

## **Appendix A**

### **Search strategy, selection process and results for policy documents**

Keywords used for searches were 'breastfeeding' and 'breastfeeding support'. Results are divided by government agency or department website. A number of separate searches were conducted on each website. For each of these searches, a narrative description of the navigation pathway that was taken is provided, followed by a navigation pathway 'tree'. Trees consist of the names or labels of successive links taken while navigating the website. The succession of links has been delineated by identifying (→) each name or label clicked on during website navigation. The termination of each of these searches is clearly delineated with the name(s) of documents retrieved or a statement that no relevant documents were found and that particular search was terminated.

The names of documents are italicized. After each tree the relevant documents found to be eligible or ineligible for inclusion from that search are given with a description and reason for exclusion if appropriate. A new search within the same website begins with a new narrative description, followed by a pathway and list of eligible and ineligible documents. A new search of another website begins with the identification of the agency or department and continues in the same format as described above.

### **England**

Two national government websites in England were accessed and searched in May 2009: the U.K. Department of Health (DH) and the National Institute for Health and Clinical Excellence (NICE). Combined results from searches included a total of 19 documents identified, out of which 13 were ineligible, two were duplicates, and four were eligible for inclusion. Within the DH website, 14 separate searches were conducted which yielded a total of 13 relevant documents, of which nine were ineligible, two of those were duplicates, and two were eligible for inclusion. One search was conducted within the NICE website, which yielded a total of six relevant documents, of which four were ineligible for inclusion and two were eligible.

## ***Department of Health***

The DH website was accessed in June 2009 to find documents related to national policies for breastfeeding promotion and support. Using the keyword 'breastfeeding' in the DH homepage search box retrieved 68 documents and internal DH links to specific sections of the DH website. After screening, a total of two documents and seven links remained eligible for further screening. The full text of each document was retrieved from the DH website. The Forward and/or Introduction of each document were reviewed before making a final decision for inclusion or exclusion.

The seven DH website links were followed and document lists within those sections of the DH website were screened for eligibility by title and description, using the exclusion/inclusion criteria described above. The full text of documents that appeared relevant from the title and/or description was retrieved. The Forward and/or Introduction of each of these documents were reviewed before making a final decision for inclusion or exclusion. The most current documents from these remained eligible for inclusion in the final sample. To ensure all relevant DH documents were identified, each website link was followed, and subsequent relevant links were followed to a terminal point of the document(s). Any documents not already identified were reviewed for eligibility using the strategy described above. Only those documents retrieved in full text are listed here.

### **Document eligible for inclusion directly identified in search results**

*Document: Good practice and innovation in breastfeeding* (published November 2004)

*Description:* 'This booklet aims to provide a practical, evidence-based resource for health professionals to help support good practice and innovation in supporting breastfeeding initiation - with a particular focus on reaching women from disadvantaged groups'. (Title page)

### **Documents ineligible for inclusion directly identified in search results**

*Document: Infant feeding initiative: a report evaluating the Breastfeeding Practice Projects 1999–2002* (published December 2003)

*Description:* 'This report evaluates the 79 best breastfeeding practice projects funded through the infant feeding initiative between 1999–2002. It provides a synthesis of the key challenges and findings from the projects as well as making

recommendations on how best to support mothers who choose to breastfeed'. (Title page, Reader information)

*Reason for exclusion:* This is a report of findings from an evaluation of public health intervention programmes implemented in England and does not represent policy or guidelines related to breastfeeding promotion and support.

*Document: Infant feeding recommendation* (published May 2003)

*Description:* 'Department of Health has reviewed its guidance on the introduction of solid food and this paper summarises the latest advice. We hope this will inform and assist health professionals supporting parents in optimizing their infants' nutrition'. (section 1.5)

*Reason for exclusion:* More current information and guidance is available in the DH document, *Good practice and innovation in breastfeeding*, and in the National Institute for Health and Clinical Evidence (NICE) *Public health guidance 11*.

*Improving the nutrition of pregnant and breastfeeding mothers and children in low-income households.*

*Document: Improvement, expansion and reform: the next 3 years. Priorities and planning framework 2003–2006* (published October 2002)

*Description:* 'This document sets out what [NHS] organisations need to do over the next three years. It identifies national priorities and targets which organisations need to build into their local plans'. (p. 2)

*Reason for exclusion:* This is a document that lays out public health objectives and targets for all services in the NHS. Although not eligible for inclusion in the sample for analysis, this document is significant in that it included a breastfeeding target (an increase of 2% per year in rates of breastfeeding initiation) to meet objectives for reducing health inequalities.

### **Documents eligible for inclusion identified following DH website links<sup>1</sup>**

*Link:* Children's services

*Navigation pathway:*

DH Home

→ Health care

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<sup>1</sup> Note. arrowed lists represent successive clicks on links down a chain of links in the DH website. Website pathways are given from the DH homepage for convenience of the reader. Links retrieved in the search did not start at the DH homepage, and emboldened links in the list represent the point of entry into the DH website associated with each link retrieved in the search.

→ **Children and maternity**

→ The National Service Framework

→ National service framework documents

→ *National service framework for children, young people and maternity services: Maternity services* (published September 2004)

**Documents ineligible for inclusion identified following DH website links**

*Link:* Children's services

*Navigation pathway:*

DH Home

→ Health care

→ **Children and maternity**

→ *Healthy lives, brighter futures – The strategy for children and young people's health* (published February 2009)

*Reason for exclusion:* Document includes an outline of DH financial plan for breastfeeding promotion and support, a list of indicators of health that includes breastfeeding, and a sample schedule of maternity care for patients that includes when breastfeeding should be discussed

*Link:* Maternity

*Navigation pathway:*

DH Home

→ Health care

→ Children and maternity

→ **Maternity, Healthy Child Programme and Early Years**

→ *Maternity matters* (published April 2007)

*Reason for exclusion:* Document outlines the new choice of maternity care scheme and describes targets for rates of breastfeeding initiation and continuation.

*Link:* Maternal and infant nutrition

*Navigation pathway:*

DH Home

→ Health care

→ Children and maternity

→ Maternity, Healthy Child Programme and Early Years

→ **Maternal and infant nutrition**

→ Key documents

→ Infant feeding associated documents

→ *Infant feeding recommendation*

*Reason for exclusion:* Document was previously identified and excluded.

*Link:* Breastfeeding

*Directly linked to documents:*

- ◆ *Improvement, expansion and reform: the next 3 years. Priorities and planning framework 2003–2006*
- ◆ *Infant feeding initiative: a report evaluating the Breastfeeding Practice Projects 1999-2002*

*Reason for exclusion:* Documents were previously identified and excluded.

*Link:* Healthy Start: a new Welfare Food Scheme

*Navigation pathway:*

→ DH Home

→ Health care

→ Children and maternity

→ Maternity, Healthy Child Programme and Early Years

→ Maternal and infant nutrition

→ **Breastfeeding / infant feeding**

→ *Healthy Start: proposals for reform of the Welfare Food Scheme* (published October 2002)

*Reason for exclusion:* This document describes the proposed elements of the Healthy Start programme and does not represent policy or guidelines related to breastfeeding promotion and support. Although not eligible for inclusion in the sample for analysis, this document is significant in that it included breastfeeding among qualifications for eligibility to receive milk tokens for women participating in the programme.

*Link:* Infant feeding

*Directly linked to document:*

- ◆ *Infant feeding survey 2005* (published May 2007)

*Reason for exclusion:* This document is a report of findings from a national survey on infant feeding.

## ***National Institute for Health and Clinical Excellence (NICE)***

The NICE website was accessed and searched in May 2009 to find documents related to national policies for breastfeeding promotion and support. Using the keyword 'breastfeeding' in the NICE homepage search box retrieved 36 documents. Titles and descriptions of documents were screened, and the full text of documents that appeared relevant for further screening were retrieved and reviewed. Only those documents that were retrieved in full text are listed here.

### **Documents eligible for inclusion**

*Document: NICE public health guidance 11. Improving the nutrition of pregnant and breastfeeding mothers and children in low-income households* (published March 2008)

*Description:* 'The guidance is for NHS and other professionals who have a direct or indirect role in – and responsibility for – the nutrition of pregnant and breastfeeding mothers and pre-school children. This includes midwives, health visitors, dietitians and pharmacists. It also includes those working in local authorities and the community, voluntary and private sectors. In addition, it will be of interest to members of the public'. (p. 3)

*Document: Promotion of breastfeeding initiation and duration: Evidence into practice briefing* (published July 2006)

*Description:* 'This document presents evidence based actions for promoting the initiation and/or duration of any and/or exclusive breastfeeding among full term, singleton, and healthy babies. The evidence based actions include all population groups with a particular focus among population groups where breastfeeding rates are low. It provides an unprecedented opportunity to realise this policy commitment in practice and create real and sustained improvements in breastfeeding rates with resulting reductions in inequalities in health'. (p. 7)

### **Documents ineligible for inclusion**

*Document: Commissioning guides: peer-support programme for women who breastfeed* (published August 2008)

*Description:* 'This commissioning guide provides support for the local implementation of NICE public health guidance through commissioning, and is a resource to help health professionals in England to commission an effective peer-

support programme for women who breastfeed'. (NICE webpage <http://www.nice.org.uk/usingguidance/commissioningguides/breastfeed/breastfeed.jsp>)

*Reason for exclusion:* This document offers guidance on key issues for those involved in healthcare commissioning when commissioning a breastfeeding peer support programme, and as such does not represent policy.

*Document: Breastfeeding for longer – what works? Systematic review summary* (published May 2005)

*Description:* 'This paper summarises the findings of a systematic review of interventions to enable women to continue breastfeeding, with special reference to women from disadvantaged groups where rates are lowest'. (p. 1)

*Reason for exclusion:* This document is a systematic review.

*Document: The effectiveness of public health interventions to promote the duration of breastfeeding. Systematic review* (published May 2005)

*Description:* 'This document presents the findings from a systematic review of public health interventions to promote the duration of breastfeeding'.

