Traditional birth attendant (TBA) training for improving health behaviours and pregnancy outcomes

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RHL summary

Key Findings

The review examined the effects of TBA training on health behavior and pregnancy outcomes. The key are:

Trained TBAs versus untrained TBAs:

- Significantly lower rates of stillbirths, neonatal and perinatal death in the trained TBAs group.
- One study reported lower maternal mortality (not statistically significant) and a statistically significant reduction in pre- and post-partum hemorrhage, puerperal sepsis and referral to any health care facility for any complication in the intervention group.

Additionally trained TBAs versus trained TBAs:

- No significant difference in perinatal and late neonatal death rates between groups. However, neonatal death rate was significantly lower in intervention compared with the control group.
- Meta-analysis on stillbirth and early neonatal death did not find any significant difference.

Evidence included in this review

Six randomized (two) and cluster randomized (four) studies involving over 1345 TBAs, more than 32,000 women and approximately 57,000 births are included in this review. Trials were conducted in sub-Saharan Africa and South-Asia.

Quality assessment

Using GRADE approach, the quality of included evidence was assessed to be of mixed nature with several studies having problems with attrition. None of the studies were blinded. Most of the outcomes were reported in only one trial, with high or unclear risk of bias with the exception of the only two outcomes where meta-analysis could be performed (stillbirths and early neonatal deaths) were risk of bias was low or unclear. Therefore, the results need to be interpreted with caution.

Clinical implications
TBA training may be the only means to optimize the use of community-level health workers for maternal and newborn health in settings where there is insufficient number of a skilled birth attendants or limited access to health facilities, and women prefer TBAs.

**Further research**

The review highlights the need for high quality large trials reporting on similar relevant maternal and perinatal outcomes, training methods, supervision, better evaluation of health outcomes, with sufficient contrast between intervention and control groups to adequately assess the effect of TBA training on the pregnancy outcomes.

**Cochrane review**

Citation: Sibley LM, Sipe TA, Barry D. Traditional birth attendant training for improving health behaviours and pregnancy outcomes. *Cochrane Database of Systematic Reviews* 2012, Issue 8. Art. No.: CD005460. DOI: 10.1002/14651858.CD005460.pub3.

**Abstract**

Between the 1970s and 1990s, the World Health Organization promoted traditional birth attendant (TBA) training as one strategy to reduce maternal and neonatal mortality. To date, evidence in support of TBA training is limited but promising for some mortality outcomes.

To assess the effects of TBA training on health behaviours and pregnancy outcomes.

We searched the Cochrane Pregnancy and Childbirth Group's Trials Register (18 June 2012), citation alerts from our work and reference lists of studies identified in the search.

Published and unpublished randomised controlled trials (RCT), comparing trained versus untrained TBAs, additionally trained versus trained TBAs, or women cared for/living in areas served by TBAs.

Three authors independently assessed study quality and extracted data in the original and first update review. Three authors and one external reviewer independently assessed study quality and two extracted data in this second update.

Six studies involving over 1345 TBAs, more than 32,000 women and approximately 57,000 births that examined the effects of TBA training for trained versus untrained TBAs (one study) and additionally trained TBA training versus trained TBAs (five studies) are included in this review. These studies consist of individual randomised trials (two studies) and cluster-randomised trials (four studies). The primary outcomes across the sample of studies were perinatal deaths, stillbirths and neonatal deaths (early, late and overall).

Trained TBAs versus untrained TBAs: one cluster-randomised trial found a significantly lower perinatal death rate in the trained versus untrained TBA clusters (adjusted odds ratio (OR) 0.70, 95% confidence interval (CI) 0.59 to 0.83), lower stillbirth rate (adjusted OR 0.69, 95% CI 0.57 to 0.83) and lower neonatal death rate (adjusted OR 0.71, 95% CI 0.61 to 0.82). This study also found the maternal death rate was lower but not significant (adjusted OR 0.74, 95% CI 0.45 to 1.22).
Additionally trained TBAs versus trained TBAs: three large cluster-randomised trials compared TBAs who received additional training in initial steps of resuscitation, including bag-valve-mask ventilation, with TBAs who had received basic training in safe, clean delivery and immediate newborn care. Basic training included mouth-to-mouth resuscitation (two studies) or bag-valve-mask resuscitation (one study). There was no significant difference in the perinatal death rate between the intervention and control clusters (one study, adjusted OR 0.79, 95% CI 0.61 to 1.02) and no significant difference in late neonatal death rate between intervention and control clusters (one study, adjusted risk ratio (RR) 0.47, 95% CI 0.20 to 1.11). The neonatal death rate, however, was 45% lower in intervention compared with the control clusters (one study, 22.8% versus 40.2%, adjusted RR 0.54, 95% CI 0.32 to 0.92).

We conducted a meta-analysis on two outcomes: stillbirths and early neonatal death. There was no significant difference between the additionally trained TBAs versus trained TBAs for stillbirths (two studies, mean weighted adjusted RR 0.99, 95% CI 0.76 to 1.28) or early neonatal death rate (three studies, mean weighted adjusted RR 0.83, 95% CI 0.68 to 1.01).

The results are promising for some outcomes (perinatal death, stillbirth and neonatal death). However, most outcomes are reported in only one study. A lack of contrast in training in the intervention and control clusters may have contributed to the null result for stillbirths and an insufficient number of studies may have contributed to the failure to achieve significance for early neonatal deaths. Despite the additional studies included in this updated systematic review, there remains insufficient evidence to establish the potential of TBA training to improve peri-neonatal mortality.


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