarter of all maternal deaths. The majority of PPH-associated deaths can be prevented by use of uterotonics during the third stage of labour, combined with prompt and appropriate identification and management of PPH. Heat-stable Carbetocin (HSC) is a long-acting uterotonic that has similar efficacy to oxytocin in active management of third stage of labour (AMTSL) [1]. It is stable up to three years without refrigeration and therefore holds promise for use in countries with cold-chain challenges [2]. Tranexamic Acid (TXA) inhibits plasminogen activation and reduces bleeding by inhibiting the breakdown of fibrinogen and fibrinogen clots. WHO has recommendations on use of HSC for prevention when the quality of oxytocin cannot be guaranteed, and TXA for treatment [3,4]. HSC and TXA are not yet widely used in many African countries – there is variability in whether these drugs are registered or included in the essential medicines list for different countries. Introduction of HSC and TXA have the potential to improve prevention and treatment of PPH and decrease maternal morbidity and mortality in countries with a high burden of PPH.

## Methodology

Mixed-methods research design conducted Burkina Faso, Ethiopia, Ghana, Sierra Leone, and Uganda using a step-wise approach to collect baseline data on AMTSL from selected facilities, training healthcare providers on safe and appropriate use of HSC and TXA, introduction of the medicines into the study facilities followed by 2 months of post-implementation data collection.

## Sample size:

| Country      | No. of women | No. of healthcare providers |
|--------------|--------------|-----------------------------|
| Burkina Faso | 3624         | 30                          |
| Ethiopia     | 3844         | 28                          |
| Ghana        | 4616         | 40                          |
| Sierra Leone | 3352         | 26                          |
| Uganda       | 9968         | 16                          |
| Total        | 25404        | 140                         |



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*“Trapped along the Yiffin Road for hours with bleeding but thanks to tranexamic acid for the magic”*

*“We are grateful for HSC and TXA”*

## Overall Study Objectives:

To assess 1) **safe and appropriate use** of HSC for PPH prevention, and TXA for PPH treatment, and 2) their **integration** into routine care.

## Research Questions:

1. How does AMTSL in BEMONC and CEMONC facilities compare before and after the introduction of HSC and TXA?
2. What is the feasibility of implementing the introduction of HSC and TXA into BEMONC and CEMONC facilities?
3. What are healthcare provider attitudes on current challenges with PPH prevention and management and acceptability of introducing HSC and TXA?

**BEMONC:** Basic Emergency Obstetric and Newborn Care  
**CEMONC:** Complex Emergency Obstetric and Newborn Care

## Testimonies:

## Lessons learned

### Effective practical training

More hands-on and simulation training needed for all healthcare providers in labour wards on safely and correctly administering HSC and TXA and eliminate risk of misuse

### Documentation of uterotonic and TXA time of administration

More training needed on accurate and consistent documentation of time of uterotonic and TXA administration

### Workforce mobilisation

Ensuring healthcare providers take ownership of training and monitoring of HSC and TXA use

## Results

Out of 25404 combined total of deliveries from the five countries, 74% received HSC for PPH prevention and 91% of patients were administered a uterotonic within 5 mins of birth. For PPH treatment, 3.4% of patients received TXA for PPH treatment and 78% of patients received TXA within 3 hours of birth during implementation and received TXA.\* No adverse effects were reported. Aside from challenges in documenting the two medicines, health providers viewed HSC and TXA as safe and effective drugs that should be rolled out at the national level.

*\*Analysis is ongoing so final results may vary. The results will be published in a peer-reviewed journal before Q4 2023.*

## Conclusion

This study adds unique value to the PPH landscape as it assesses safe and appropriate use of HSC and TXA in multiple country settings and adherence to updated clinical protocols. The broader implications of the findings are to help identify an effective and scalable model for introduction of these two medicines into facilities, and understand what adaptations are necessary for the successful integration of updated protocols and guidelines into best practice of PPH prevention and management.

## References:

- 1) Widmer, M., et al., Heat-Stable Carbetocin versus Oxytocin to Prevent Hemorrhage after Vaginal Birth. N Engl J Med 2018;379:743-52
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- 3) World Health Organization. WHO Recommendations on Uterotonics for the Prevention of Postpartum Haemorrhage. 2018
- 4) World Health Organization. Updated WHO Recommendation on Tranexamic Acid for the Treatment of Postpartum Haemorrhage. 2017