Breastfeeding Promotion

Practice Resource

Section 3: What the research shows (only)

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Practice Resource: Breastfeeding Promotion

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<table>
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<tr>
<th><strong>Breastfeeding duration</strong></th>
<th>The total period of time during which an infant receives any breast milk at all, from initiation (first breastfeeding) until breastfeeding has ceased completely.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Breastfeeding Hospital Initiative (BFHI)</strong></td>
<td>Hospital-based initiative designed by the World Health Organization (WHO) aimed at improving breastfeeding initiation rates by promoting breastfeeding in hospital and providing support for breastfeeding after discharge.</td>
</tr>
<tr>
<td><strong>Commercial discharge packs</strong></td>
<td>Information packs containing samples of artificial formula or promotional material for artificial formula given to mothers as they leave hospital after giving birth.</td>
</tr>
<tr>
<td><strong>Exclusive breastfeeding</strong></td>
<td>Feeding an infant breast milk only.</td>
</tr>
<tr>
<td><strong>Health care worker</strong></td>
<td>Generally a midwife or nurse.</td>
</tr>
<tr>
<td><strong>Lactation consultant or specialist</strong></td>
<td>Nurse who consults with breastfeeding mothers, offering practical advice and techniques related to successful breastfeeding.</td>
</tr>
<tr>
<td><strong>Long-term duration</strong></td>
<td>Breastfeeding for a period of more than three months.</td>
</tr>
<tr>
<td><strong>Discharge packs</strong></td>
<td>A collection of free samples given to mothers as they leave hospital after giving birth which contains items such as breast pads but not free samples of infant formula.</td>
</tr>
<tr>
<td><strong>Peer support programs</strong></td>
<td>Methods of support provided by non-health professionals, often mothers who have successfully breastfed and who have received training to work as counsellors with new mothers, usually in a volunteer capacity.</td>
</tr>
<tr>
<td><strong>Primiparous women</strong></td>
<td>Women who are pregnant for the first time.</td>
</tr>
<tr>
<td><strong>Post-natal clinic</strong></td>
<td>Follow-up clinics for mothers after the birth of the baby.</td>
</tr>
<tr>
<td><strong>Short-term duration</strong></td>
<td>A period of less than three months (13 weeks) of exclusive breastfeeding.</td>
</tr>
</tbody>
</table>

Refer to Appendix 5 for a glossary of terms related to research methodology terminology.
Section 3: What the research shows

Summary of the evidence

At this stage, there are no interventions for increasing breastfeeding rates that can be recommended strongly. However, there is a fair level of support for at least two interventions for promoting breastfeeding, and promising support for another two interventions. Furthermore, there is strong support for which interventions are not helpful in promoting breastfeeding.

<table>
<thead>
<tr>
<th>Intervention focus</th>
<th>Recommended intervention</th>
<th>Effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initiation</td>
<td>Structured education programs – antenatal classes on breastfeeding that focus on information, practical skills and problem solving techniques</td>
<td>**</td>
</tr>
<tr>
<td>Initiation and duration</td>
<td>Education programs with support – programs providing education and support (by telephone or in person)</td>
<td>**</td>
</tr>
<tr>
<td>Duration</td>
<td>Peer support or counselling program – home visits by volunteer peer counsellors who have breastfed their own infants successfully and received training for this program</td>
<td>*</td>
</tr>
<tr>
<td>Duration</td>
<td>Baby Friendly Hospital Initiative – with ongoing advice provided by a primary health care provider</td>
<td>*</td>
</tr>
<tr>
<td>Initiation and duration</td>
<td>Written material – fact sheets or pamphlets on breastfeeding and its benefits, distributed in antenatal classes or maternity hospitals</td>
<td>**☆☆☆</td>
</tr>
<tr>
<td>Initiation and duration</td>
<td>Commercial discharge packages – free samples of infant formula or promotional material for infant formula, given to new mothers as they leave hospital</td>
<td>**☆☆☆</td>
</tr>
</tbody>
</table>

Guide to recommendation of effectiveness category

<table>
<thead>
<tr>
<th>Level of evidence</th>
<th>Effectiveness</th>
<th>Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strong to good evidence</td>
<td>Beneficial</td>
<td>★★★</td>
</tr>
<tr>
<td></td>
<td>Not beneficial</td>
<td>★☆☆</td>
</tr>
<tr>
<td>Fair level of evidence</td>
<td>May be beneficial</td>
<td>★☆☆</td>
</tr>
<tr>
<td></td>
<td>May not be beneficial</td>
<td>★☆☆</td>
</tr>
<tr>
<td>Requires more studies</td>
<td>May be beneficial (promising)</td>
<td>★☆☆</td>
</tr>
<tr>
<td></td>
<td>May not be beneficial (not likely)</td>
<td>★☆☆</td>
</tr>
<tr>
<td></td>
<td>Unknown benefits</td>
<td>?☆☆☆</td>
</tr>
</tbody>
</table>
Section 3: What the research shows

Refer to Appendix 5 for a glossary of terms related to research methodology terminology.

