August 2016 – SUPPORT Summary of a systematic review

Does additional social support during at-risk pregnancy improve perinatal outcomes?

Additional social support has been advocated for socially disadvantaged pregnant women because they are at greater risk of experiencing adverse birth outcomes. Support may include advice and counselling (e.g. about nutrition, rest, stress management, or the use of alcohol), tangible assistance (e.g. transportation to clinic appointments, or household help), and emotional support (e.g. reassurance, or sympathetic listening). The additional social support may be delivered by multidisciplinary teams of healthcare workers or lay health workers during home visits, clinic appointments or by telephone.

Key messages

- **Compared to usual care, providing additional social support during an at-risk pregnancy probably leads to fewer caesarean births and may lead to fewer antenatal hospital admissions.**
- **Compared to usual care, providing additional social support during an at-risk pregnancy probably has little or no effect on the incidence of low birth weight, preterm births, or perinatal deaths.**
- **The studies included in this review were conducted among socially disadvantaged groups in middle- and high-income countries. Disadvantaged groups in some high- and middle-income countries may share similar characteristics to disadvantaged groups in low-income countries, and the results of these studies may therefore be transferable to low-income country settings.**

Who is this summary for?

People making decisions concerning additional social support for socially disadvataged women during pregnancy

! This summary includes:

- **Key findings** from research based on a systematic review
- **Considerations about the relevance of this research** for low-income countries

X Not included:

- Recommendations
- Additional evidence not included in the systematic review
- Detailed descriptions of interventions or their implementation

This summary is based on the following systematic review:

Hodnett ED, Fredericks S, Weston J. Support during pregnancy for women at increased risk of low birthweight babies. *Cochrane Database of Systematic Reviews* 2010, Issue 6. Art. No.: CD000198.

What is a systematic review?

A summary of studies addressing a clearly formulated question that uses systematic and explicit methods to identify, select, and critically appraise the relevant research, and to collect and analyse data from the included studies

SUPPORT was an international project to support the use of policy relevant reviews and trials to inform decisions about maternal and child health in low- and middle-income countries, funded by the European Commission (FP6) and the Canadian Institutes of Health Research.

Glossary of terms used in this report: www.supportsummaries.org/glossary-of-terms

Background references on this topic: See back page

Background

Health problems associated with low birth weight (<2,500 grams) consume a significant proportion of healthcare resources. In low-income countries, chronic maternal malnutrition and preterm births are major causes of low birth weight.

This summary is based on a review which assessed the effects of additional social support during pregnancy for women at increased risk of low birth weight babies, compared to usual care. The authors included studies if the additional support was provided during the pregnancy and continued until the birth of the baby, or was provided into the postnatal period.

How this summary was prepared

After searching widely for systematic reviews that can help inform decisions about health systems, we have selected ones that provide information that is relevant to low-income countries. The methods used to assess the reliability of the review and to make judgements about its relevance are described here: www.supportsummaries.org/how-support-summaries-are-prepared/

Knowing what's not known is important

A reliable review might not find any studies from low-income countries or might not find any well-designed studies. Although that is disappointing, it is important to know what is not known as well as what is known.

A lack of evidence does not mean a lack of effects. It means the effects are uncertain. When there is a lack of evidence, consideration should be given to monitoring and evaluating the effects of the intervention, if it is used.

About the systematic review underlying this summary

Review objective: To assess the effects of programmes offering additional social support compared with routine care for pregnant women who are believed to be at high risk for giving birth to babies that are either preterm or weigh less than 2,500 grams, or both, at birth.

Types of	What the review authors searched for	What the review authors found
Study designs & Interventions	Randomised trials of standardized or individualized programmes of additional social support, provided either during home visits, regular antenatal clinic visits, or by telephone on several occasions during pregnancy	17 randomised trials. 14 of the studies involved one-to-one support and the rest involved both one-to-one and group sessions.
Participants	Pregnant women judged to be at risk of having preterm or growth-restricted babies, or both	12,264 pregnant women
Settings	Not pre-specified	Australia, Great Britain, France, Latin America, South Africa, and the USA
Outcomes	Caesarean section, gestational age <37 weeks, birth weight <2500 g, stillbirth/neonatal death	Caesarean section (9 studies), gestational age <37 weeks (11), birth weight <2,500 g (11), stillbirth/neonatal death (11), antenatal hospital admission (3)
Date of most recent search: January 2010		
Limitations: This is a well-conducted systematic review with only minor limitations.		