*Reason for exclusion:* This document is a systematic review.

*Document: Effectiveness of interventions to promote healthy feeding of infants under one year of age* (published June 1998)

*Description:* 'This document reviews the effectiveness of healthy eating interventions to promote healthy feeding of infants under one year of age.... This review provides some evidence for the effectiveness of interventions to improve frequency of, and knowledge about, breastfeeding'. (NICE introductory webpage to document [[http://www.nice.org.uk/aboutnice/howweare/aboutthehda/hdadocuments/effectiveness\\_of\\_interventions\\_to\\_promote\\_healthy\\_feeding\\_of\\_infants\\_under\\_one\\_year\\_of\\_age.jsp](http://www.nice.org.uk/aboutnice/howweare/aboutthehda/hdadocuments/effectiveness_of_interventions_to_promote_healthy_feeding_of_infants_under_one_year_of_age.jsp)])

*Reason for exclusion:* This document is a systematic review.

## **United States**

Five federal government websites in the U.S. were accessed and searched in June 2009: the Agency for Healthcare Research and Quality (AHRQ), Centers for Disease Control and Prevention (CDC), United States Department of Health and Human Services (HHS), United States Breastfeeding Committee (USBC), and United States

Department of Agriculture (USDA). Combined results from searches included a total of 12 documents, out of which six were eligible for inclusion, four were ineligible, and one was a duplicate.

One search each was conducted within the AHRQ and CDC websites, two separate searches were each conducted in the HHS and USBC websites, and ten separate searches were conducted in the USDA website. One relevant document was retrieved from the AHRQ website and deemed eligible for inclusion. Three documents were found on the CDC website, two of which were eligible and one ineligible. The HHS search produced two documents, one was eligible but a duplicate and the other was ineligible. Four documents were retrieved from the USBC website; all four were ineligible. Searches conducted in the USDA website yielded three documents, all of which were ineligible.

### ***Agency for Healthcare Research and Quality***

The AHRQ website was accessed and searched in August 2009 to find documents related to federal policies for breastfeeding support. The keyword 'breastfeeding' was entered in the homepage search box, which retrieved 268 results. An attempt to narrow the search was made by using the keywords 'breastfeeding support' in the search box, which retrieved 252 results. Titles and descriptions of these results were screened for relevance. One relevant document was identified, *Primary care interventions to promote breastfeeding: Recommendation statement*, and the full text of the document was downloaded for review.

#### *Navigation pathway:*

AHRQ Home

- 'breastfeeding' entered in search box retrieved 268 results
- 'breastfeeding support' entered in search box retrieved 252 results
- *Primary care interventions to promote breastfeeding: Recommendation statement* (published October 2008)

### **Document eligible for inclusion**

*Document: Primary care interventions to promote breastfeeding: Recommendation statement* (published October 2008)

*Description:* 'Update of a 2003 U.S. Preventive Services Task Force (USPSTF) recommendation on counseling to promote breastfeeding. The USPSTF evaluated



the results of a systematic review, conducted by the Tufts-New England Medical Center Evidence-based Practice Center, of literature published since January 2007 on primary care- initiated, -conducted, or -referable activities to promote and support breastfeeding’. (p. 560 *Annals of Internal Medicine*, 2008, Vol. 149, No. 8)

### ***Centers for Disease Control and Prevention (CDC)***

The CDC website was accessed and searched in August 2009 to find documents related to federal policies for breastfeeding support. The A-Z Index was accessed from the CDC homepage and clicking on ‘B’ provided a list of topics starting with that letter. The topic ‘Breastfeeding’ was selected, which opened the CDC website section on breastfeeding. Among the links available in this section was ‘Policies’. This link was selected, which opened a webpage containing descriptions and links to two documents identified on the website as federal breastfeeding policies, *Healthy People 2010, Section 16: Maternal, Infant, and Child Health, Objective 16-19* and *Breastfeeding: HHS Blueprint for Action on Breastfeeding*. The full text of each document was downloaded from the CDC website for review.

#### *Navigation pathway:*

CDC Home

→ A-Z Index

→ ‘B’

→ Breastfeeding

→ Policies

→ *Healthy People 2010, Section 16: Maternal, Infant, and Child Health, Objective 16-19* (published January 2000)

→ *Breastfeeding: HHS Blueprint for Action on Breastfeeding* (published in 2000)

Returning to the CDC website section on breastfeeding, the link ‘Promotion and Support’ was selected, which opened a webpage containing titles, descriptions and links to publications, public health programme websites, and resources for breastfeeding support. The link to the publication *The CDC Guide to Breastfeeding Interventions* was selected, which opened up a webpage where the entire document or sections of the document could be downloaded. The entire document was downloaded for review.

#### *Navigation pathway:*

CDC Home

→ A-Z Index

- 'B'
- Breastfeeding
- Promotion and Support
- *The CDC Guide to Breastfeeding Interventions* (published 2005)

### **Documents eligible for inclusion**

*Document: Breastfeeding: HHS Blueprint for Action on Breastfeeding* (published 2000)

*Description:* 'This Blueprint for Action introduces a comprehensive framework to increase breastfeeding rates in the United States and to promote optimal breastfeeding practices'. (p. 9)

*Document: The CDC Guide to Breastfeeding Interventions* (published 2005)

*Description:* 'Provide guidance and direction in selecting a breastfeeding intervention; offer the most relevant information on each type of intervention to help the reader make wise decisions'. (Introduction, iii)

### **Documents ineligible for inclusion**

*Document: Healthy People 2010, Section 16: Maternal, Infant, and Child Health, Objective 16-19* (published January 2000)

*Description:* 'Healthy People 2010 was a national health promotion and disease prevention initiative that brings together national, state, and local government agencies; non-profit, voluntary, and professional organizations, businesses, communities; and individuals to address major public health issues. The report *Healthy People 2010*, released by the Department of Health and Human Services in January 2000, includes 28 subject areas and 467 specific objectives that serve as a roadmap for improving the nation's health during the first decade of the 21st century'. (CDC webpage *Healthy People 2010 Objectives for the Nation* [<http://www.cdc.gov/breastfeeding/policies/policy-hp2010.htm>])

*Reason for exclusion:* This document only contains national targets for breastfeeding rates.

### ***U.S. Department of Health and Human Services (HHS)***

The HHS website was accessed and searched in July 2009 to find documents related to federal policies for breastfeeding support. An A-Z index was accessed from the HHS homepage and selecting 'B' provided a list of topics starting with that letter. The topic 'Breastfeeding' was selected, which opened the HHS website womenhealth.gov section on breastfeeding. From a list of links 'OWH<sup>2</sup> Programs and Documents' was selected.

A link labelled 'HHS Blueprints and Breastfeeding Policy Statements' was selected from the new webpage, which brought up links to government and professional association breastfeeding policy documents. A direct link to the document *HHS Blueprint for Action on Breastfeeding* was listed on this webpage and the full text was downloaded for review.

A link to the United States Breastfeeding Committee (USBC) listed on this webpage was followed, which opened the USBC homepage. Findings from the USBC website search are detailed in a separate section below.

#### *Navigation pathway:*

HHS Home

- A-Z Index
- 'B'
- Breastfeeding
- womenhealth.gov
- OWH Programs and Publications
- HHS Blueprints and Breastfeeding Policy
- Statements
- *HHS Blueprint for Action on Breastfeeding* (published 2000)

Another search was conducted on the HHS website with a focus on public health, obesity and breastfeeding. From the HHS homepage the keywords 'obesity breastfeeding' was entered in the search box, which retrieved 51 results. These were screened for relevance by title and description and a link labelled 'Reproductive health' was followed, which opened the document *Healthy People 2010—Reproductive Health*. A full text of the document was downloaded for review.

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<sup>2</sup> OWH = The Office on Women's Health in the U.S. Department of Health and Human Services.

*Navigation pathway:*

HHS Home

- 'obesity breastfeeding' in search box retrieved 51 results
- Reproductive health
- *Healthy People 2010–Reproductive Health* (published October 2001)

### **Documents eligible for inclusion**

*Document: Breastfeeding: HHS Blueprint for Action on Breastfeeding* (published 2000)

*Description:* 'This Blueprint for Action introduces a comprehensive framework to increase breastfeeding rates in the United States and to promote optimal breastfeeding practices'. (p. 9)

This document was previously identified and already deemed eligible for inclusion in the sample (see CDC search strategy results).

### **Documents ineligible for inclusion**

*Document: Healthy People 2010–Reproductive Health* (published October 2001)

*Description:* 'This document was intended as a companion piece to "Healthy People 2010" and compiles the objectives related to reproductive health. It was intended to assist Title X grantees, family planning and other reproductive health professionals, as they plan for the future healthcare needs of the nation'. (p. Title page)

*Reason for exclusion:* This document contained no mention of breastfeeding.

### ***United States Breastfeeding Committee (USBC)***

The USBC homepage was accessed and searched in August 2009 from the HHS website search results (see HHS search strategy above) to find documents related to federal policies for breastfeeding support. A link to the document '*USBC's New Strategic Plan for 2009-2013*' was selected, which opened the document and the full text was downloaded for review.

Returning to the USBC homepage, a link labelled 'Health Care Reform Begins With Breastfeeding' was followed, which opened the document *Health Care Reform: Improving Breastfeeding Support Will Save Billions*. The full text of the document was downloaded for review.

Returning to the USBC homepage, a link labelled 'Publications' was followed, which opened a page listing USBC documents. The documents *Achieving exclusive breastfeeding in the United States: Findings and recommendations* and *Achieving exclusive breastfeeding in the United States: Findings and recommendations* were found here and the full text downloaded for review.

