

Local Multi-professional training for obstetric emergencies – Review of the published evidence

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Introduction

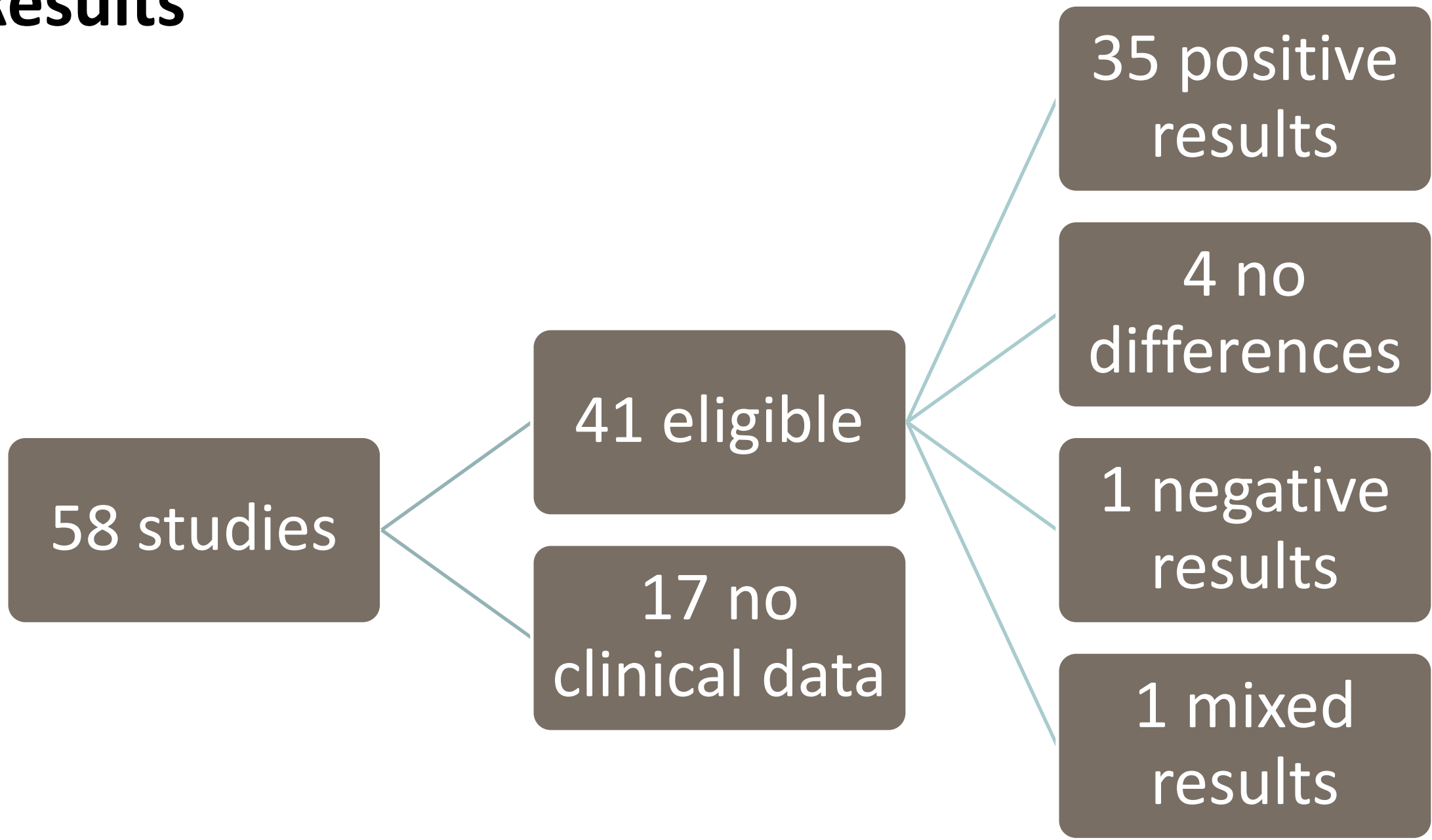
PROMPT Training has 14 modules: Team working, Basic life support and maternal collapse, maternal cardiac arrest and advanced life support, maternal anaesthetic emergencies, fetal monitoring in labour, preeclampsia and eclampsia, maternal sepsis, major obstetric haemorrhage, shoulder dystocia, umbilical cord prolapse, vaginal breech birth, twin birth, acute uterine inversion, basic newborn resuscitation. The objective of the study is to test the hypothesis that PROMPT is an effective training.