Hodnett ED, Fredericks S, Weston J. Support during pregnancy for women at increased risk of low birth weight babies. *Cochrane Database of Systematic Reviews* 2010, Issue 6. Art. No.: CD000198.

Summary of findings

The review identified 17 trials with a total study population of 12,264 women. Support was provided by midwives or nurses (11 studies), social workers (4), a multi-disciplinary team of nurses, psychologists, midwives, or by trained lay health workers (2 studies).

- **Additional social support during at-risk pregnancy, compared to usual care, probably leads to little or no difference in the incidence of low birth weight, preterm births, stillbirths, or neonatal deaths. The certainty of this evidence is moderate.**
- **Additional social support during at-risk pregnancy, compared to usual care, probably leads to fewer Caesarean sections. The certainty of this evidence is moderate.**
- **Additional social support during at-risk pregnancy, compared to usual care, may lead to fewer antenatal hospital admissions. The certainty of this evidence is low.**

About the certainty of the evidence (GRADE) *

⊕⊕⊕⊕
High: This research provides a very good indication of the likely effect. The likelihood that the effect will be substantially different† is low.

⊕⊕⊕◯
Moderate: This research provides a good indication of the likely effect. The likelihood that the effect will be substantially different† is moderate.

⊕⊕◯◯
Low: This research provides some indication of the likely effect. However, the likelihood that it will be substantially different† is high.

⊕◯◯◯
Very low: This research does not provide a reliable indication of the likely effect. The likelihood that the effect will be substantially different† is very high.

* This is sometimes referred to as 'quality of evidence' or 'confidence in the estimate'.

† Substantially different = a large enough difference that it might affect a decision

See last page for more information.

Additional social support versus usual care during at-risk pregnancy

People Pregnant women judged to be at risk of having preterm or growth-restricted babies, or both
Settings Australia, Great Britain, France, Latin America, South Africa, and the USA
Intervention Additional social support
Comparison Usual care

Outcomes	Absolute effect*		Relative effect (95% CI)	Certainty of the evidence (GRADE)
	With usual care	**With additional social support**		
Low birth weight	132 per 1000	121 per 1000	RR 0.92 (0.83 to 1.03)	⊕⊕⊕◯ Moderate
	Difference: 11 fewer births <2500 gram per 1000 births (Margin of error: 22 fewer cases to 4 more)			
Preterm births	136 per 1000	125 per 1000	RR 0.92 (0.83 to 1.01)	⊕⊕⊕◯ Moderate
	Difference: 11 fewer births <37 weeks per 1000 births (Margin of error: 23 fewer cases to 1 more)			
Perinatal deaths	27 per 1000	26 per 1000	RR 0.96 (0.74 to 1.26)	⊕⊕⊕◯ Moderate
	Difference: 1 fewer death per 1000 births (Margin of error: 7 fewer cases to 7 more)			
Caesarean births	226 per 1000	197 per 1000	RR 0.87 (0.78 to 0.97)	⊕⊕⊕◯ Moderate
	Difference: 29 fewer caesarean births per 1000 births (Margin of error: 7 to 50 fewer cases)			
Antenatal hospital admissions	538 per 1000	425 per 1000	RR 0.79 (0.68 to 0.92)	⊕⊕◯◯ Low
	Difference: 113 fewer antenatal hospital admissions per 1000 births (Margin of error: 43 to 172 fewer cases)			

Margin of error = Confidence interval (95% CI) RR: Risk ratio GRADE: GRADE Working Group grades of evidence (see above and last page)

* The risk WITHOUT the intervention is based on usual care. The corresponding risk WITH the intervention (and the 95% confidence interval for the difference) is based on the overall relative effect (and its 95% confidence interval).