*Navigation pathway:*

USBC Home

- *USBC's New Strategic Plan for 2009-2013* (adopted June 2009)
- Health Care Reform Begins With Breastfeeding
- *Health Care Reform: Improving Breastfeeding Support Will Save Billions* (published June 2009)
- Publications
- *Achieving exclusive breastfeeding in the United States: Findings and recommendations* (published 2008)
- *Breastfeeding in the United States: A National Agenda (2001)* (published 2001)

Returning to the USBC homepage, a link labelled 'Legislation and policy' was selected, which opened a page containing a link to the National Alliance for Breastfeeding Advocacy (NABA). This link was followed, which opened up the NABA homepage. A link labelled 'Policy' was followed, which opened up a webpage with information on NABA federal government lobbying efforts, news and alerts, and a list of links to other website homepages that included the federal Congress (House and Senate), the HHS Office on Women's Health, the CDC, the U.S. Department of Agriculture/Food Nutrition Service (USDA), a directory of state breastfeeding coalitions, the International Baby Food Action Network, the World Alliance for Breastfeeding Action, the USBC, and several miscellaneous others. These websites had either already been reviewed, or it was clear they would not lead to documents potentially eligible for inclusion. No relevant documents were found on the NABA homepage, and no further links were followed from this point.

*Navigation pathway:*

USBC Home

- Legislation and policy
- National Alliance for Breastfeeding Advocacy (NABA)
- NABA Home

→ Policy  
(No relevant documents or links found – termination of search)

### **Documents ineligible for inclusion**

*Document: USBC's New Strategic Plan for 2009–2013* (adopted July 2009)

*Description:* There was no succinct description provided in the document.

*Reason for exclusion:* This document provides USBC vision and mission statements, and lists strategic goals to achieve its vision and mission and represents U.S. policy.

*Document: Health Care Reform: Improving Breastfeeding Support Will Save Billions* (published June 2009)

*Description:* There was no succinct description provided in the document. The document briefly outlines the position of health professional associations on breastfeeding, the public health risks and healthcare costs of not breastfeeding, and policy gaps. The document offers recommendations for healthcare reform policy and legislation to address breastfeeding support in the U.S.

*Reason for exclusion:* This document was released as a public statement and does not represent USBC or federal policy.

*Document: Achieving exclusive breastfeeding in the United States: Findings and recommendations* (published 2008)

*Description:* There was no succinct description provided in the document. The document uses a conceptual framework and review of the literature to develop recommendations for support and promotion of breastfeeding through legislation, policy and practice in the U.S.

*Reason for exclusion:* This document was a literature review that was prepared for the USBC but expressly does not represent federal or USBC policy or recommendations.

*Document: Breastfeeding in the United States: A National Agenda* (2001)  
(published 2001)

*Description:* The policy recommendations from the National Breastfeeding Policy Conference, held in Washington, D.C. in November of 1998, provided framework for setting a national policy agenda to protect, promote and support breastfeeding well into the 21<sup>st</sup> century. The mandate from this conference transferred the policy agenda to the USBC. The Federal Government, through the Health Resources and

Services Administration's Maternal and Child Health Bureau, asked the committee to provide a strategic plan to implement this policy agenda'. (p. 4)

*Reason for exclusion:* This document has been replaced with the more recent document *USBC's New Strategic Plan for 2009-2013* (adopted July 2009).

### ***United States Department of Agriculture (USDA)***

The USDA website was accessed and searched in August 2009 to find documents related to federal policies for breastfeeding support. There was no A-Z index. The keyword 'breastfeeding' was entered in the homepage search box, which retrieved 4260 links to documents and USDA webpages. It was untenable to review this large list and this search was terminated.

#### *Navigation pathway:*

USDA Home

→ Keyword 'breastfeeding' entered in search box retrieved 4260 results. Search terminated.

Returning to the USDA homepage a link labelled 'Agencies & Offices' was selected, which opened a page with three drop-down menus to choose office, agency, or mission area. After reviewing choices available in each menu, a link from the agency drop-down menu labelled 'Center for Nutrition Policy and Promotion (CNPP)' was selected, which opened the CNPP homepage. None of the links to CNPP documents or webpages appeared relevant and this search was terminated.

Returning to the agency drop-down menu, a link labelled 'Food and Nutrition Service' (FNS) was selected, which opened the FNS homepage. On the FNS homepage a link labelled 'Regulations and Policy' was selected, which opened a webpage containing three lists of links under the headings 'Legislation', 'Regulations', and 'Policy'. In the Regulations list a link labelled 'Women, Infants and Children' was followed, which opened the Laws and Regulations webpage for Women, Infants and Children.

This webpage contained links under the heading 'Legislation' or 'Regulations'. Under Regulations a link labelled 'WIC Program Regulations' was followed, which opened *Federal Register in the Code of Federal Regulations, 7 C.F.R. Part 246 – Special Supplemental Nutrition Program For Women, Infants And Children*

(January 2009 edition)<sup>3</sup>. Returning to the Regulations webpage a link labelled ‘Recently published WIC regulations’ was followed, which yielded no relevant documents or links and this search was terminated. Returning to the Regulations and Policy webpage, the ‘Policy’ link was selected which yielded no relevant documents or links and this search was terminated.

*Navigation pathway:*

USDA Home

- Agencies & Offices
- Agency drop-down menu ‘Center for Nutrition Policy and Promotion’ (CNPP)
- CNPP Home  
(No relevant documents or links found – termination of search)
- Agency drop-down menu ‘Food and Nutrition Service’ (FNS)
- FNS Home
- Regulations and Policy
- Regulations
- WIC Program Regulations
- *Federal Register in the Code of Federal Regulations, 7 C.F.R. Part 246 – Special Supplemental Nutrition Program For Women, Infants And Children* (January 2009 edition)
- Recently published WIC regulations  
(No relevant documents or links found – termination of search)
- Policy  
(No relevant documents or links found – termination of search)

Returning to the FNS homepage, the keyword ‘breastfeeding’ was entered in the search box and 566 results were retrieved. Search results were limited to a choice in the drop-down list to ‘only childhood nutrition’, which retrieved seven documents. One document appeared relevant, *FNS Rules and Regulations, Amendments to the Child Nutrition Infant Meal Pattern: Final Rule* (published May 2002), and the full text was downloaded for review.

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<sup>3</sup> The Code of Federal Regulations (CFR) was the codification of the general and permanent rules published in the Federal Register by the executive departments and agencies of the Federal Government.



*Navigation pathway:*

FNS Home

- 'breastfeeding' in search box retrieved 566 results
- Limit search to selection in drop-down list 'only childhood nutrition' retrieved seven documents of which one appeared relevant
- *FNS Rules and Regulations, Amendments to the Child Nutrition Infant Meal Pattern: Final Rule* (published May 2002)

Returning to the FNS homepage, the A-Z topics link was selected, which opened an A-Z index. Under 'B' the 'Breastfeeding' link was selected, which opened the webpage Breastfeeding support in WIC. This webpage contained information about the breastfeeding support program in WIC and miscellaneous links primarily for WIC clients or those seeking further information about aspects of the program such as the *Loving Support*<sup>4</sup> initiative. The '*Loving Support Makes Breastfeeding Work*' link was followed, which opened a webpage containing a description of the program but no relevant documents or links and this search was terminated.

*Navigation pathway:*

FNS Home

- A-Z Index
- 'B'
- Breastfeeding
- Breastfeeding support in WIC
- *Loving Support Makes Breastfeeding Work*  
(No relevant documents or links found – termination of search)

Returning to the A-Z index, a link labelled 'Infant Nutrition and Feeding Guide' under 'I' was selected. This opened a 'Publications' webpage for Women, Infants and Children, which contained a list of printed resources for WIC clients and providers/administrators. No relevant documents or links were found and this search was terminated.

*Navigation pathway:*

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<sup>4</sup> '*Loving Support Makes Breastfeeding Work*' was the WIC breastfeeding promotion campaign, which was national in scope and being implemented at the State agency level. The goals of the campaign were to: encourage WIC participants to initiate and continue breastfeeding; increase referrals to WIC for breastfeeding support; increase general public acceptance and support of breastfeeding; and provide technical assistance to WIC State and local agency professionals in the promotion of breastfeeding'.

- A-Z Index
  - 'T'
  - Infant nutrition and feeding guide
  - Publications
- (No relevant documents or links found – termination of search)

Returning to the A-Z index, under 'P' a link labelled 'Policy and Guidance' was selected, which a webpage containing links and documents listed under the headings 'WIC Program Policy', 'Guidance', and 'Contact WIC in Your Area'. Under 'Guidance' the link labelled 'Nutrition Services Standards' was selected which opened the document *WIC Nutrition Services Standards* (published October 2001).

*Navigation pathway:*

- A-Z Index
- 'P'
- Policy and Guidance
- Guidance
- Nutrition Services Standards
- WIC Nutrition Services Standards (published October 2001)

Returning to the Breastfeeding support in WIC webpage, the link labelled 'Using *Loving Support* to Build a Breastfeeding Friendly Community' was selected, which opened a webpage containing information about this aspect of the program. No relevant documents or links were found and this search was terminated.

*Navigation pathway:*

- Breastfeeding support in WIC
  - Using *Loving Support* to Build a Breastfeeding Friendly Community
- (No relevant documents or links found – termination of search)

Returning to the Breastfeeding support in WIC webpage, the link labelled 'Using *Loving Support* to Implement Breastfeeding Peer Counseling' was selected, which opened a webpage containing information and links related to this aspect of the program. No relevant documents or links were found and this search was terminated.

*Navigation pathway:*

- Breastfeeding support in WIC
- Using Loving Support to Implement Breastfeeding Peer Counseling  
(No relevant documents or links found – termination of search)

Returning to the USDA homepage, a link labelled ‘Food and Nutrition’ was followed, which opened a webpage containing links to other USDA webpages and a list of USDA reports and documents. The link labelled ‘Child nutrition programs’ was selected, which opened the Child Nutrition Programs webpage on the USDA Economic Research Service<sup>5</sup> (ERS) website. A link labelled ‘Policy Topics’ was selected which opened a webpage containing a list of links pertaining to all activities of the USDA and a ‘Policy Topics’ section. A link labelled ‘Food and Nutrition Assistance Policy’ under Policy Topics was selected, which opened a webpage containing a list of links and documents. No new links or documents were found and this search was terminated.