Key research findings

About promotion of breastfeeding

- **Concern for the baby’s health is a major motivating factor for breastfeeding.**
  In a survey conducted by the Australian Breastfeeding Association (ABA), women who breastfed were mainly motivated by the perceived health benefits for the baby and a belief that breast milk is the optimal food for a baby.

- **Family influence and convenience are also motivating factors.**
  In the ABA survey, women who breastfed were also partially motivated by family influence and partially by breastfeeding being a convenient option.

- **Community attitudes, lack of knowledge and returning to work are important barriers to continuing to breastfeed.**
  One fifth of ABA respondents nominated negative and ill-informed community attitudes as the single greatest barrier to continuing to breastfeed. Having insufficient knowledge about breastfeeding and the difficulty of returning to work and continuing to breastfeed successfully were reported as additional barriers.

- **The mother’s age influences breastfeeding duration.**
  A national survey conducted in 2001 by National Health Surveys revealed that more children of older mothers were being breastfed. When infants were six months old, the percentage of children being breastfed was 38 per cent if the mother’s age was between 18 and 29 years, and 54 per cent if mothers were over 30 years old. When infants were one year old, the percentage of children being breastfed was 14 per cent if mothers were 18-29 years and 28 per cent if mothers were over 30.

- **Socioeconomic status and the mother’s education also affect breastfeeding initiation and duration.**
  Riva et al. (1999) surveyed a large group of mothers within a month of delivery and over the first year of their child’s life. Breastfeeding initiation was linked to higher social class while breastfeeding duration was linked with higher levels of mother’s education.
Interventions for promoting breastfeeding

Target group
- Pregnant women
- Mothers of newborns
- Women who may or may intend to breastfeed
- Many women from low socio-economic backgrounds

Key findings
At this stage, no interventions have had a sufficient number of trials to support their effectiveness in promoting breastfeeding and therefore none can be recommended highly. There is however a fair level of support for at least two interventions and promising support for another two:

- **Structured education programs** are supported by three control trials that indicate their effectiveness in improving breastfeeding initiation. Breastfeeding rates for controls were 22-45 per cent, while rates for those in the education program were 45-92 per cent. More studies are required to confirm the effectiveness of these programs and to follow up their impact over a longer time.

- **Education programs with support** are supported by two control trials demonstrating their effect on breastfeeding *initiation* and *short-term duration* (six to nine weeks). While another study failed to show a significant difference between those receiving this intervention and a control group, there was a trend for a longer *duration* of breastfeeding (four months) in the intervention group. In addition the introduction of solids was significantly delayed in this group. More studies are required to confirm the effectiveness of these programs and to follow up on their impact at six months (the recommended duration).

- **Peer support or counselling programs** are supported by one large Canadian study, which demonstrated that a peer support program can increase exclusive breastfeeding rates three months after birth. Many more randomised control trials are required before the effectiveness of peer support programs can be established conclusively.

- **The Baby Friendly Hospital Initiative with primary health care provider advice** has been evaluated in one very large Canadian study. Targeting a Russian population, the evaluation focused on 31 maternity units and clinics. Infants born in these sites were significantly more likely to be
breastfed exclusively at three and six months, to be breastfed to some extent at 12 months and to have a reduced risk of one or more gastrointestinal tract infections and of atopic eczema. These findings are very encouraging, although further randomised control trials are needed to establish if findings can be generalised.

- There is strong support indicating that written material and the distribution of commercial discharge packs are not helpful in promoting breastfeeding.

Overall, further research of high quality is required in the area of breastfeeding promotion. Such research needs to establish which program features work best, for example if one-on-one programs are more effective than group programs, if antenatal classes are better than postnatal support and to compare the effectiveness of different categories of facilitators, such as lactation consultants and peer volunteers.

