

## ***Executive summary***

# **A systematic review to evaluate the effectiveness of interventions to promote the initiation of breastfeeding**

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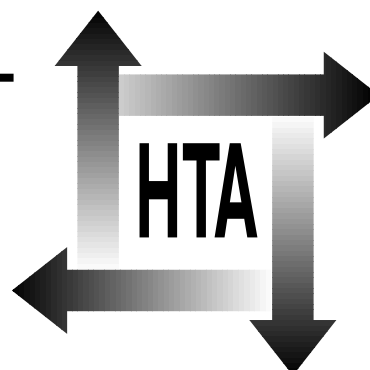
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## Executive summary

### Background

Human breastmilk provides complete nutrition for infants and helps protect against certain childhood diseases. Despite this, rates of initiation of breastfeeding in the UK remain low relative to other countries. In 'Our healthier nation' action report, the government has highlighted the promotion of breastfeeding in order to assist improvements in health and to reduce the health inequalities of mothers and children in the UK.

### Objectives

The primary aim of this systematic review was to evaluate existing evidence to identify which promotion programmes are effective at increasing the number of women who start to breastfeed. In addition, the review aimed to assess the impact of such programmes on the duration and/or exclusivity of breastfeeding and the intermediate and process outcomes. Where the strength and quality of the evidence permitted, the review aimed to identify implications for practice within the UK and priority areas for future research.

### Methods

#### Data sources

A range of electronic databases were searched from inception to November 1998, several relevant journals were hand-searched, and references of retrieved papers were examined. Relevant experts, organisations and lay groups were contacted to help identify further published or unpublished material. Additionally, an expert panel was consulted.

#### Selection criteria

Four types of criteria were used to select eligible studies for this review:

- study design – randomised controlled trials (RCTs), non-RCTs with concurrent controls, and before–after studies (cohort or cross-sectional)
- participants – pregnant women, mothers in the immediate postpartum period before the first breastfeed, any participant linked to pregnant

women or new mothers, or any participant who may breastfeed in the future, or be linked to a breastfeeding woman in the future

- interventions – any type of intervention designed to promote the uptake of breastfeeding was included; control groups could receive an alternative breastfeeding promotion programme or standard care
- outcomes – the primary outcome was initiation of breastfeeding; secondary outcomes (duration and exclusivity of breastfeeding) were included if initiation was reported in the same study; intermediate and process outcomes were also included, and need not necessarily be associated with reported initiation rates.

#### Data extraction and validity assessment

Data were extracted into structured tables. All included studies were checked against a comprehensive methodological checklist. Different checklists were used for RCTs, non-RCTs and before–after studies. Data extraction and validity assessment were independently checked by a second reviewer.

#### Data synthesis

The studies were grouped according to intervention type, and were combined using a narrative synthesis. For individual RCTs and non-RCTs reporting initiation of breastfeeding, relative risks with associated 95% confidence intervals were estimated, with calculations performed on an intention-to-treat basis where possible. Pooling of relative risks was considered inappropriate owing to the lack of similarity across the studies.

### Results

A total of 59 studies met the selection criteria, comprising 14 RCTs, 16 non-RCTs and 29 before–after studies.

Interventions were grouped into the following categories:

- health education
- health sector initiatives (HSI) – general
- HSI – Baby Friendly Hospital Initiative (BFHI)
- HSI – training of health professionals

- HSI – US Department of Agriculture’s Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)
- HSI – social support from health professionals
- peer support
- media campaigns
- multifaceted interventions.

In many cases, studies were dissimilar in terms of the type of intervention(s), participants and the definitions of outcomes. Methodological problems of some studies also limited interpretation of findings. Whilst the results from before–after studies should be viewed with some caution, inclusion of these studies provided a useful evidence base for evaluation of more complex interventions.

### **Health education (nine RCTs, seven non-RCTs, three before–after studies)**

Breastfeeding literature alone, or combined with a more formal, non-interactive method of health education, appears to have limited impact on initiation rates. Small, informal, group health education classes, delivered in the antenatal period, can be an effective intervention to increase initiation rates, and in some cases the duration of breastfeeding, among women from different income or ethnic groups.

### **HSI: general, and based on the BFHI (two RCTs, three non-RCTs, four before–after studies)**

Institutional changes in hospital practices to promote breastfeeding, either as part of, or independent to, the BFHI, can be effective at increasing both the initiation and duration of breastfeeding, particularly in developing countries. These may include stand-alone interventions such as rooming-in, or a package of interventions, such as rooming-in, early contact and health education.