Relevance of the review for low-income countries

➔ Findings	▷ Interpretation*
APPLICABILITY	
➔ **The studies were from a wide range of settings. Socially disadavantaged groups in both high-income and middle-income countries were included.**	▷ *Disadvantaged groups in some high- and middle-income countries may share common characteristics with disadvantaged groups in low-income countries. The findings may therefore be transferable to low-income country settings.*
EQUITY	
➔ **The studies were focused on socio-economically vulnerable groups, including people with low levels of income and education.** ➔ **Social support was mostly provided by appropriately trained professional healthcare workers.**	▷ *The challenges faced by socio-economically vulnerable women in low-income countries can be complex and extensive. This might limit the potential for them to benefit from additional social support, if these challenges are not addressed. Such women may, for example, need to travel long distances to access healthcare facilities. When they arrive, staff shortages (especially in rural areas) may impact on the quality of care they receive. Many vulnerable women may choose not to attend facility-based antenatal care and may deliver their children in their own homes instead.* ▷ *Human resource levels in low-income settings, especially in rural areas, may be limited. This might also limit the potential for them to benefit from additional social support, if such shortages are not addressed.*
ECONOMIC CONSIDERATIONS	
➔ **Most of the study interventions were facility-based and performed by professional healthcare workers.** ➔ **Social support in a small number of studies was delivered by trained lay health workers.**	▷ *Professional healthcare workers in many low-income countries are often overstretched and the introduction of facility-based interventions may not be feasible or may require additional health workers. The cost of providing additional health professionals or trained lay health workers is likely to be highly variable. An estimate of such costs must be based on an understanding of specific local settings and conditions.*
MONITORING & EVALUATION	
➔ **This review showed that additional social support results in little or no difference in important perinatal outcomes**	▷ *Any decision to implement additional social support programmes should identify what changes in outcomes the programme is intended to achieve and a plan for monitoring those outcomes and evaluating the impact of the programme on those outcomes.*

*Judgements made by the authors of this summary, not necessarily those of the review authors, based on the findings of the review and consultation with researchers and policymakers in low-income countries. For additional details about how these judgements were made see: www.supportsummaries.org/methods

Additional information

Related literature

Brooten D, Youngblut JM, Brown L, Finkler SA, Neff DF, Madigan E. A randomized trial of nurse specialist home care for women with high-risk pregnancies: outcomes and costs. *American Journal of Managed Care* 2001; 7:793–803.

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Heins HC, Nance NW, McCarthy BJ, Efird CM. A randomized trial of nurse-midwifery prenatal care to reduce low birth weight. *Obstetrics & Gynecology* 1990; 75:341–45.

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Conflict of interest

None declared. For details, see: www.supportsummaries.org/coi

Acknowledgements

This summary has been peer reviewed by: SURE, Uganda; Ellen D Hodnett and Hanna Bergman

This review should be cited as

Hodnett ED, Fredericks S, Weston J. Support during pregnancy for women at increased risk of low birth weight babies. *Cochrane Database of Systematic Reviews* 2010, Issue 6. Art. No.: CD000198.

The summary should be cited as

Wiysonge CS. Does additional social support during at-risk pregnancy improve perinatal outcomes? A SUPPORT Summary of a systematic review. August 2016. www.supportsummaries.org

This summary was prepared with additional support from:

The **South African Medical Research Council** aims to improve South Africa's health and quality of life through promoting and conducting relevant and responsive health research. www.mrc.ac.za/

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About certainty of the evidence (GRADE)

The "certainty of the evidence" is an assessment of how good an indication the research provides of the likely effect; i.e. the likelihood that the effect will be substantially different from what the research found. By "substantially different" we mean a large enough difference that it might affect a decision. These judgements are made using the GRADE system, and are provided for each outcome. The judgements are based on the study design (randomised trials versus observational studies), factors that reduce the certainty (risk of bias, inconsistency, indirectness, imprecision, and publication bias) and factors that increase the certainty (a large effect, a dose response relationship, and plausible confounding). For each outcome, the certainty of the evidence is rated as high, moderate, low or very low using the definitions on page 3.

For more information about GRADE: www.supportsummaries.org/grade

SUPPORT collaborators:

The Cochrane Effective Practice and Organisation of Care Group (EPOC) is part of the Cochrane Collaboration. The Norwegian EPOC satellite supports the production of Cochrane reviews relevant to health systems in low- and middle-income countries . www.epocoslo.cochrane.org

The Evidence-Informed Policy Network (EVIPNet) is an initiative to promote the use of health research in policymaking in low- and middle-income countries. www.evipnet.org

The Alliance for Health Policy and Systems Research (HPSR) is an international collaboration that promotes the generation and use of health policy and systems research in low- and middle-income countries. www.who.int/alliance-hpsr

Norad, the Norwegian Agency for Development Cooperation, supports the Norwegian EPOC satellite and the production of SUPPORT Summaries. www.norad.no

The Effective Health Care Research Consortium is an international partnership that prepares Cochrane reviews relevant to low-income countries. www.evidence4health.org

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