Details of selected intervention strategies

Structured education program: Antenatal classes for low-income African-American women

- At least one group session of 50-80 minutes duration or one-on-one sessions of 15-30 minutes duration
- Women were less than 24 weeks pregnant
- Sessions run by midwives
- Content:
  - Lactation
  - Breastfeeding myths
  - Breastfeeding benefits
  - Common problems and strategies to overcome them
  - Demonstration by other parents
  - Discussion

Education program with support: Home support for women of low socio-economic status

- One-on-one
- First two months after birth
- Typically five to eight home visits, each 30-60 minutes long
- Telephone support as well
- Run by breastfeeding counsellor
Section 3: What the research shows

- Content:
  - Management of engorgement
  - Feeding frequency
  - Confidence and relaxation
  - Stool patterns
  - Expression and storage of breast milk
  - Growth spurts
  - Supplementation with formula

Peer support or counselling program: Peer support for new breastfeeding mothers

- One-on-one
- 12-week period after birth
- Peer volunteer contacted mother by telephone 48 hours after birth and then as often as requested by the mother over a 12-week period
- Peer volunteer provided information, emotional support and feedback
- Peer volunteers:
  - At least six months previous breastfeeding experience
  - Positive attitude to breastfeeding
  - Received a 2.5 hour orientation session
  - Equipped with handbook that included referral information
  - Peer volunteers ‘matched’ to new mothers (by for example age, socioeconomic status and cultural background)

Primary health care provider advice: ‘Well’ clinics for healthy mothers intending to breastfeed

- Mother and child attended clinic
- Seen at 1, 2, 3, 6, 9 and 12 months by a paediatrician
- Staff received 18 hours of lactation management training
- All midwives, nurses, physicians and paediatricians providing care in antenatal and postnatal clinics trained over 12-16 months
- Issues targeted:
  - Maintaining lactation
  - Promoting exclusive breastfeeding
  - Prolonging breastfeeding
  - Resolving common problems
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- Clinics were part of the Baby Friendly Hospital Initiative (BFHI) so mothers also had:
  - Help to initiate breastfeeding within a half hour of giving birth
  - Rooming in: the mother and infant remained together 24 hours a day
  - Encouragement to breastfeed on demand
  - No encouragement to give their infants dummies
  - Referrals to support groups after discharge from hospital

Research on the Baby Friendly Hospital Initiative

The intervention with the most research conducted on it to date (with one randomised control trial) is a program that incorporated the Baby Friendly Hospital Initiative (BFHI). This initiative is the work of the World Health Organisation (WHO) and UNICEF. The key points from the research on which this initiative is based follow:

- **It is best to focus efforts to improve breastfeeding duration on women who have made the decision prenatally to breastfeed.**
  Numerous studies have found that the mother’s decision to breastfeed is usually made prenatally or even before becoming pregnant. Reports of correspondence between prenatal intentions and feeding choice range from 77 to 97 per cent.

- **Helping with breastfeeding technique and teaching mothers to feed on demand are likely to be instrumental to the success of the BFHI.**
  The conclusion from four systematic reviews of empirical research into breastfeeding interventions was that the duration and exclusivity of breastfeeding are increased by help with positioning and other aspects of breastfeeding technique and demand feeding.

- **Postnatal support is also likely to play a key role in the success of the BFHI.**
  Four systematic reviews also concluded that postnatal support is important in increasing breastfeeding duration and exclusivity.
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- **A prolonged postpartum hospital stay may add to the effectiveness of the BFHI.**

  All participants in the large Canadian study referred to above remained in hospital for six to seven days after giving birth. This far exceeds what is common in most western societies and may have helped in establishing good breastfeeding practices and instilling maternal confidence early on.

For managers of birthing facilities, the following site provides information regarding the ten steps of the BFHI and how to become accredited as a Baby Friendly Hospital:


For practitioners, training packages on the BFHI as well as up-to-date information on key breastfeeding messages will soon be available to purchase from the following site:

www.babyfriendly.org.uk/teaching_packs.asp
Annotated summary of intervention studies

Following is:
- A summary of the intervention studies that were used to inform this resource
- An annotated summary of structured education programs
- An annotated summary of education programs with support
- An annotated summary of written material
- An annotated summary of peer support or counselling programs
- An annotated summary of primary health care provider advice

