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## A systematic review of telephone support for women during pregnancy and the early postpartum period

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### **CRD summary**

This review assessed the effects of telephone support on smoking, preterm birth, low birth weight, breastfeeding and post-partum depression. The authors concluded that proactive telephone support may improve some outcomes and further research was warranted. These conclusions reflect the limited evidence found and seem appropriate.

### **Authors' objectives**

To assess the effects of telephone support on smoking, preterm birth, low birth weight, breastfeeding and post-partum depression.

### **Searching**

The authors searched the Cochrane Pregnancy and Childbirth Group trials register, Cochrane Central Register of Controlled Trials, MEDLINE, EMBASE and CINAHL to 2006 without language restrictions. Keywords used were reported. Secondary references were scanned and experts in the field contacted.

### **Study selection**

Published or unpublished randomised controlled trials (RCTs) of telephone-based interventions to support women antenatally, up to two months post-partum or both were eligible for the review. Interventions had to focus on reducing adverse outcomes related to smoking, premature birth (less than 37 weeks gestation), low birth weight (less than 2,500g), breastfeeding duration or post-partum depression. Studies of early discharge interventions or reactive telephone hotlines were excluded.

Included trials involved telephone calls to study participants as the main intervention or as an adjunct intervention and covered a wide range of outcomes. Interventions were delivered by health professionals in most trials; some trials of peer support were included.

Two reviewers independently selected studies for inclusion. Disagreements were resolved through discussion and consensus.

### **Assessment of study quality**

Methodological quality was assessed according to the recommendations of the Cochrane Collaboration that covered generation of allocation sequence, allocation concealment, blinding of outcome assessors, completeness of follow-up and intention-to-treat analysis.

Two reviewers independently assessed validity. Disagreements were resolved through discussion and consensus.

### **Data extraction**

Data were extracted to derive relative risks (RR) for dichotomous outcomes and mean differences for continuous outcomes. Two reviewers independently extracted data using a piloted form. Investigators were contacted for unpublished or missing data, if necessary, and data were sought to allow intention-to-treat analysis.

### **Methods of synthesis**

Trials that evaluated the same outcome were combined by fixed-effect meta-analysis if significant heterogeneity ( $I^2 > 50\%$ ) was not present. If significant heterogeneity was found, random-effects meta-analysis was used and heterogeneity was explored by sensitivity analysis excluding the trials considered most at risk of selection or attrition bias. Prespecified subgroup analyses were performed to investigate the effects of intervention type (primary or adjunct), intervention initiator and intervention provider (health professional or layperson).

### Results of the review

Fourteen RCTs with 8,037 participants (range 41 to 1,970) were included. Methodological quality of the included trials was moderate. Five trials did not report method of randomisation, allocation concealment was unclear in four trials and seven trials did not report a power calculation.

Compared with usual care, telephone support had a statistically significant beneficial effect on smoking relapse 24 weeks post-partum (RR 0.73, 95% CI: 0.58 to 0.93; two trials), low birth weight (RR 0.78, 95% CI: 0.63 to 0.97; three trials), any breastfeeding (RR 1.18, 95% CI: 1.05 to 1.33; three trials) and exclusive breastfeeding (RR 1.45, 95% CI: 1.12 to 1.87; two trials). One small RCT found a significant decrease in depression four and eight weeks post-partum for telephone support compared with usual care. Effects on smoking cessation and premature birth were not significant. Significant heterogeneity was found for smoking outcomes. Results of subgroup analyses were reported.

### Authors' conclusions

Proactive telephone support for pregnant and post-partum women may play a role in improving some outcomes. Further research was warranted.

### CRD commentary

Inclusion and exclusion criteria were clear. The authors searched a range of sources without language restrictions and made some attempts to locate unpublished studies, although risk of publication bias was not formally evaluated. Validity was assessed using appropriate criteria. Study selection, validity assessment and data extraction were performed by two reviewers, thus minimising the risk of errors and bias during the review process. Some relevant details of included studies were presented. However, results of individual trials and validity assessment results were not reported, which made it difficult for the reader to form their own interpretation of the evidence. Trials were combined by meta-analysis and heterogeneity was investigated. Significant heterogeneity was found for smoking-related outcomes, which suggested that meta-analysis results for these outcomes should be treated with caution. Overall, the authors' cautious conclusions reflect the limitations of the evidence base; their recommendations for further research appear justified.

### Implications of the review for practice and research

**Practice:** The authors did not state any implications for practice.

**Research:** The authors stated that further research was warranted to evaluate telephone support interventions for premature birth, breastfeeding and post-partum depression.

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