

Development and validation of a prognostic model predicting death and near miss

Anti-fibrinolytics Trialists Collaborators Obstetric Group

BAD score predictors

Age	Point
≥ 30 years and < 40 years	2
≥ 40 years	3
Systolic blood pressure	
Mild hypotension 80 to 100 mmHg	3
Severe hypotension < 80 mmHg	8
Caesarean	2
Placenta abnormalities	1
Hypertensive disorders of pregnancy	2
Stillbirths	3
Anaemia	
haemoglobin 70 to 100 g/L	2
haemoglobin <70 g/L	10

Background

Early identification of women at risk of life-threatening bleeding is essential to enable early life-saving intervention. We developed and validated a prognostic model to predict death and near miss from bleeding after childbirth.

Study design

Observational prognostic study using multilevel logistic regression based on data from twenty-two low, middle and high-income countries in four randomised trials (WOMAN, WOMAN-2, TRAAP and TRAAP-2 trials).

Outcome

Maternal death or near-miss defined using the WHO near-miss approach. Maternal death included all deaths within 24 hours of birth. Near-miss included laparotomy, hysterectomy or interventional radiology within 24 hours of birth.

Findings: We included data on 43450 women enrolled. Using internal-external cross-validation, the pooled AUROC for the model was 0·82; 95% CI (0·78-0·87). And the BAD score had an AUROC of 0·80; 95% CI (0·76-0·84).

Conclusion

A simple accurate score can be used at hospital admission to stratify the baseline risk of women giving birth and can inform the need for tranexamic acid administration.