Summary of intervention studies

<table>
<thead>
<tr>
<th>Focus of study</th>
<th>Target group</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structured education programs</td>
<td>Low-income pregnant women&lt;sup&gt;9&lt;/sup&gt;</td>
<td>Hill, 1987 (United States)</td>
</tr>
<tr>
<td></td>
<td>African-American low-income women&lt;sup&gt;4&lt;/sup&gt;</td>
<td>Kistin et al., 1990 (United States)</td>
</tr>
<tr>
<td></td>
<td>Primiparous women intending to breastfeed&lt;sup&gt;10&lt;/sup&gt;</td>
<td>Redman et al., 1995 (Australia)</td>
</tr>
<tr>
<td></td>
<td>Primiparous women below 36 weeks gestation&lt;sup&gt;11&lt;/sup&gt;</td>
<td>Duffy et al., 1997 (Australia)</td>
</tr>
<tr>
<td></td>
<td>Primiparous women post delivery&lt;sup&gt;12&lt;/sup&gt;</td>
<td>Pugh et al., 1998 (United States)</td>
</tr>
<tr>
<td>Education program with support</td>
<td>Women who had breastfed at least once before (65 per cent African-American)&lt;sup&gt;13&lt;/sup&gt;</td>
<td>Frank et al., 1987 (United States)</td>
</tr>
<tr>
<td></td>
<td>Pregnant women at risk for having low-birth-weight infants&lt;sup&gt;14&lt;/sup&gt;</td>
<td>Oakley and Rajan, 1990 (United Kingdom)</td>
</tr>
<tr>
<td></td>
<td>Primiparous women intending to breastfeed first time or previously unsuccessful women&lt;sup&gt;5&lt;/sup&gt;</td>
<td>Serafino-Cross and Donovan, 1992 (United States)</td>
</tr>
</tbody>
</table>
### Section 3: What the research shows

<table>
<thead>
<tr>
<th>Focus of study</th>
<th>Target group</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education program with support <em>continued</em></td>
<td>Low-income pregnant women&lt;sup&gt;15&lt;/sup&gt;</td>
<td>Brent et al., 1995 (United States)</td>
</tr>
<tr>
<td>Primiparous women intending to breastfeed&lt;sup&gt;10&lt;/sup&gt;</td>
<td>Redman et al., 1995 (United Kingdom)</td>
<td></td>
</tr>
<tr>
<td>Primiparous women post delivery&lt;sup&gt;12&lt;/sup&gt;</td>
<td>Pugh et al., 1998 (United States)</td>
<td></td>
</tr>
<tr>
<td>Written material</td>
<td>Primiparous post-partum women breastfeeding on enrolment&lt;sup&gt;16&lt;/sup&gt;</td>
<td>Curro, 1997</td>
</tr>
<tr>
<td>Low-income pregnant women&lt;sup&gt;9&lt;/sup&gt;</td>
<td>Hill, 1987</td>
<td></td>
</tr>
<tr>
<td>Primiparous women intending to breastfeed&lt;sup&gt;10&lt;/sup&gt;</td>
<td>Redman, 1995</td>
<td></td>
</tr>
<tr>
<td>Women who had breastfed at least one child (65 per cent African-American)&lt;sup&gt;13&lt;/sup&gt;</td>
<td>Frank, 1987</td>
<td></td>
</tr>
<tr>
<td>Peer support or counselling programs</td>
<td>Primiparous post-partum women breastfeeding on enrolment&lt;sup&gt;6&lt;/sup&gt;</td>
<td>Dennis et al., 2002</td>
</tr>
<tr>
<td>Baby Friendly Hospital Initiative with primary health care provider advice</td>
<td>Post-partum women intending to breastfeed&lt;sup&gt;7&lt;/sup&gt;</td>
<td>Kramer et al., 2001</td>
</tr>
<tr>
<td>Distribution of commercial packages</td>
<td>Post-partum women who initiated breastfeeding in hospital or immediately on discharge&lt;sup&gt;17&lt;/sup&gt;</td>
<td>Donnelly et al., 2004 (systematic review [9 studies])</td>
</tr>
</tbody>
</table>
# Annotated summary of structured education programs

