

# PRACTICAL OBSTETRIC MULTI PROFESSIONAL TRAINING (PROMPT) - EVIDENCE OF EFFECTIVENESS

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## Introduction

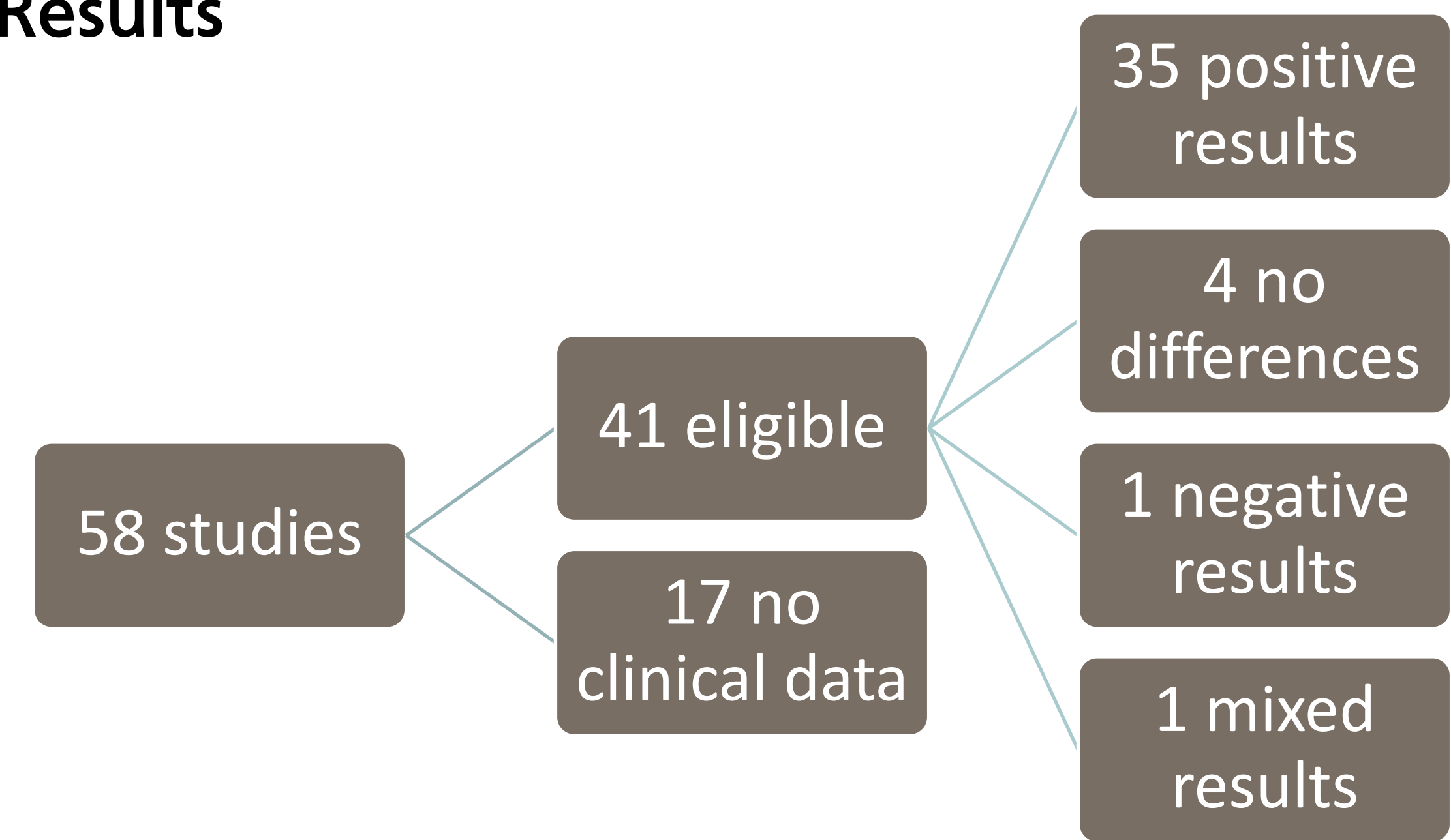
PROMPT Training has 14 modules: Team working, Basic life support and maternal collapse, maternal cardiac arrest and advanced life support, maternal anaesthetic emergencies, fetal monitoring in labour, preeclampsia and eclampsia, maternal sepsis, major obstetric haemorrhage, shoulder dystocia, umbilical 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, looking at the rare but potentially life-threatening complications such as 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, increase of knowledge of the trainees, reduction in claims and in the cost of liability court cases.

As a literature source we used the studies published on the website of PROMPT New Zealand (<https://www.promptnz.org/evidence-of-effectiveness>).

## Results



From the 58 studies a total of 41 were eligible. 17 were letters or manuscripts without clinical data. 35/41 eligible studies showed an improvement in 8/14 of the modules trained by PROMPT. In particular, better teamwork and communication, better management of shoulder dystocia and reduction of brachial plexus injury, reduction of hypoxic ischemic encephalopathy and low 5'-APGAR-Scores, better management of pre-eclampsia and administration of MgSO4, reduced DDI for umbilical cord prolapse, better management of postpartum haemorrhage, better management of vaginal breech and instrumental deliveries, better management of maternal cardiac arrest and neonatal resuscitation, as well as a reduction of the mean hospitalization time of the patients and a reduction of litigation costs, showing cost-effectiveness of the training.

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



- **Four** studies demonstrated no improvements. The main reasons were lack of authentic training materials, not training more than 95% of labor 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 showed a substantial reduction of adverse outcomes already after 2½ years of PROMPT training.

## Conclusions

PROMPT Training is effective in reducing adverse outcomes of rare but severe obstetric complications and also cost-effective, if the training is implemented authentically and continuously.