September 2009 – SUPPORT Summary of a systematic review

Which primary care-based interventions promote breastfeeding?

Primary care-based interventions for promoting breastfeeding in this setting were categorised as education in person or telephone support including peer counselling, written material, early contacts and commercial discharge packets. Education was defined as individual instruction sessions or group classes that contained structured content. Interventions were categorised as support when they provided telephone or in-person (clinic, hospital, or home) social support, advice and encouragement. Early maternal contact was defined as a period of time, typically 10-45 minutes, of skin to skin contact between mother and infant soon after birth.

Key messages

- **Breastfeeding education increases breastfeeding initiation and short term continuation up to 3 months, but has little or no impact on long term duration up to 6 months. The impact of education was greatest in populations with baseline breastfeeding rate less than 50%.**
- **Breastfeeding support increases short and long-term breastfeeding duration but has little or no impact on breastfeeding initiation.**
- **Combining breastfeeding education and support increases initiation as well as short and long-term continuation of breastfeeding**
- **The increases in both initiation and short-tem continuation of breastfeeding when breastfeeding support and education are combined are not substantially different from those achieved with education alone.**
- **All the studies included in this summary were conducted in high income countries among vulnerable groups such as low-income, low educational level, and Black populations.**
- **Factors to consider when assessing the transferability of the findings to a particular low or middle-income setting include:**
  - prevalence of (exclusive) breastfeeding,
  - income status,
  - access to primary care facilities, and
  - antenatal HIV prevalence.

Who is this summary for?

People making decisions concerning interventions for increasing child survival

This summary includes:

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

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:

Guise JM, Palda V, Westhoff C, Chan BKS, Helfand M, Lieu TA. The effectiveness of Primary Care-Based Interventions to Promote Breastfeeding: Systematic Evidence Review and Meta-Analysis for the US Preventive Task Force. Ann Fam Med. 2003;1:70-80.

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 – an international collaboration funded by the EU 6th Framework Programme to support the use of policy relevant reviews and trials to inform decisions about maternal and child health in low- and middle-income countries.
www.support-collaboration.org

Glossary of terms used in this report:
www.support-collaboration.org/summaries/explanations.htm

Background references on this topic:
See back page.

Background

Breast feeding plays an important role in child survival. In the United States vulnerable groups defined as low-income, low education level and black populations have low breastfeeding rates. It is important to establish whether primary care-based interventions can improve breastfeeding rates in these populations. By contrast, in some low and middle-income countries the category of women who are most likely not to breastfeed are the affluent and highly educated. These are usually career women who have to work in a system that does not give them a long maternity leave nor stability of employment.

This summary is based on a systematic review published in 2003 by Guise and colleagues on the effects of primary care-based interventions on breastfeeding initiation and continuation.

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- and middle-income countries. The methods used to assess the quality of the review and to make judgements about its relevance are described here: www.support-collaboration.org/summaries/methods.htm

Knowing what's not known is important

A good quality review might not find any studies from low- and middle-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.

About the systematic review underlying this summary

Review objective: To evaluate the effectiveness of primary care-based interventions on the initiation and duration of breastfeeding.

	What the review authors searched for	What the review authors found
Interventions	Randomised controlled trials and cohort studies of interventions to improve breastfeeding initiation and duration by variety of providers.	35 studies were included and analysed. 22 randomised controlled trials, 8 non-randomised controlled trials and 5 systematic reviews.
Participants	Women from vulnerable groups delivering at facilities	Mainly studies from the United States had women from vulnerable groups. Studies from other settings did not specify the characteristics of the women.
Settings	Interventions originating from a primary healthcare setting in developed countries	Studies from United States (17), United Kingdom (6), Australia (2), Ireland (1), Canada (2), Sweden (1), and Italy (1) were included.
Outcomes	Initiation of breastfeeding Breastfeeding for 1-3 months Breastfeeding for 4-6 months	Initiation of breastfeeding (9 studies) Breastfeeding for 1-3 months (12 studies) Breastfeeding for 4-6 months (7 studies)
Date of most recent search: August 2003		
Limitations: This was an exhaustive review of studies conducted in developed countries and published in English.		

Guise JM, Palda V, Westhoff C, Chan BKS, Helfand M, Lieu TA. The effectiveness of primary care-based Interventions to promote breastfeeding: systematic evidence review and meta-analysis for the US Preventive Task Force. *Ann Fam Med* 2003;1:70-80.