<table>
<thead>
<tr>
<th>Study</th>
<th>Participant selection</th>
<th>Intervention details</th>
<th>Results</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hill, P.D., 1987 (United States)</td>
<td>Intervention group = 31 Control group = 33 University antenatal clinic for low-income women Completed initial breastfeeding knowledge questionnaire and contacted six weeks post-partum</td>
<td>Intervention: attended a 40-minute lecture and slide session with a 5-10 minute question-and-answer session after presentation Were given a pamphlet on breastfeeding with information reinforcing the lecture and its contents Control: received standard care</td>
<td>There was a significant (p&lt;0.001) difference in knowledge before and after the intervention. The intervention Initiation of breastfeeding: More of the intervention group initiated breastfeeding than the intervention group (45 per cent versus 61 per cent p&lt;0.05)</td>
<td>Women were paid $5 for participation Mean education level: 11.8 years Statistically significant relationship between years of schooling and decision to breastfeed</td>
</tr>
<tr>
<td>Kistin, N., Benton, D. and Rao, S. 1990 (United States)</td>
<td>Control group = 56 Intervention group 1 = 38 Intervention group 2 = 36</td>
<td>Intervention 1: At least one 50-80 minute group sessions on lactation, breastfeeding myths, benefits and solving problems and discussion and demonstration of breastfeeding by other parents Intervention 2: At least one one-on-one sessions, 15-30 minutes, before 30 weeks gestation, on similar topics to Intervention 1 Control: Standard care</td>
<td>Breastfeeding rates in hospital: Control: 13 of 56 (22 per cent) Intervention 1: 17 of 38 (45 per cent) Intervention 2: 18 of 36 (50 per cent) Both interventions 1 and 2 had higher breastfeeding rates (73 per cent and 97 per cent respectively) than controls (p&lt;0.05).</td>
<td>29 withdrawals There was a favourable trend for individual versus group and both group and individual education versus standard care.</td>
</tr>
</tbody>
</table>

**Practice resource:**

**BREASTFEEDING PROMOTION**
### Section 3: What the research shows

<table>
<thead>
<tr>
<th>Study</th>
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<th>Comments</th>
</tr>
</thead>
</table>
| Redman S., Watkins J., Evans L. and Lloyd D., 1995 (Australia) | Control group = 85 Intervention group = 81 | Intervention: one three-hour education session given between 24 and 28 weeks gestation by a lactation specialist  
Topics included:  
- advantages of breastfeeding  
- physical and psychological preparation for breastfeeding  
- anatomy and physiology of lactation  
- management of breastfeeding following birth  
- advice about problems with breastfeeding  
- breastfeeding in special circumstances (for example after a Caesarean section)  
- methods of determining if the baby is receiving enough milk  
- practical advice -- for example, correct breastfeeding positions  
- demonstration of lactation aids such as a breast pump  
- 5-minute video on the role of the Nursing Mothers’ Association of Australia  
Discussion group at 6-8 weeks post-partum for mothers, babies and support persons – participants encouraged to bring partners, mother or friend to the sessions  
Topics:  
- sexuality and family planning  
- working outside the home  
- breastfeeding an older baby  
- introducing solids | Breastfeeding rates at six weeks  
Control group = 68 of 83 (82 per cent)  
Intervention group = 64 of 81 (79 per cent)  
No significant differences between the groups in breastfeeding duration.  
Post-study analysis of reasons given by mothers in a questionnaire for ceasing breastfeeding revealed a significant association between stopping breastfeeding and the following:  
- the baby having a bottle feed while still in hospital  
- smoking during the breastfeeding period  
- use of a combined oral contraceptive pill following baby’s birth  
- introducing solid food before 4 months of age. The presence of any or all of these factors meant that the mother was more likely to cease breastfeeding within four months after delivery. | The interventions used in this study were based on behavioural principles which included modelling, social support and concrete, specific instruction. (Meichenbaum and Cameron, 1982. Cognitive behaviour therapy. In Wilson G.T. and Franks, C.M. (eds) Contemporary Behaviour Therapy: Conceptual and Empirical Foundations. Guilford Press, New York.). |

**Practice resource:**  
**BREASTFEEDING PROMOTION**


<table>
<thead>
<tr>
<th>Study</th>
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<th>Results</th>
<th>Comments</th>
</tr>
</thead>
</table>
| Duffy, E.P., Percival, P. and Kershaw, E., 1997 (Australia) | Control group = 35
Primiparous women less than 36 weeks gestation age attending public hospital maternity ward
Intervention group = 35 | Intervention: attended 1-hour class given by a lactation consultant involving techniques for positioning and baby attaching for breastfeeding. Dolls given to each participant to simulate the baby and for practical use. Control: standard care | Breastfeeding rates
Control = 10 of 35 (29 per cent)
Intervention = 32 of 35 (92 per cent)
p< 0.05 | Women who participated in the educational session had significantly higher LATCH scores [see below for explanation] by fourth day after delivery than the control group, indicating they were better at attaching and positioning their babies
LATCH scores (Latch on, Audible swallow, Type of nipple, Comfort and Help) were used to measure position and attachment of baby on breast. A score of 0 to 2 was given at each feed with a maximum score of 10 possible at the end of the day. |