*Navigation pathway:*

USDA Home

- Food and Nutrition
- Child nutrition programs
- USDA Economic Research Service
- Policy topics  
(No new relevant documents or links found – termination of search)

Returning to the ERS homepage, the link labelled ‘Food and nutrition assistance’ was selected, which opened a webpage containing a list of links and documents. The ‘WIC Program’ link was selected, which opened a webpage containing information about the WIC program and related links. A link labelled ‘Recommended Readings’ was selected which opened a webpage containing a list of reports and documents. One report appeared relevant, *The WIC Program: Background, Trends, and Economic Issues* (published April 2009) and the full text of the document was retrieved for review.

*Navigation pathway:*

USDA Economic Research Service

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<sup>5</sup> The Economic Research Service was a primary source of economic information and research in the U.S. Department of Agriculture.

- Food and nutrition assistance
- WIC<sup>6</sup> program
- Recommended readings (one document appeared relevant)
- The WIC Program: Background, Trends, and Economic Issues (published April 2009)

### **Documents ineligible for inclusion**

*Document: Federal Register in the Code of Federal Regulations, 7 C.F.R. Part 246 – Special Supplemental Nutrition Program for Women, Infants and Children* (January 2009 edition).

*Description:* ‘The Federal Register contains regulatory documents having general applicability and legal effect, most of which were keyed to and codified in the Code of Federal Regulations’. (p. 36779, USDA FNS Federal Register Vol. 67, No. 102)  
 ‘This part announces regulations under which the Secretary of Agriculture shall carry out the Special Supplemental Nutrition Program for Women, Infants and Children (WIC Program)’. (p. 342 in *C.F.R. Part 246*)

*Reason for exclusion:* This document contains rules and regulations for determining eligibility and benefits for WIC recipients.

*Document: FNS Rules and Regulations, Amendments to the Child Nutrition Infant Meal Pattern: Final Rule* (published May 2002)

*Description:* ‘This section of the Federal Register contains regulatory documents having general applicability and legal effect, most of which were keyed to and codified in the Code of Federal Regulations.... The Food and Nutrition Service was issuing final regulations amending the meal pattern for infants less than 12 months of age in the National School Lunch Program, the School Breakfast Program, and the Child and Adult Care Food Program’. (p. 36779, USDA FNS Federal Register Vol. 67, No. 102)

*Reason for exclusion:* This document contains rules and regulations for financial reimbursement for the Child Nutrition Infant Meal Pattern programme.

*Document: WIC Nutrition Services Standards* (published October 2001)

*Description:* ‘The updated Nutrition Services Standards represent a wide range of performance practices used in the delivery of quality WIC nutrition services’. (p. 5)

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<sup>6</sup> WIC = The Special Supplemental Nutrition Program for Women, Infants, and Children

*Reason for exclusion:* This document outlines the duties and tasks of WIC staff at state and local levels, and the responsibilities of WIC agencies in delivery of services.

*Document: The WIC Program: Background, Trends, and Economic Issues*

(published April 2009)

*Description:* ‘The goal of this report was to provide a better understanding of how WIC works, provide its history and program trends, and inform public debate on major economic issues facing the program’. (p. III)

*Reason for exclusion:* This report describes how the WIC program works, its history, trends and characteristics of the population served by the program. The report examines current issues facing WIC with a focus on economic issues. The document was intended to inform policy-making but does not represent policy.

### **Summary of results**

Policy documents found in the search strategy were published between 2000 and 2008: three documents were published in 2009, two of which were eligible for inclusion and one ineligible. One document published in 2008 was eligible. Between the years 2007 and 2003 inclusive there were no eligible documents found. One eligible document each was found in years 2002 and 2001, and three eligible documents were found in 2000. At least one eligible document was found in each of the five websites of federal agencies and departments that were searched. The documents chosen for the sample represented a span of eight years of policy on breastfeeding support: one was published in 2000, one in 2005, and one in 2008.

The documents chosen for the sample originated from three of the five federal agencies identified as having a breastfeeding support policy. In the sample, one agency was comprised of an independent panel of academic and clinical experts, commissioned by the federal government to produce policy recommendations on issues of preventive and primary health care. Another agency used internal and external experts from government agencies, academic institutions, non-profit organisations and commercial enterprises to formulate policy recommendations related to disease control and prevention. A third agency involved the use of a sub-committee made up of representatives from a large number of different federal agencies to produce policy recommendations that address issues of health inequities in women and girls.

Documents chosen for the sample also represented two types of policy: one that outlines standards for healthcare systems and/or services in the country (*HHS Blueprint for Action on Breastfeeding*), and two offering guidelines specific to breastfeeding support practices and/or services (*CDC Guide to Breastfeeding Interventions* and *Primary care interventions to promote breastfeeding: U.S. Preventive Services Task Force recommendation statement*).

## **Appendix B**

### **Data extraction sheet for policy documents**

**Name of document and number of pages:**

**Title:**

**Country:**

**Source:**

**Issue date:**

**Categories:**

**Goal of report:**

**Composition of group that developed the guideline:**

**All factors from analytical framework:**

#### *Political influences*

<sup>1</sup>legislation and policy to promote and support breastfeeding

<sup>2</sup>public health initiatives in breastfeeding promotion and support

<sup>3</sup>the Baby-Friendly Initiative

#### *Economic influences*

<sup>4</sup>financial investment in breastfeeding promotion and support

<sup>5</sup>countermanding the commercial promotion of infant formula and artificial feeding

#### *Sociocultural influences*

<sup>6</sup>social expectations and cultural norms

<sup>7</sup>breastfeeding support from community, family and peers

<sup>8</sup>public attitudes and media portrayals of breastfeeding and breastfeeding women

#### *Healthcare influences*

<sup>9</sup>promotion and support of breastfeeding in healthcare systems through policies, services and practitioners

<sup>10</sup>education and training of healthcare personnel

<sup>11</sup>the Baby-Friendly Hospital Initiative

*Maternal factors*

<sup>12</sup>perceptions, attitudes, knowledge and experience of breastfeeding

**Data extraction sheet for policy documents, cont...**

<sup>13</sup>maternal/infant health status

<sup>14</sup>demographics

<sup>15</sup>*Breastfeeding inequalities*

**Factors from conceptual framework missing in policy:**

*Systematic reviews used:*

*Other sources of evidence used:*

**Intervention category:**

Target population	Who should take action	Recommended action(s)	Analytical framework category
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## Appendix C

### Data extraction sheet: *Maternity Standard*

#### **Maternity Standard: National Service Framework for Children, Young People and Maternity Services (52 pages)**

**Country:** England

**Source:** Department of Health

**Issue date:** October 2004

**Categories:** Public health, maternal and infant health; health inequalities

**Purpose:** This is the standard on maternity services which forms part of the National Service Framework for Children, Young People and Maternity Services.

#### **Composition of group that developed the guideline:**

Maternity Services External Working Group Members

#### **Chairs**

Heather Mellows, Vice President, Royal College of Obstetricians and Gynaecologists, London and Consultant Obstetrician and Gynaecologist, Doncaster Bassetlaw Hospitals NHS Trust

Meryl Thomas, Practising Midwife and Honorary Vice President, Royal College of Midwives Members

#### **Members**

Jean Chapple, Consultant in Perinatal Epidemiology/Public Health, Westminster PCT, London

Griselda Cooper, Consultant Anaesthetist, Department of Anaesthesia and Intensive Care, Queen Elizabeth Hospital, Birmingham

Jean Duerden, Local Supervisory Authority Midwifery Officer for Yorkshire and Northern Lincolnshire, West Yorkshire Strategic Health Authority, Leeds

William Dunlop, President, Royal College of Obstetricians and Gynaecologists, London

Sue Eardley, Chairman, Mayday Healthcare NHS Trust, Croydon

Jo Garcia, Social Scientist, National Perinatal Epidemiology Unit

Toni Horn, Chief Executive, Decorum Primary Care Trust, Hertfordshire (currently, Programme Director for Children's Services, Bedfordshire and Hertfordshire Strategic Health Authority)

David Jewell, Honorary Senior Lecturer, Uof Bristol: Editor, British Journal of General Practice; GP, Bristol

Lynne Leyshon, Head of Midwifery and Gynaecology Services, Torbay Hospital, Torquay

Lorna Muirhead, President, Royal College of Midwives, London

James Neilson, Head of Department, Department of Obstetrics & Gynaecology, Liverpool Woman's Hospital

Mary Newburn, Head of Policy Research, National Childbirth Trust, London

Margaret Oates, Consultant & Senior Lecturer in Psychiatry, Motherhood and Mental Health Team, Queens Medical Centre, Nottingham

## Data extraction sheet: *Maternity Standard, cont...*

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Yana Richens, Research Fellow, Quality Improvements Programme, Royal College of Nursing Institute, Oxford (currently, Consultant Midwife, Public Health and Postnatal Care, Elizabeth Garrett Anderson & Obstetric Hospital)

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Sarah Riddell, Non-Executive Trust Director, Hammersmith NHS Trust

---

Jane Sandall, Professor of Midwifery and Women's Health, Florence Nightingale School of Nursing and Midwifery Kings College, London

---

Sunil Sinha, Professor of Paediatrics & Neonatal Medicine, Department of Paediatrics and Neonatology,

---

James Cook, University Hospital, Middlesbrough

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DH/DFES Officials: Gwyneth Lewis, Catherine McCormick, Elizabeth Paterson, Kathryn Tyson, Lindsay Wilkinson

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### All determinants from analytical framework:

#### Political determinants

- 1 legislation and policy to promote and support breastfeeding,
  - 2 public health initiatives in breastfeeding promotion and support
  - 3 the Baby-Friendly Initiative
- 