### **HSI:WIC (two RCTs, three non-RCTs, five before–after studies)**

In most studies, WIC programs were effective at increasing both the initiation and duration of breastfeeding among women of low-income groups in the USA. Effective WIC interventions included one-to-one health education in the antenatal period, peer counselling in the ante- and postnatal periods, or a combination of one-to-one health education and peer counselling in the ante- and postnatal periods.

### **HSI: training of health professionals (five before–after studies)**

The limited evidence available suggests that these programmes may be useful in improving the

knowledge of midwives and nurses; however, favourable results were not shown in terms of changes in attitudes of health professionals, or changes in breastfeeding rates.

### **HSI: social support from health professionals (one RCT)**

The social support intervention did not produce significantly increased rates of initiation compared with standard care.

### **Peer support (two non-RCTs)**

Both studies showed peer support programmes, when delivered as a stand-alone intervention to women in low-income groups, to be an effective intervention at increasing initiation rates (and duration) among women who had expressed a wish to breastfeed.

### **Media campaigns (two before–after studies)**

The limited evidence available suggests that a media campaign as a stand-alone intervention, and particularly television commercials, may improve attitudes towards, and increase initiation rates of, breastfeeding.

### **Multifaceted interventions (one non-RCT, 10 before–after studies)**

Several studies found multifaceted interventions to be effective in increasing initiation rates (and duration and exclusivity of breastfeeding). Most of the multifaceted interventions that were found to be effective comprised a media campaign and/or a peer support programme combined with structural changes to the health sector (HSI) or, in fewer cases, combined with health education activities.

## **Conclusions**

Three types of intervention have been shown to be useful in the promotion of breastfeeding when delivered as a stand-alone intervention in developed countries. Informal, small group health education, delivered during the antenatal period, appears to be effective at increasing initiation rates among women from different income groups and from some minority ethnic groups. There is also some evidence to show that one-to-one health education can be effective at increasing initiation rates among women on low incomes. Peer support programmes, delivered in the ante- and postnatal periods, have also been shown to be effective at increasing both initiation and duration rates of breastfeeding among women on low incomes, and

particularly among women who have expressed a wish to breastfeed.

Packages of interventions have also been shown to be effective at increasing the initiation and, in most cases, the duration of breastfeeding in developed countries. Effective packages appear to include a peer support programme and/or a media campaign combined with structural changes to the health sector and/or health education activities.

Structural changes in hospital practices to promote breastfeeding (HSI) have been shown to be effective at increasing both initiation and duration of breastfeeding in developing countries. Rooming-in, as either a stand-alone intervention or as one component of a package of interventions, is a key example of an effective HSI.

### Implications for practice

The authors' judgement is that there is sufficient evidence of effectiveness for practitioners and policy-makers to consider the following:

- an internal review of existing breastfeeding education programmes to increase the availability of good practice health education programmes
- increased implementation of peer support programmes, particularly targeting women from low-income groups
- implementation of a 'package' of interventions at national and local levels with particular emphasis on peer support programmes and good practice health education activities

combined with structural changes to maternity ward practices

- revision of the 'Good practice guidance to the NHS' on breastfeeding.

### Recommendations for future research

Priorities for further research, not in order of importance, are:

- further evaluations of the impact of training programmes for health professionals
- further research relating to the effectiveness of media campaigns
- evaluation of health education approaches targeting women on low incomes as well as their significant others
- evaluation of the impact of breastfeeding promotion programmes within different ethnic groups
- evaluation of changes in the routine supply of artificial milk in maternity units
- greater methodological rigour in future research
- standardisation of the definition of 'initiation of breastfeeding'.

### Publication

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# NHS R&D HTA Programme

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This report is one of a series covering acute care, diagnostics and imaging, methodology, pharmaceuticals, population screening, and primary and community care. It was identified as a priority by the Primary and Community Care Panel and funded as project number 96/47/01.

The views expressed in this publication are those of the authors and not necessarily those of the Standing Group, the Commissioning Board, the Panel members or the Department of Health. The editors wish to emphasise that funding and publication of this research by the NHS should not be taken as implicit support for the recommendations for policy contained herein. In particular, policy options in the area of screening will be considered by the National Screening Committee. This Committee, chaired by the Chief Medical Officer, will take into account the views expressed here, further available evidence and other relevant considerations.

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