**Practice resource:**

**BREASTFEEDING PROMOTION**
### Study Selection and Intervention Details

<table>
<thead>
<tr>
<th>Study</th>
<th>Participant selection</th>
<th>Intervention details</th>
<th>Results</th>
<th>Comments</th>
</tr>
</thead>
</table>
| Pugh L.C. and Milligan, R.A., 1998 (USA)¹² | Control group = 30 Intervention group = 50 Primiparous women within 24 hours of normal delivery at term attending a community hospital | Intervention: visit from community health nurse three to four days after delivery to observe and teach breastfeeding technique. Visits focused on:  
- discussion of diet and exercise  
- sleep and rest needs  
- building mother’s self-esteem  
- support and comfort measures, including positioning to enhance breastfeeding  

Visit 2: non-nursing assistance 12 days post delivery for two hours:  
- flexible nursing support offered to include non-nursing tasks such as help with dishes or laundry or child care | Breastfeeding rates:  
Control group = 8 of 30 (27 per cent)  
Intervention group = 15 of 30 (50 per cent)  
Data not normally distributed and result not significant | Further analyses from the Modified Fatigue Symptom Checklist (MFSC) given to all mothers on Days 1, 7, 14 and in Week 6 found that younger women and those with higher depression scores at 14 days post delivery were more likely to stop breastfeeding. |

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**Practice resource:**

**BREASTFEEDING PROMOTION**
Annotated summary of education program with support

<table>
<thead>
<tr>
<th>Study</th>
<th>Participant selection</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Frank, D.A., Wirtz, S.J., Sorenson, J.R. and Heeren, T., 1987 (USA)</td>
<td>Group 1=83 (Routine breastfeeding counselling and commercial discharge pack) Group 2 = 84 (Routine breastfeeding counselling and research discharge pack) Group 3 =77 (Research breastfeeding counselling and commercial discharge pack) Group 4 =79 (Research breastfeeding counselling and research discharge pack) Women who had previously breastfed at least once in a city hospital maternity ward</td>
<td>Education: a 20-40 minute individual counselling session at hospital Support: eight phone calls following discharge home on days 5, 7, 14, 21, 28 and weeks 6, 8, 12 and 24 hour pager availability Control: routine breastfeeding counselling</td>
<td>Breastfeeding rates at 4 months Control group = 90 of 160 (56 per cent) Intervention = 103 of 163 (63 per cent) Not significant although there were significant differences at 2 months</td>
<td>65 per cent of target population were low-income African-American women and a relatively high proportion had previously breastfed successfully. This study also looked at effects of commercial discharge packs on duration of breastfeeding (refer to section on education-written materials).</td>
</tr>
</tbody>
</table>

Practice resource: BREASTFEEDING PROMOTION
### Study Details

<table>
<thead>
<tr>
<th>Study</th>
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<th>Intervention Details</th>
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<th>Comments</th>
</tr>
</thead>
</table>
| Oakley, A. and Rajan, L., 1990 (United Kingdom)<sup>14</sup> | Control group = 254, Intervention group = 255  
Pregnant women at risk for having a low-birth-weight infant  
Antenatal clinics at 4 hospitals | Support: standard care plus minimum of 3 antenatal home visits and 2 telephone contacts or brief home visits between these times by midwife to provide social support  
Control group: standard care | Breastfeeding rates  
Control = 89 of 226 (39 per cent)  
Intervention = 105 of 230 (46 per cent) | All women had a history of at least one previous low-birth-weight baby (less than 2500 grams) and less than 24 weeks gestation |
| Serafino-Cross, P. and Donovan P., 1992 (USA)<sup>5</sup> | Control group = 26, Intervention group = 26  
All women were lower socio-economic status  
Four hospital-based antenatal clinics | Support: 30-60 minute home visits and telephone support in first two months, by breastfeeding counsellor in first 2 months after birth. Average 5-8 visits plus telephone support. Topics discussed included breastfeeding frequency, complications and management, baby stool patterns, growth and storage of breast milk.  
Control: standard care including additional in-hospital breastfeeding instruction by researcher | Breastfeeding rates at two months  
Control = 9 of 26 (35 per cent)  
Intervention = 16 of 26 (62 per cent)  
p<0.01 | Women included were English speaking and of low socio-economic status and had indicated a desire to breastfeed for at least two months or had previously been unsuccessful and stopped breastfeeding within the first month. |