#### Economic determinants

- 4 financial investment in breastfeeding promotion and support
  - 5 countermanding the commercial promotion of infant formula and artificial feeding
- 

#### Sociocultural determinants

- 6 social expectations and cultural norms
  - 7 breastfeeding support from community, family and peers
  - 8 public attitudes and media portrayals of breastfeeding and breastfeeding women
- 

#### Healthcare determinants

- 9 promotion and support of breastfeeding in health care systems through policies, services and practitioners
  - 10 education and training of health care personnel
  - 11 the Baby-Friendly Hospital Initiative
- 

#### Maternal determinants

- 12 perceptions, attitudes, knowledge and experience of breastfeeding
  - 13 maternal/infant health status
  - 14 demographics
- 

#### 15 Breastfeeding inequalities

### Determinants from analytical framework missing in policy:

- 4 financial investment in breastfeeding promotion and support
  - 8 public attitudes and media portrayals of breastfeeding and breastfeeding women
  - 10 education and training of health care personnel
  - 12 perceptions, attitudes, knowledge and experience of breastfeeding
  - 14 demographics
- 

#### 15 Breastfeeding inequalities

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## Data extraction sheet: *Maternity Standard, cont...*

### Systematic reviews used:

National Institute for Clinical Excellence Clinical Guideline 6: *Antenatal care; routine care for the healthy pregnant woman*. (2003). National Collaborating Centre for Women's and Children's Health, London. (in press at time of publication)

### Other sources of evidence used:

Commission for Racial Equality. *Maternity services code of practice*.<sup>7</sup>

Department of Health. (2004). *Good Practice and Innovation in Breastfeeding*. (forthcoming at time of publication)

Singh D, Newburn M. *Access to maternity information and support: the experiences and needs of women before and after giving birth* London: National Childbirth Trust 2000.

Teenage Pregnancy Unit/ Royal College of Midwives/Department of Health. *Teenage Parents: Who Cares? – a guide to commissioning and delivering maternity services for young parents*. February 2004.

### Intervention category: Ongoing community care

<b>Target population</b>	Postpartum women and their infants, partner, family and other influencers
<b>Who should take action</b>	NHS maternity care providers and Primary Care Trusts; community-based breastfeeding support networks and services
<b>Recommended action(s)</b>	1. Additional necessary support can be provided through a maternity support worker service, with midwife or health visitor supervision as part of a community post-natal care team. Other support may be provided by peer support initiatives and Sure Start early years services. There is evidence that peer support programmes can have a positive impact in improving breastfeeding rates. <sup>1, 6, 7, 10</sup>
<b>Conceptual framework category</b>	<p><b>Political determinants</b></p> <p><sup>1</sup> legislation and policy to promote and support breastfeeding</p> <p><sup>2</sup> public health initiatives in breastfeeding promotion and support</p> <p><b>Sociocultural determinants</b></p> <p><sup>6</sup> social expectations and cultural norms</p> <p><sup>7</sup> breastfeeding support from community, family and peers</p> <p><b>Healthcare determinants</b></p> <p><sup>10</sup> promotion and support of breastfeeding in health care systems through policies, services and practitioners</p>

### Intervention category: Infant feeding

<b>Target population</b>	Pregnant and postpartum women
<b>Who should take action</b>	NHS maternity care providers and Primary Care Trusts; community-based breastfeeding support networks and services

<sup>7</sup> Reference not found as cited; one publication found that may be intended reference: Commission for Racial Equality. (1994). *Code of Practice in Maternity Services*. (CRE, London).

**Data extraction sheet: *Maternity Standard, cont...***

<p><b>Recommended action(s)</b></p>	<ol style="list-style-type: none"> <li>1. Information on breastfeeding is timely, consistent and reflects best practice standards; this will help to deliver the Department of Health PSA target on improving the health of the population.<sup>10</sup></li> <li>2. Support for breastfeeding is a routine part of ante-natal care, birth and post-natal care, with particular support for mothers who have had a multiple birth or have a premature or sick baby. NHS Trusts have, as a minimum standard for breastfeeding support, the best practice guide <i>Good Practice and Innovation in Breastfeeding</i>.<sup>13</sup></li> <li>3. Arrangements are in place for women to easily access breast-feeding support services e.g. community-based networks offering mother-to-mother support and trained breastfeeding counsellors working within, or closely with, the health care system.<sup>7</sup></li> <li>4. Women who are taking medicines receive specialist advice, based on best available evidence, in relation to breastfeeding.<sup>13</sup></li> </ol>
<p><b>Analytical framework category</b></p>	<p><b>Socio-political determinants</b>  <sup>3</sup> the Baby-Friendly Initiative</p> <p><b>Economic determinants</b>  <sup>5</sup> countermanding the commercial promotion of infant formula and artificial feeding</p> <p><b>Sociocultural determinants</b>  <sup>7</sup> breastfeeding support from community, family and peers</p> <p><b>Healthcare determinants</b>  <sup>10</sup> the promotion and support of breastfeeding in health care systems through policies, services and practitioners</p> <p><b>Maternal determinants</b>  <sup>13</sup> maternal/infant health status</p>

## Appendix D

### Data extraction sheet *Good practice and innovation in breastfeeding*

#### Good practice and innovation in breastfeeding (36 pages)

**Source:** Department of Health

**Issue date:** November 2004

**Categories:** Maternal/infant health; public health; health inequalities; breastfeeding inequalities

**Goal:** To provide a practical, evidence-based resource for health professionals to help support good practice and innovation in breastfeeding initiation with a particular focus on reaching women from disadvantaged groups, their partners and influencers.

#### Composition of group that developed guideline

Andrew Radford, UNICEF Baby Friendly Initiative

Angela King, University of Northumbria

Catherine Pardoe, Lactation consultant, Sussex

Celia Enyioko, Maternity Alliance

Gillian Jessops, Health visitor, Hull

Helen Spiby, Senior Lecturer (Evidence based practice in midwifery) University of Leeds

Isabel Carrick, Health Promotion Specialist, Hull and East Yorkshire

Janet Fyle, Royal College of Midwives

Janette Westman, Bradford Teaching Hospital NHS Trust

Julia Savage, Midwife, Nottinghamshire

Julie Williams, Health visitor and lactation consultant, Sussex

Kate Monkhouse, Association of Breastfeeding Mothers

Krys Henderson, La Leche League

Linda Kennedy and Michelle Wiseman, Sure Start

Liz Jones, University Hospital, North Staffordshire

Lorraine Best, University of Sheffield

Mandy Grant, Poole Primary Care Trust

Mary Renfrew, University of Leeds

Mary Smale, Breastfeeding consultant, Doncaster

Mary Whitmore, Breastfeeding Network tutor, Lancashire

Mavis Kirkham, University of Sheffield

Melissa Kallat, Royal Victoria Infirmary, Newcastle upon Tyne

Obi Amadi, Community Practitioners' and Health Visitors' Association

Phyll Buchanan, Breastfeeding Network

Rosemary Dodds, National Childbirth Trust

Sarah Gill, La Leche League leader, Nottingham

Sinead Farrell, Whittington Hospital, London

Sue Battersby, University of Sheffield

Sue Henry, Queens Park Hospital, Blackburn

**Data extraction sheet *Good practice and innovation in breastfeeding, cont...***

**All factors from analytical framework**

**Political determinants**

- 1 legislation and policy to promote and support breastfeeding,
- 2 public health initiatives in breastfeeding promotion and support
- 3 the Baby-Friendly Initiative

**Economic determinants**

- 4 financial investment in breastfeeding promotion and support
- 5 countermanding the commercial promotion of infant formula and artificial feeding

**Sociocultural determinants**

- 6 social expectations and cultural norms
- 7 breastfeeding support from community, family and peers
- 8 public attitudes and media portrayals of breastfeeding and breastfeeding women

**Healthcare determinants**

- 9 promotion and support of breastfeeding in health care systems through policies, services and practitioners
- 10 education and training of health care personnel
- 11 the Baby-Friendly Hospital Initiative

**Maternal determinants**

- 12 perceptions, attitudes, knowledge and experience of breastfeeding
- 13 maternal/infant health status
- 14 demographics

**15 Breastfeeding inequalities**

**Factors from analytical framework missing in policy**

<sup>13</sup> maternal/infant health status

**Systematic reviews used:**

Protheroe L, Dyson L, Renfrew MJ, Bull J, Mulvihill C (2003). *The effectiveness of public health interventions to promote the initiation of breastfeeding: Evidence Briefing*. Health Development Agency.

Renfrew MJ, Wallace L, D'Souza L, McCormick F, Spiby H, Dyson L. (2004). *The effectiveness of public health interventions to promote the duration of breastfeeding: Evidence Briefing*. Health Development Agency.<sup>8</sup>

**Other sources of evidence used:**

Department of Health (2003) *Infant Feeding Initiative: A Report Evaluating the Breastfeeding Practice Projects 1999-2002*.

<sup>8</sup> Dyson, L., Rnfrew, M., McFadden, A., McCormick, F., Herbert, G., Thomas, J. (2006). Effective action briefing on the initiation and duration of breastfeeding: Effective action recommendations. Public Health Collaborating Centre for Maternal and Child Nutrition: Evidence and Guidance. National Institute for Health and Clinical Evidence.

