

# Routine use of tranexamic acid in women with postpartum haemorrhage was not associated with an increase in maternal morbidity

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## Introduction

The World Maternal Antifibrinolytic (WOMAN) trial found that tranexamic acid (TXA) was associated with a reduced risk of death due to bleeding in women with postpartum haemorrhage (PPH) regardless of birth modality, with no apparent increase in risk of thromboembolic events.<sup>1</sup> Following the publication of the WOMAN trial, the Queensland Health guideline on PPH management was updated in March 2018 to include TXA as a first-line therapy.<sup>2</sup> The aim of this study was to compare maternal morbidity associated with PPH before and after the PPH management guideline update in March 2018 at a regional Queensland hospital.

## Methods

This was a retrospective study of 1024 women with PPH at Toowoomba Hospital from April 2016 to March 2020. Data were collected from the hospital's maternity databases and individual patient chart review. The study was approved by the Toowoomba Hospital Research and Ethics Committee as a clinical audit. The outcome of maternal morbidity was stratified into hospital admission, thromboembolic events, surgical interventions, and other complications. A logistic regression model was fitted to binary outcomes and a linear model was fitted to continuous outcomes, comparing groups before (n=466) and after (n=558) the guideline update in March 2018.

## Results

There were no significant differences between the length of admission, ICU admissions, hospital representations and readmissions, and balloon tamponade rates between the two groups ( $p > 0.05$ ). The study was insufficiently powered to assess thromboembolic events (deep vein thrombosis, pulmonary embolism, myocardial infarction, stroke), surgical interventions (emergency hysterectomy, brace sutures), and other complications (renal failure, cardiac failure, hepatic failure, seizures, sepsis).

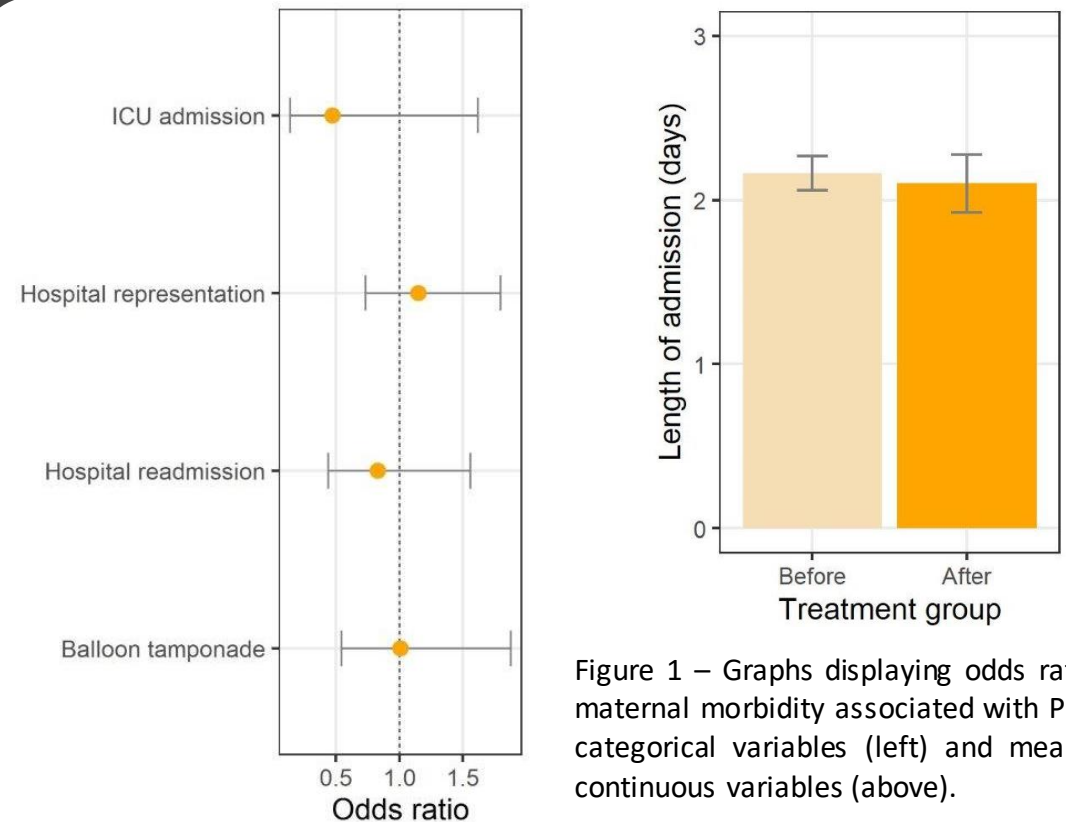


Figure 1 – Graphs displaying odds ratios of maternal morbidity associated with PPH for categorical variables (left) and means for continuous variables (above).

## Conclusions

- The introduction of TXA as a first-line therapy for women with PPH at this regional Queensland hospital was not associated with an increase in maternal morbidity.
- Specifically, there was no change in length of hospital admission, ICU admissions, hospital representations, hospital readmission, and balloon tamponade.

## References

1. WOMAN trial collaborators. Effect of early tranexamic acid administration on mortality, hysterectomy, and other morbidities in women with post-partum haemorrhage (WOMAN): an international, randomised, double-blind, placebo-controlled trial. *Lancet*. 2017;389(10084):2105-16.
2. Queensland Clinical Guidelines. Primary postpartum haemorrhage. 2018.