### Practice resource:

**BREASTFEEDING PROMOTION**
### Section 3: What the research shows

<table>
<thead>
<tr>
<th>Study</th>
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<th>Intervention details</th>
<th>Results</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Redman, S., Watkins, J., Evans, L. and Lloyd, D., 1995 (Australia)</td>
<td>Control group = 85, intervention group = 81. Women who registered more than 20 weeks before delivery and who intended to breastfeed.</td>
<td>Support: 34-minute visit in hospital by a breastfeeding consultant. Home visits at request if mother was having problems such as nipple soreness, unsettled baby, frequent feeds and needing emotional support. Telephone calls by breastfeeding consultant at two to three weeks to discuss problems with breastfeeding and possible solutions and encouragement to continue breastfeeding. At three months continuation of breastfeeding encouraged and suggestion given to delay introducing solids until four months. Further calls on request.</td>
<td>Breastfeeding rates at four months: Control = 45 of 77 (58 per cent), intervention = 42 of 75 (56 per cent) (no significant difference).</td>
<td>This was the third component of this multi-faceted intervention. Refer to: Structured educational programs and Written materials for details of other components.</td>
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</table>
### Annotated summary of written material

<table>
<thead>
<tr>
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<tr>
<td>Curro, V., Lanni, R., Scipione, F., and Grimaldi, P. 1997 (Italy)&lt;sup&gt;16&lt;/sup&gt;</td>
<td>Control group =97 Intervention group =103 Primiparous women already exclusively breastfeeding attending first postnatal visit at university outpatient clinic</td>
<td>Written material: booklet containing information and practical instructions for breastfeeding plus standard counselling (see below) Control = 10 minutes verbal counselling session on breastfeeding by researcher</td>
<td>Breastfeeding rates Control = 50 of 97 (52 per cent) Intervention = 61 of 103 (59 per cent)</td>
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<td>Hill, P.D., 1987 (USA)&lt;sup&gt;9&lt;/sup&gt;</td>
<td>Control group = 33 Intervention group = 31 University antenatal clinic for low-income women. Completed initial breastfeeding knowledge questionnaire and contacted six weeks post-partum</td>
<td>Written material: pamphlet reinforcing information from slide presentation Control: standard care</td>
<td>Knowledge: Although there were significant difference between pre and post test knowledge results for those who received the intervention (see below), there was no difference in knowledge at post test between control and intervention (nor for breastfeeding duration) Pre-test: 22.35 ± 4.93 Post-test: 29.19 ± 2.70 p &lt;0.001</td>
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<tr>
<td>Redman S., Watkins J., Evans L. and Lloyd, D., 1995 (Australia)</td>
<td>Control group = 85, Intervention group = 81 Women who registered more than 20 weeks before delivery and who intended to breastfeed. Intervention given between 24-28 weeks gestation</td>
<td>Written material: 1. Package given during Initial visit contained: • glossary of breastfeeding terms • list services available • common questions and answers about breastfeeding • Nursing Mothers’ Association handouts and wall planner 2. Hospital package given after giving birth contained: • Information on breastfeeding and expressing milk and questions common to all new mothers with answers 3. Post-natal pack given six to eight weeks after giving birth contained: • Information about breastfeeding an older baby and introducing solids</td>
<td>Breastfeeding rates Control = 68 of 83 (82 per cent) Intervention = 64 of 81 (79 per cent) No significant difference</td>
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<td>Frank, D.A., Wirtz, S.J., Sorenson, J.R. and Heeren, T. 1987 (USA)(^{13})</td>
<td>Group 1=83 (Routine breastfeeding counselling and commercial discharge pack) Group 2 = 84 (Routine breastfeeding counselling and research discharge pack) Group 3 =77 (Research breastfeeding counselling and commercial discharge pack) Group 4 =79 (Research breastfeeding counselling and research discharge pack) Women who had previously breastfed at least once in city hospital maternity ward</td>
<td>Written material: Research discharge packs (no formula provided) given to women in the hospital after the birth containing breast pads and educational pamphlets advocating breastfeeding No advertising of infant formula Control: commercial discharge pack containing bottles, sterile water, teats, several pamphlets with information on health education and product promotion by three companies making artificial formula</td>
<td>Breastfeeding rates at four months (for any breastfeeding): Control = 92 of 167 (55 per cent) Intervention = 101 of 156 (65 per cent) Significant difference (p = .038)</td>
<td>All four groups of women received breastfeeding counselling as well as either a research or commercial pack. Result reflects trend of written materials together with counselling being more effective than written materials alone. Maternity hospital actively promoted a breastfeeding policy.</td>
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### Annotated summary of peer support or counselling programs