**Data extraction sheet *Good practice and innovation in breastfeeding, cont...***

<b>Intervention category: Healthcare</b>	
<b>Target population</b>	Women who are considering infant feeding options, and mothers who wish to initiate or continue breastfeeding, particularly those in disadvantaged groups
<b>Who should take action</b>	Midwives; health visitors; and other health professionals working in maternal/infant health care
<b>Recommended action(s)</b>	<p><b>1. ‘Positive policies’</b></p> <ul style="list-style-type: none"> <li>a. All health care facilities should have a policy in place.<sup>9</sup></li> <li>b. Everyone in contact with pregnant women, new mothers and their families, needs to know about the policy and put it into practice.<sup>10</sup></li> <li>c. Monitoring and evaluation systems need to be in place to ensure the policy is being followed.<sup>4</sup></li> <li>d. Use the Baby-Friendly Hospital Initiative’s <i>Ten Steps to Successful Breastfeeding</i> as the standard of practice.<sup>3, 5</sup></li> </ul> <p><b>2. ‘Solid structures, strong staff’</b></p> <ul style="list-style-type: none"> <li>a. Have a designated co-ordinator for driving forward the breastfeeding agenda/policy, whether it be in maternity units, health care trusts or community settings.<sup>4</sup></li> <li>b. Use trained breastfeeding counselors and supporters from volunteer groups.<sup>7</sup></li> <li>c. Train health care assistants in breastfeeding support.<sup>10</sup></li> <li>d. Ensure all staff in the delivery suite encourages skin-to-skin contact between mother and newborn from immediately after birth.<sup>9</sup></li> <li>e. Allow time for staff to attend working group meetings on breastfeeding support.<sup>4</sup></li> </ul> <p><b>3. ‘Skilling up – professional training’</b></p> <ul style="list-style-type: none"> <li>a. All health professionals who come into contact with mothers and babies should have breastfeeding management training.<sup>10</sup></li> <li>b. Professional education should focus on training to provide antenatal education to mothers and on hospital practice, especially at birth and immediately after birth.<sup>9, 10</sup></li> <li>c. Include training on the social and cultural barriers to breastfeeding and particular social groups who may need targeted or extra support.<sup>6, 10, 15</sup></li> <li>d. Consider discipline-specific training.<sup>10</sup></li> <li>e. Incorporate an evaluation and monitoring component, to assess how the training affects practice and measure whether it has helped improve breastfeeding initiation rates.<sup>9</sup></li> </ul> <p><b>4. ‘Early awareness – antenatal education’</b></p> <ul style="list-style-type: none"> <li>a. Incorporate information about breastfeeding into routine antenatal care with individual mothers.<sup>12</sup></li> <li>b. Direct breastfeeding promotional activities towards targeted groups and the health professionals who have contact with them.<sup>2, 15</sup></li> <li>c. Implement workshop-style community breastfeeding support programmes with trained staff that address the psychosocial, psychological and practice aspects of breastfeeding.<sup>6, 10, 12</sup></li> <li>d. Solicit involvement of local volunteer breastfeeding support groups in education programmes.<sup>7</sup></li> <li>e. Involve fathers, significant others and/or other influencers in antenatal education.<sup>6, 7</sup></li> <li>f. Monitor how antenatal promotion and education activities affect breastfeeding initiation rates.<sup>4</sup></li> </ul> <p><b>5. ‘The power of mother-to-mother support’</b></p> <ul style="list-style-type: none"> <li>a. Look to set up peer support outreach work within the community, as well as at health centres. Locate meetings in easy-to-reach places, and ensure mothers are aware of local support available.<sup>7</sup></li> </ul>

<p><b>Data extraction sheet <i>Good practice and innovation in breastfeeding, cont...</i></b></p>	<p>b. Consider using trained peer supporters in teaching sessions for professionals, as well as to provide support for individual mothers in the community.<sup>7, 9, 10</sup></p> <p>c. Explore the opportunities to work in partnership with Sure Start.<sup>2, 4</sup></p> <p>d. Establish monitoring schemes to measure how mother-to-mother support affects breastfeeding initiation rates.<sup>4</sup></p> <p><b>6. ‘Reaching out – access, outreach and publicity’</b></p> <p>a. In order to engage with disadvantaged groups, projects need to target the priority audiences and involve proactive outreach work.<sup>15</sup></p> <p>b. Advertise and promote local initiatives and projects through relevant publicity and back it up with personal contact and encouragement.<sup>8</sup></p> <p>c. Develop targeted initiatives for hard-to-reach and disadvantaged groups such as teenagers and low-income women.<sup>15</sup></p> <p>d. Develop integrated approaches that involve local health care professionals from multiple disciplines in a variety of settings.<sup>9, 14</sup></p> <p>e. Involve representatives from targeted groups in needs assessment and programme development.<sup>15</sup></p> <p>f. Consider outreach activities for men/fathers.<sup>7</sup></p> <p>g. Display breastfeeding images in health centres, GP surgeries and other primary care trust premises.<sup>8</sup></p> <p>h. Educate employers in ways of supporting breastfeeding women working outside of the home.<sup>7</sup></p> <p>i. Study the research available that establishes the needs of particular hard-to-reach groups.<sup>15</sup></p>
<p><b>Analytical framework category</b></p>	<p><b>Socio-political determinants</b></p> <p><sup>2</sup> public health initiatives in breastfeeding promotion and support</p> <p><sup>3</sup> the Baby-Friendly Initiative</p> <p><b>Economic determinants</b></p> <p><sup>4</sup> financial investment in breastfeeding promotion and support</p> <p><sup>5</sup> countermanning the commercial promotion of infant formula and artificial feeding</p> <p><b>Sociocultural determinants</b></p> <p><sup>6</sup> social expectations and cultural norms</p> <p><sup>7</sup> breastfeeding support from community, family and peers</p> <p><sup>8</sup> public attitudes and media portrayals of breastfeeding and breastfeeding women</p> <p><b>Healthcare determinants</b></p> <p><sup>9</sup> promotion and support of breastfeeding in health care systems through policies, services and practitioners</p> <p><sup>10</sup> education and training of health care personnel</p> <p><b>Maternal determinants</b></p> <p><sup>12</sup> perceptions, attitudes, knowledge and experience of breastfeeding</p> <p><sup>14</sup> demographics</p> <p><sup>15</sup> <b>Breastfeeding inequalities</b></p>



## Appendix E

### Data extraction sheet: *NICE public health guidance 11.*

<b>NICE public health guidance 11. Improving the nutrition of pregnant and breastfeeding mothers and children in low-income households (105 pages)</b>	
<b>Country:</b> England	<b>Issue date:</b> March 2008
<b>Source:</b> Dept of Health, National Institute for Health and Clinical Excellence, London	
<b>Categories:</b> Public health, health inequalities, nutrition, maternal health	
<b>Purpose:</b> Provide guidance to address disparities in the nutrition of low-income and other disadvantaged groups compared with the general population. Provide guidance for NHS and other professionals who have a direct or indirect role in – and responsibility for – the nutrition of pregnant and breastfeeding mothers including those working in local authorities and community, voluntary and private sectors, but also intended to be of interest to the public. (Introduction section, pg. 3)	
<b>Composition of group that developed the guideline</b>	
<b>NICE project team</b>	
Andrew Dillon, Executive Lead	
Karen Peploe, Lead Analyst	
Kristin O'Leary, Communications Manager	
Sarah Dunsdon, Project Manager	
Tricia Younger, Associate Director	
Professor Mike Kelly, Director	
Jane Cowl, Public involvement Lead	
Sue Latchem, Implementation Lead	
Brian Travis, Coordinator	
<b>NICE Programme Development Group: Maternal and Child Nutrition:</b>	
Pam Heslop, Community Nursery Nurse, Greater Peterborough Primary Care Partnership	
Cindy Hutchinson, Midwife, King's College London	
Wendy Jones, Prescribing Support Pharmacist, East Hampshire Primary Care Trust	
Paul Little, General practitioner and Professor of Primary Care Research	
Alison Lloyd, N.C.T. Antenatal teacher and assistant project officer in a teenage pregnancy housing project, Community Member	
Jenny McLeish, Formerly Policy Officer at the Maternity Alliance, Community Member	
Ruth Moore, Regional Development Manager, National Childminding Association	
Richard Watt, Professor in Dental Public Health, University College, London	
<b>All factors from analytical framework</b>	
<b>Socio-political determinants</b>	
1 legislation and policy to promote and support breastfeeding,	
2 public health initiatives in breastfeeding promotion and support	
3 the Baby-Friendly Initiative	
<b>Economic determinants</b>	
4 financial investment in breastfeeding promotion and support	
5 countermanding the commercial promotion of infant formula and artificial feeding	

## Data extraction sheet: NICE public health guidance 11, cont...

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### Sociocultural determinants

- 6 social expectations and cultural norms
- 7 breastfeeding support from community, family and peers
- 8 public attitudes and media portrayals of breastfeeding and breastfeeding women

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### Healthcare determinants

- 9 promotion and support of breastfeeding in health care systems through policies, services and practitioners
- 10 education and training of health care personnel
- 11 the Baby-Friendly Hospital Initiative

### Maternal determinants

- 12 perceptions, attitudes, knowledge and experience of breastfeeding
- 13 maternal/infant health status
- 14 demographics

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### 15 Breastfeeding inequalities

**Factors from analytical framework missing in policy:** None

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### Systematic reviews related to breastfeeding used

Renfrew, M., Dyson, L., Wallace, L., D'Souza, L., McCormick, F., Spiby, H. (2005). *The effectiveness of public health interventions to promote the duration of breastfeeding: systematic review 1<sup>st</sup> edition*. National Institute for Health and Clinical Evidence, London.

Jacklin, P., Retsa, P., Kwan, I., O'Connell, A-M., Dougherty, M., Whittle, M. (2006). *Rapid economic review of public health interventions designed to improve the nutrition of children aged 0–5 years*. The National Collaborating Centre for Women's and Children's Health, London.

Moreton, J.A., King, S.E., D'Souza, L., McFadden, A., McCormick, F., Renfrew, M.J. (2008). *The effectiveness of public health interventions to promote safe and healthy milk feeding practices in babies*. Maternal and Infant Research Unit, Department of Health Sciences, University of York, Heslington, UK

McCormick, F., Moreton, J.A., D'Souza, L., King, S.E., McFadden, A., Renfrew, M.J. (2007). *The effectiveness of public health interventions to improve the nutrition of young children aged 6–24 months*. Maternal Infant Research Unit, Department of Health Sciences, University of York, Heslington, UK.