Summary of findings

The review included 35 studies conducted in the United States, United Kingdom, Australia, Ireland, Canada, Sweden, and Italy: 22 randomised controlled trials (RCTs), 8 non-randomised controlled trials, and 5 systematic reviews. Only the findings of the RCTs and non-randomised controlled trials are included in this summary.

1) Breastfeeding education

Twelve RCTs conducted in the US, UK and Australia assessed the impact of antepartum individual or group education interventions on initiation and duration of breastfeeding. The studies found that:

➔ **Breastfeeding education during pregnancy increases breastfeeding initiation and short-term continuation up to 3 months, but has little or no impact on continuation of breastfeeding up to 6 months.**

About the quality of evidence (GRADE)

⊕⊕⊕⊕
High: Further research is very unlikely to change our confidence in the estimate of effect.

⊕⊕⊕◯
Moderate: Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate.

⊕⊕◯◯
Low: Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate.

⊕◯◯◯
Very low: We are very uncertain about the estimate.

For more information, see last page

Breastfeeding education

Patients or population: Pregnant women
Settings: Primary care in high-income countries
Intervention: Individual or group education by lactation specialists or nurses
Comparison: No intervention

Outcomes	Impact	Number of participants (studies)	Quality of the evidence (GRADE)
Breastfeeding initiation	**+ 23% mean increase** (95% CI: +12 to +34)	315 (7 studies)	⊕⊕⊕⊕ High
Short-term continuation of breastfeeding	**+ 39% mean increase** (95% CI: +27 to +50)	773 (8 studies)	⊕⊕⊕⊕ High
Long-term continuation of breastfeeding	**+ 4% mean increase** (95% CI: -6 to +16)	695 (5 studies)	⊕⊕⊕⊕ High

p: p-value GRADE: GRADE Working Group grades of evidence (see above and last page)

2) Breastfeeding support

Eight RCTs examined the impact of in-person or telephone support on breastfeeding initiation and duration. The timing of support programmes was divided; exclusively antepartum (3 studies), exclusively postpartum (3 studies), and both antepartum and postpartum (2 studies). The studies found that:

➔ **Breastfeeding support increases short and long-term breastfeeding duration but probably has little or no impact on breastfeeding initiation.**

Breastfeeding support

Patients or population: Pregnant women
Settings: Primary care in high-income countries
Intervention: In-person or telephone support
Comparison: No intervention

Outcomes	Impact	Number of participants (studies)	Quality of the evidence (GRADE)
Breastfeeding initiation	**+ 6% mean increase** (95% CI:-2 to +15)	626 (3 studies)	⨁⨁⨁◯ Moderate
Short-term continuation of breastfeeding	**+ 11% mean increase** (95% CI: +3 to +19)	962 (5 studies)	⨁⨁⨁⨁ High
Long-term continuation of breastfeeding	**+ 8% mean increase** (95% CI: +2 to +16)	1226 (5 studies)	⨁⨁⨁⨁ High

p: p-value GRADE: GRADE Working Group grades of evidence (see above and last page)

3) Breastfeeding support with educational programmes

Four RCTs combined breastfeeding support with educational programmes and found that:

- ➔ **Combining breastfeeding education and support increases initiation and (short and long-term) continuation of breastfeeding**
- ➔ **The increases in both initiation and continuation of breastfeeding are larger when support and education are combined than with support alone**
- ➔ **The increases in both initiation and short-tem continuation of breastfeeding when breastfeeding support and education are combined are not substantially different from those achieved with education alone.**

Breastfeeding education and support

Patients or population: Pregnant women
Settings: Primary care in high-income countries
Intervention: Support and education
Comparison: No intervention

Outcomes	Impact	Number of participants (studies)	Quality of the evidence (GRADE)
Breastfeeding initiation	**+ 21% mean increase** (95% CI: +7 to +35)	170 (2 studies)	⨁⨁⨁◯ Moderate
Short-term continuation of breastfeeding	**+ 36% mean increase** (95% CI: +22 to +49)	163 (2 studies)	⨁⨁⨁◯ Moderate
Long-term continuation of breastfeeding	**+ 13 % mean increase** (95% CI: +1 to +25)	168 (2 studies)	⨁⨁⨁◯ Moderate

p: p-value GRADE: GRADE Working Group grades of evidence (see above and last page)