<table>
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<td>Dennis, C.L., Hodnett, E., Gallop, R. and Chalmers, B. 2002 (Canada)⁶</td>
<td>Control group = 126 Intervention group = 132</td>
<td>Peer support: conventional care and a peer support volunteer who contacted the mother by telephone 48 hours after birth and as often as required by the mother over a 12-week period</td>
<td>Rates for any breastfeeding at three months Control group = 88 of 132 (66.9 per cent) Intervention group = 100 of 124 (81.1 per cent) p = 0.01 Exclusive breastfeeding at three months Control group = 50 of 124 (40.3 per cent) Intervention group = 75 of 124 (56.8 per cent) p = 0.01 Odds ratio: Any breastfeeding at 3 months: 2.5, p&lt;0.001</td>
<td>Peer telephone support included information, feedback and emotional assistance from peer volunteer mothers with experiential knowledge of successful breastfeeding. The peer mothers had received training before working in their local community. The quality rather than quantity of peer support contact appeared to be an important factor.</td>
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<td></td>
<td>First-time mothers of infants more than 37 weeks gestation in a maternity hospital</td>
<td>Control: conventional in-hospital and community post-partum support services including a breastfeeding clinic and a telephone support line</td>
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**Practice resource:**

**BREASTFEEDING PROMOTION**
### Annotated summary of primary health care provider advice

<table>
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<tr>
<td>Kramer M., Chalmers, B., Hodnett, E et al., 2001 (Canada)(^7)</td>
<td>Control group = 15 sites; 8,181 pairs Intervention group = 16 sites; 8,865 pairs Multi-centre cluster randomisation of maternity hospitals and their corresponding postnatal “well” clinics Healthy mothers intending to breastfeed</td>
<td>BFHI 10 steps and advice: Mother-child pair seen at “well” child clinic by paediatrician at 1, 2, 3, 6, 9 and 12 months. Given support modelled on 10-step Baby Friendly Hospital Initiative with Step 10 including postnatal visits to clinic. Management included methods to maintain lactation, promote exclusive breastfeeding and resolve common problems.</td>
<td>Exclusive breastfeeding at three months: Control group = 6.4 per cent Intervention group = 43.3 per cent (p &lt; .001) Exclusive breastfeeding at six months: Control group = 0.6 per cent Intervention group = 7.9 per cent (p = .01) Breastfeeding to some degree at 12 months: Control group = 11.4 per cent Intervention group = 19.7 per cent (significant)</td>
<td>Usual length of stay in maternity hospital six to seven days, which may have assisted establishment of successful breastfeeding techniques. “Well” clinics are similar to Maternal and Child Health Centres in Australia.</td>
</tr>
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</table>

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**Practice resource:**

**BREASTFEEDING PROMOTION**
References


References


Other references used in developing the resource


# Glossary of Terms – Research Methodology

Note: Wherever possible these definitions are taken from the *Glossary of Terms in the Cochrane Collaboration, Version 4.2.5, updated May 2005.*

<table>
<thead>
<tr>
<th>Term</th>
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<tr>
<td><strong>Case-control study</strong></td>
<td>A study that compares people with a disease or outcome of interest (cases) with people from the same population without that disease or outcome (controls), and which seeks to find associations between the outcome and exposure to particular risk factors.</td>
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<td><strong>Cochrane Review</strong></td>
<td>Systematic summaries of evidence of the effects of health care interventions, intended to help people make practical decisions. For a review to be called a Cochrane Review it must be in the Cochrane Database of Systematic Reviews or the Cochrane Review Methodology Database. These are administered by the Cochrane Collaboration, an international organisation that aims to help people make well-informed decisions about health care.</td>
</tr>
<tr>
<td><strong>Control</strong></td>
<td>A participant in a randomised controlled trial who is in a group that acts as a comparator for the experimental intervention(s); alternatively, a participant in a case-control study who is in a group that does not have the disease or outcome of interest.</td>
</tr>
<tr>
<td><strong>Control trials</strong></td>
<td>Studies in which participants are assigned to an intervention or control group using specific criteria.</td>
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<tr>
<td><strong>Effectiveness</strong></td>
<td>The extent to which a specific intervention, when used under ordinary circumstances, does what it is intended to do.</td>
</tr>
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<td><strong>Evidence</strong></td>
<td>Up-to-date, accurate information about the effects of interventions.</td>
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<td><strong>Randomised controlled trial (RCT)</strong></td>
<td>An experiment in which two or more interventions are compared by being randomly (like tossing a coin) allocated to participants.</td>
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