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### Other sources of evidence used

Maternal and Child Nutrition Programme. Economic Appraisal. Modelling the cost-effectiveness of breastfeeding support. The National Collaborating Centre for Women's and Children's Health, London. 9

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### Expert reports

Cook, P. (2006, November). Handling and storage of expressed breast milk. London: Food Hazards and Consumer Protection Branch, Microbiological Safety Division, Food Standards Agency.

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<sup>9</sup> The publication retrieved from the NICE website for this reference does not fully correspond with the one listed here. The publication retrieved is:  
Jacklin, P., Retsa, P., Dougherty, M., Kwan, I. (2007). *Modelling the cost effectiveness of interventions to promote breastfeeding*. The National Collaborating Centre for Women's and Children's Health, London.

## Data extraction sheet: *NICE public health guidance 11, cont...*

### Methods used to develop recommendations

The PDG developed draft recommendations through informal consensus, based on the following criteria:

- Strength (quality and quantity) of evidence of effectiveness and its applicability to the populations/settings referred to in the scope.
- Effect size and potential impact on population health and/or reducing inequalities in health.
- Cost effectiveness.
- Balance of risks and benefits.
- Ease of implementation and the anticipated extent of change in practice that would be required.

The PDG also considered whether a recommendation should only be implemented as part of a research programme, where evidence was lacking.

### Intervention category: Training of health care professionals

<b>Target population</b>	Health professionals and support workers who care for children under 5 years and women who may become – or who are – pregnant
<b>Who should take action</b>	Professional bodies, skills councils and others responsible for setting competencies and developing continuing professional development programmes for health professionals, nursery nurses and support workers
<b>Recommended action(s)</b>	<ol style="list-style-type: none"> <li>1. Professional bodies should ensure health professionals have the appropriate knowledge and skills to give advice on: <ol style="list-style-type: none"> <li>a. breastfeeding management, using the Baby Friendly Initiative (BFI) training as a minimum standard.<sup>3, 4, 9, 11</sup></li> <li>b. the rationale for recommending certain dietary supplements to pregnant and breastfeeding women.<sup>13</sup></li> </ol> </li> <li>2. As part of their continuing professional development, train midwives, health visitors and support workers in breastfeeding management, using BFI training as a minimum standard.<sup>4, 5, 9, 11</sup></li> <li>3. As part of their continuing professional development, train health professionals, including doctors, dietitians and pharmacists, to promote and support breastfeeding, using BFI training as a minimum standard.<sup>4, 5, 9, 11</sup></li> </ol>
<b>Analytical framework category</b>	<p><b>Socio-political determinants</b>  <sup>3</sup> the Baby-Friendly Initiative</p> <p><b>Economic determinants</b>  <sup>5</sup> countermessaging the commercial promotion of infant formula and artificial feeding</p> <p><b>Healthcare determinants</b>  <sup>9</sup> promotion and support of breastfeeding in health care systems through policies, services and practitioners  <sup>11</sup> education and training of health care personnel</p> <p><b>Maternal determinants</b>  <sup>13</sup> maternal/infant health status</p>

**Data extraction sheet: NICE public health guidance 11, cont...**

<b>Intervention category: Vitamin D</b>	
<b>Target population</b>	Pregnant women and breastfeeding mothers
<b>Who should take action</b>	Dietitians, public health nutritionists, midwives, health visitors, GPs, obstetricians and community pharmacists; manufacturers of goods for pregnant and breastfeeding women
<b>Recommended action(s)</b>	<ol style="list-style-type: none"> <li>1. Dietitians and public health nutritionists should educate health professionals about the importance of supplements for all pregnant and breastfeeding women.<sup>11, 13</sup></li> <li>2. During the booking appointment at the beginning of pregnancy, midwives should offer every woman information and advice on the benefits of taking a vitamin D supplement (1.0 micrograms [µg] per day) during pregnancy and while breastfeeding.<sup>12, 13</sup></li> <li>3. Health professionals should take particular care to check that women at greatest risk of deficiency are following advice to take a vitamin D supplement during pregnancy and while breastfeeding.<sup>13</sup></li> <li>4. Midwives and health visitors should advise all pregnant and breastfeeding women about the availability of suitable vitamin D supplements.<sup>12, 13</sup></li> <li>5. Manufacturers should include information with their products on the importance of vitamin D supplements during pregnancy and while breastfeeding.<sup>4</sup></li> </ol>
<b>Analytical framework category</b>	<p><b>Economic determinants</b>  <sup>4</sup> financial investment in breastfeeding promotion and support</p> <p><b>Healthcare determinants</b>  <sup>11</sup> education and training of health care personnel</p> <p><b>Maternal determinants</b>  <sup>12</sup> perceptions, attitudes, knowledge and experience of breastfeeding  <sup>13</sup> maternal/infant health status</p>
<b>Intervention category: Healthy Start</b>	
<b>Target population</b>	Pregnant women and parents of infants and children under 4 years who may be eligible for the Healthy Start benefit
<b>Who should take action</b>	PCT commissioners and managers GPs, midwives, health visitors, obstetricians, paediatricians, and community pharmacists
<b>Recommended action(s)</b>	Health professionals should use every opportunity they have to offer those parents who are eligible for the Healthy Start scheme practical, tailored information, support and advice on how to initiate and maintain breastfeeding. <sup>9, 12</sup>
<b>Analytical framework category</b>	<p><b>Healthcare determinants</b>  <sup>9</sup> promotion and support of breastfeeding in health care systems through policies, services and practitioners</p> <p><b>Maternal determinants</b>  <sup>12</sup> perceptions, attitudes, knowledge and experience of breastfeeding</p>

**Data extraction sheet: NICE public health guidance 11, cont...**

<b>Intervention category: Obesity</b>	
<b>Target population</b>	Pregnant women who have a pre-pregnancy body mass index (BMI) over 30/ those with a BMI over 30 who have a baby or may become pregnant
<b>Who should take action</b>	Obstetricians, gynaecologists, GPs, midwives, health visitors, nurses, dietitians, those working in contraceptive services or on weight management programmes (commercial or voluntary)
<b>Recommended action(s)</b>	Advise women that losing weight by eating healthily and taking regular exercise will not affect the quantity or quality of their milk. <sup>12, 13</sup>
<b>Analytical framework category</b>	<b>Maternal determinants</b> <sup>12</sup> perceptions, attitudes, knowledge and experience of breastfeeding <sup>13</sup> maternal/infant health status
<b>Intervention category: Breastfeeding support programmes within health care services</b>	
<b>Target pop'n</b>	Pregnant women and breastfeeding mothers
<b>Who should take action</b>	Commissioners and managers of maternity and children's services
<b>Recommended action(s)</b>	<ol style="list-style-type: none"> <li>1. Adopt a multifaceted approach or a coordinated programme of interventions across different settings to increase breastfeeding rates to include: <ol style="list-style-type: none"> <li>a. activities to raise awareness of the benefits of – and how to overcome the barriers to – breastfeeding.<sup>8, 9</sup></li> <li>b. training for health professionals.<sup>11</sup></li> <li>c. breastfeeding peer-support programmes.<sup>7</sup></li> <li>d. joint working between health professionals and peer supporters.<sup>7, 9</sup></li> <li>e. education and information for pregnant women on how to breastfeed, followed by proactive support during the postnatal period (the support may be provided by a volunteer).<sup>7, 9, 12</sup></li> </ol> </li> <li>2. Implement a structured programme that encourages breastfeeding, using BFI as a minimum standard and subject to external evaluation.<sup>4, 5</sup></li> <li>3. Ensure there is a written, audited and well-publicised breastfeeding policy that includes training for staff and support for those staff who may be breastfeeding. Identify a health professional responsible for implementing this policy.<sup>9, 11</sup></li> </ol>
<b>Analytical framework category</b>	<b>Socio-political determinants</b> <sup>3</sup> the Baby-Friendly Initiative <b>Economic determinants</b> <sup>5</sup> countermanding the commercial promotion of infant formula and artificial feeding <b>Sociocultural determinants</b> <sup>7</sup> breastfeeding support from community, family and peers <sup>8</sup> public attitudes and media portrayals of breastfeeding and breastfeeding women <b>Healthcare determinants</b> <sup>9</sup> promotion and support of breastfeeding in health care systems through policies, services and practitioners <sup>11</sup> education and training of health care personnel <b>Maternal determinants</b> <sup>12</sup> perceptions, attitudes, knowledge and experience of breastfeeding

**Data extraction sheet: NICE public health guidance 11, cont...**

<b>Intervention Category: Education and training of health care personnel in breastfeeding support</b>	
<b>Target population</b>	Pregnant women and breastfeeding mothers
<b>Who should take action</b>	Commissioners and managers of maternity and children's services; PCTs <sup>10</sup>
<b>Recommended action(s)</b>	<ol style="list-style-type: none"> <li>1. Ensure health professionals who provide information and advice to breastfeeding mothers have the required knowledge and skills.<sup>11</sup></li> <li>2. Ensure support workers receive training in breastfeeding management from someone with the relevant skills and experience before they start working with breastfeeding mothers.<sup>11</sup></li> <li>3. Ensure all those who work in maternity and children's services, including receptionists, volunteers and ancillary staff, are made fully aware of the importance of breastfeeding and help to promote a supportive environment.<sup>11</sup></li> </ol>
<b>Analytical framework category</b>	<b>Healthcare determinants</b> <sup>11</sup> education and training of health care personnel
<b>Intervention Category: Patient and family education in breastfeeding</b>	
<b>Target population</b>	Pregnant women and their partners
<b>Who should take action</b>	Midwives, obstetricians, GPs and health visitors
<b>Recommended action(s)</b>	<ol style="list-style-type: none"> <li>1. Midwives and health visitors should ensure pregnant women and their partners are offered breastfeeding information, education and support on an individual or group basis. This should be provided by someone trained in breastfeeding management and be delivered in a setting and style that best meets the woman's needs.<sup>7, 9, 12</sup></li> <li>2. During individual antenatal consultations GPs, obstetricians and midwives should encourage breastfeeding, paying particular attention to the needs of women who are least likely to breastfeed (for example, young women, those who have low educational achievement and those from disadvantaged groups).<sup>9, 14, 15</sup></li> <li>3. A midwife or health visitor trained in breastfeeding management should provide an informal group session in the last trimester of pregnancy. This should focus on how to breastfeed effectively by covering feeding position and how to attach the baby correctly.<sup>9, 14</sup></li> </ol>