Relevance of the review for low- and middle-income countries

➔ Findings	▷ Interpretation*
APPLICABILITY	
➔ The studies included covered a variety of settings in high income countries. However, the target population were vulnerable groups.	▷ *Even though these studies targeted vulnerable groups, their applicability to low-income countries is limited because of the marked differences in health systems between the two settings.* ▷ *In high HIV prevelance settings the promotion of breastfeeding is complicated by the potential risk of transmission of HIV through breast milk.*
EQUITY	
➔ All the studies targeted vulnerable groups in high-income countries such as low-income, low educational level, and Black populations.	▷ *The circumstances of vulnerable women in low and middle-income countries are not only limited to their household socio-economic status. Their access to health care facilities is often characterised by long travelling distances and staff shortages, especially in rural areas. As such many of the poor women deliver from their homes, sometimes attended to by traditional birth attendants. Therefore, facility-based interventions could exarcebate the existing inequities.*
ECONOMIC CONSIDERATIONS	
➔ ➔ These interventions were facility-based and mainly done by professional healthcare workers. Community-based interventions were excluded from this trial.	▷ *Health facility utilisation becomes an important factor. If healthcare workers are already overstretched as is usually the case in many low-income countries, introduction of these interventions may not be feasible or may compromise other aspects of healthcare.*
MONITORING & EVALUATION	
➔ Compared with support alone studies that combined breastfeeding education and support produced larger increases in initiation.	▷ *These interventions differed in the types of materials used and length of the interventions. Further research is required to identify appropriate materials, length and intensity of these interventions.* ▷ *Women in low-income countries (especially rural women) often breastfeed for at least 6 month, and the problem with them is that of lack of exclusive breastfeeding and poor weaning practices. Further research is therefore needed to assess whether the interventions identified by this review are applicable to exclusive breastfeeding.*

*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- and middle-income countries. For additional details about how these judgements were made see: http://www.support-collaboration.org/summaries/methods.htm

Additional information

Related literature

Bland R. M, Little KE, Coovadia HM, Coutsoudis A, Rollins NC, Newell ML. Intervention to promote exclusive breast-feeding for the first 6 months of life in a high HIV prevalence area. *AIDS* 2008;22: 883-91.

Coutinho SB, de Lira PL, de Carvalho Lima M, Ashworth A. Comparison of the effect of two systems for the promotion of exclusive breastfeeding. *Lancet* 2005;366:1094-100.

Haider R, Ashworth A, Kabir I, Huttly SR. Effect of community-based peer counsellors on exclusive breastfeeding practices in Dhaka, Bangladesh: a randomised controlled trial [see comments]. *Lancet,* 2000;356:1643-47.

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Conflict of interest

None declared. For details, see: www.support-collaboration.org/summaries/coi.htm

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Keywords

All Summaries: evidence-informed health policy, evidence-based, systematic review, health systems research, health care, low- and middle-income countries, developing countries, primary health care.

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

The South African Cochrane Centre, the only centre of the international Cochrane Collaboration in Africa, aims to ensure that health care decision making in Africa is informed by high quality, timely and relevant research evidence. www.mrc.ac.za/cochrane/cochrane.htm

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GLOBINF is a thematic research area focusing on ""Prevention of major global infections - HIV/AIDS and tuberculosis" at the Medical faculty, University of Oslo in collaboration with the Norwegian Institute of Public Health, Norwegian Knowledge Centre for the Health Services and Ullevål University Hospital.

About quality of evidence (GRADE)

The quality of the evidence is a judgement about the extent to which we can be confident that the estimates of effect are correct. These judgements are made using the GRADE system, and are provided for each outcome. The judgements are based on the type of study design (randomised trials versus observational studies), the risk of bias, the consistency of the results across studies, and the precision of the overall estimate across studies. For each outcome, the quality of the evidence is rated as high, moderate, low or very low using the definitions on page 3.

For more information about GRADE:
www.support-collaboration.org/summaries/grade.htm

SUPPORT collaborators:

The Alliance for Health Policy and Systems Research (HPSR) is an international collaboration aiming to promote the generation and use of health policy and systems research as a means to improve the health systems of developing countries. www.who.int/alliance-hpsr

The Cochrane Effective Practice and Organisation of Care Group (EPOC) is a Collaborative Review Group of the Cochrane Collaboration: an international organisation that aims to help people make well informed decisions about health care by preparing, maintaining and ensuring the accessibility of systematic reviews of the effects of health care interventions.
www.epocoslo.cochrane.org

The Evidence-Informed Policy Network (EVIPNet) is an initiative to promote the use of health research in policymaking. Focusing on low- and middle-income countries, EVIPNet promotes partnerships at the country level between policy-makers, researchers and civil society in order to facilitate both policy development and policy implementation through the use of the best scientific evidence available. www.evipnet.org

For more information:
www.support-collaboration.org

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