Methods

A systematic literature review of all published studies (n=58) using ‘PROMPT’ from 2005 until 2020, reporting changes in clinical and process outcomes post training, including:

- Changes in knowledge and/or behaviour
- Shoulder dystocia & permanent brachial plexus injury
- Adverse neonatal outcomes including low 5-minute Apgar scores, low pH, hypoxic ischemic encephalopathy
- Preeclampsia and eclampsia
- Umbilical cord prolapse
- reduction in claims and litigation costs

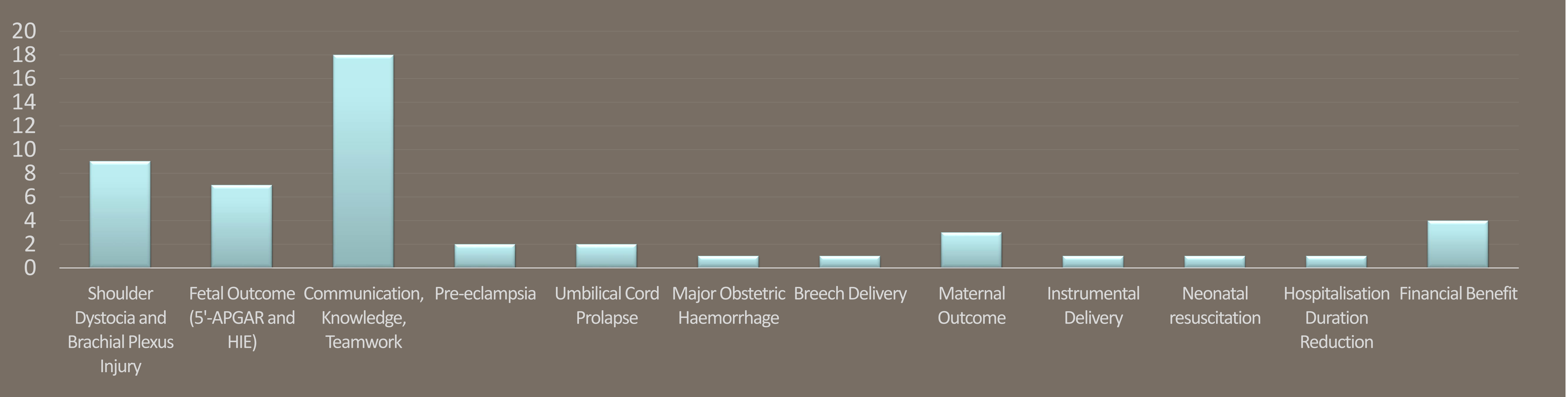
Results



From the 58 studies a total of 41 were eligible. 17 were letters or manuscripts without clinical data. 35/41 eligible studies reported improvements in 8/14 of the training modules, including:

- Improved teamwork and communication
- Improved management of shoulder dystocia and reduction of brachial plexus injury
- Reduction in HIE and low 5’ Apgar Scores
- Improved management of pre-eclampsia, inc admin of MgSO4
- Reduced DDI for umbilical cord prolapse
- Improved management of postpartum haemorrhage & maternal cardiac arrest
- Reduction of the mean hospitalization time
- Reduction in litigation costs

Diagrammatic Representation of the studies with positive findings, according to the examined topic.



- **Four** studies reported no improvements. The main reasons were lack of authentic training materials, not training more than 95% of labour ward staff annually and the absence of continuation of the training.
- One study showed a worse 5’-APGAR-Score after implementing the Training in 12 maternity units in Scotland, but the content and the authenticity of the training differed between the centres. **(THISTLE 2017)**
- Another study showed mixed results: increased rates of hysterectomy and embolism following postpartum haemorrhage and a reduction of newborn injuries following shoulder dystocia. The training was still cost-effective when repeated in 3-month intervals. **(TOSTI 2017)**
- Our **own study** at the Hannover Medical School demonstrated a substantial reduction of adverse outcomes after 2½ years of PROMPT training.

Conclusions

Local Multi-Professional Training for Obstetric Emergencies is effective in reducing adverse outcomes of rare and severe obstetric complications.

Local Multi-Professional Training for Obstetric Emergencies is also cost-effective by improving outcomes to reduce litigation costs.

However, the training requires authentic local implementation over a number of years for maximum benefit to women, their babies and their families.