<sup>10</sup> PCTs=Primary Care Trusts

**Data extraction sheet: NICE public health guidance 11, cont...**

<b>Analytical framework category</b>	<p><b>Sociocultural determinants</b>  <sup>7</sup> breastfeeding support from community, family and peers</p> <p><b>Healthcare determinants</b>  <sup>9</sup> promotion and support of breastfeeding in health care systems through policies, services and practitioners</p> <p><b>Maternal determinants</b>  <sup>14</sup> demographics  <sup>15</sup> <b>Breastfeeding inequalities</b></p>
<b>Intervention Category: Practical breastfeeding support</b>	
<b>Target population</b>	Breastfeeding mothers
<b>Who should take action</b>	Midwives, health visitors, midwifery and health visitor support workers
<b>Recommended action(s)</b>	<ol style="list-style-type: none"> <li>1. Ensure a mother can demonstrate how to position and attach the baby to the breast and can identify signs that the baby is feeding well. This should be achieved (and be documented) before she leaves hospital or the birth centre (or before the midwife leaves the mother after a home birth).<sup>12</sup></li> <li>2. Provide continuing and proactive breastfeeding support at home, recording all advice in the mother's hand-held records.</li> <li>3. Provide contact details for local voluntary organisations that can offer ongoing support to complement NHS breastfeeding services.<sup>7, 9</sup></li> <li>4. Advise mothers that a healthy diet is important for everyone and that they do not need to modify their diet to breastfeed.<sup>13</sup></li> <li>5. Do not provide written materials in isolation but use them to reinforce face-to-face advice about breastfeeding.<sup>12</sup></li> </ol>
<b>Analytical framework category</b>	<p><b>Sociocultural determinants</b>  <sup>7</sup> breastfeeding support from community, family and peers</p> <p><b>Healthcare determinants</b>  <sup>9</sup> promotion and support of breastfeeding in health care systems through policies, services and practitioners</p> <p><b>Maternal determinants</b>  <sup>12</sup> perceptions, attitudes, knowledge and experience of breastfeeding  <sup>13</sup> maternal/infant health status</p>
<b>Intervention Category: Breastfeeding peer counselor programmes</b>	
<b>Target population</b>	Pregnant women and new mothers, particularly those who are least likely to start and continue to breastfeed. For example, young women, those who have low educational achievement and those from disadvantaged groups
<b>Who should take action</b>	Commissioners and managers of maternity and children's services

## Data extraction sheet: *NICE public health guidance 11, cont...*

<b>Recommended action(s)</b>	<ol style="list-style-type: none"> <li>1. Provide local, easily accessible breastfeeding peer support programmes and ensure peer supporters are part of a multidisciplinary team.<sup>7,9</sup></li> <li>2. Ensure peer supporters:             <ol style="list-style-type: none"> <li>a. attend a recognised, externally accredited training course in breastfeeding peer support.<sup>11</sup></li> <li>b. contact new mothers directly within 4.8 hours of their transfer home (or within 4.8 hours of a home birth).<sup>9</sup></li> <li>c. offer mothers ongoing support according to their individual needs delivered face-to-face, via telephone or through local groups.<sup>7</sup></li> <li>d. can consult a health professional and are provided with ongoing support.<sup>9</sup></li> <li>e. gain appropriate child protection clearance.<sup>1</sup></li> </ol> </li> <li>3. Consider training peer supporters and link workers to help mothers, parents and carers follow professional advice on feeding infants aged 6 months and over. The advice should promote an increasingly varied diet using food of different textures in appropriate amounts (in addition to milk), in response to the baby's needs.<sup>11, 13</sup></li> </ol>
<b>Analytical framework category</b>	<p><b>Socio-political determinants</b>  <sup>1</sup>legislation and policy to promote and support breastfeeding</p> <p><b>Sociocultural determinants</b>  <sup>7</sup>breastfeeding support from community, family and peers</p> <p><b>Healthcare determinants</b>  <sup>9</sup>promotion and support of breastfeeding in health care systems through policies, services and practitioners  <sup>11</sup>education and training of health care personnel</p> <p><b>Maternal determinants</b>  <sup>13</sup>maternal/infant health status</p>
<b>Intervention Category: Practical support in management of pumping and storage of breast milk</b>	
<b>Target population</b>	Breastfeeding mothers
<b>Who should take action</b>	Midwives, health visitors, paediatric nurses, nurses working in special-care baby and neonatal units, and nursery nurses
<b>Recommended action(s)</b>	<ol style="list-style-type: none"> <li>1. Show all breastfeeding mothers how to hand-express breast milk.<sup>12</sup></li> <li>2. Advise mothers that expressed milk can be stored for:             <ol style="list-style-type: none"> <li>a. up to 5 days in the main part of a fridge, at 4°C or lower.</li> <li>b. up to 2 weeks in the freezer compartment of a fridge.</li> <li>c. up to 6 months in a domestic freezer, at minus 18°C or lower.<sup>12</sup></li> </ol> </li> <li>3. Advise mothers who wish to store expressed breast milk for less than 5 days that the fridge preserves its properties more effectively than freezing.<sup>12</sup></li> <li>4. Advise mothers who freeze their expressed breast milk to defrost it in the fridge and not to re-freeze it once thawed. Advise them never to use a microwave oven to warm or defrost breast milk.<sup>12</sup></li> </ol>



## Data extraction sheet: *NICE public health guidance 11, cont...*

<b>Analytical framework category</b>	<b>Maternal determinants</b> <sup>12</sup> perceptions, attitudes, knowledge and experience of breastfeeding
<b>Intervention Category: Link workers</b>	
<b>Target population</b>	Pregnant women and mothers whose first language is not English, their partners and extended family
<b>Who should take action</b>	NHS trusts responsible for maternity care and GP surgeries and community health centres
<b>Recommended action(s)</b>	<ol style="list-style-type: none"> <li>1. NHS trusts should train link workers who speak the mother's first language to provide information and support on breastfeeding, use of infant formula, weaning and healthy eating.<sup>6, 10</sup></li> <li>2. Where link workers are not available, ensure women whose first language is not English have access to interpreting services and information in a format and language they can understand.<sup>6</sup></li> <li>3. NHS trusts should encourage women from minority ethnic communities whose first language is not English to train as breastfeeding peer supporters.<sup>6, 14, 15</sup></li> </ol>
<b>Analytical framework category</b>	<b>Sociocultural determinants</b> <sup>6</sup> social expectations and cultural norms <b>Healthcare determinants</b> <sup>10</sup> education and training of health care personnel <b>Maternal determinants</b> <sup>14</sup> demographics <sup>15</sup> <b>Breastfeeding inequalities</b>
<b>Intervention Category: Prescribing</b>	
<b>Target population</b>	Hospital doctors, general practitioners, obstetricians, pharmacists, specialist nurses, dentists and PCT medicine management teams
<b>Who should take action</b>	NHS trusts responsible for maternity care and GP surgeries, community health centres, pharmacies and drug and alcohol services
<b>Recommended action(s)</b>	<ol style="list-style-type: none"> <li>1. Ensure health professionals and pharmacists who prescribe or dispense drugs to a breastfeeding mother consult supplementary sources (for example, the Drugs and Lactation Database or seek guidance from the UK Drugs in Lactation Advisory Service.<sup>9, 10, 13</sup></li> <li>2. Health professionals should discuss the benefits and risks associated with the prescribed medication and encourage the mother to continue breastfeeding, if reasonable to do so. In most cases, it should be possible to identify a suitable medication which is safe to take during breastfeeding by analysing pharmacokinetic and study data. Appendix 5 of the 'BNF' should only be used as a guide as it does not contain quantitative data on which to base individual decisions.<sup>9, 12</sup></li> <li>3. Health professionals should recognise that there may be adverse health consequences for both mother and baby if the mother does not breastfeed. They should also recognise that it may not be easy for the mother to stop breastfeeding abruptly – and that it is difficult to reverse.<sup>13</sup></li> </ol>

## Data extraction sheet: *NICE public health guidance 11, cont...*

<b>Analytical framework category</b>	<p><b>Healthcare determinants</b></p> <p><sup>9</sup> promotion and support of breastfeeding in health care systems through policies, services and practitioners</p> <p><sup>10</sup> education and training of health care personnel</p> <p><b>Maternal determinants</b></p> <p><sup>12</sup> perceptions, attitudes, knowledge and experience of breastfeeding</p> <p><sup>13</sup> maternal/infant health status</p>
<b>Intervention Category: Child health promotion</b>	
<b>Target population</b>	Parents and carers of infants and pre-school children
<b>Who should take action</b>	NHS trust and PCT commissioners and managers; health visitors, community nursery nurses, the child health promotion programme (CHPP) team & children's centre teams
<b>Recommended action(s)</b>	<ol style="list-style-type: none"> <li>1. Commissioners and managers should work with local partners to ensure mothers can feed their babies in public areas without fear of interruption or criticism.<sup>6, 7, 8</sup></li> <li>2. Health visitors and the CHPP team should: <ol style="list-style-type: none"> <li>a. support mothers to continue breastfeeding for as long as they choose.<sup>9</sup></li> <li>b. provide mothers and other family members with support to introduce a variety of nutritious foods (in addition to milk) to ensure the child is offered a progressively varied diet from 6 months.<sup>9, 12</sup></li> </ol> </li> </ol>
<b>Analytical framework category</b>	<p><b>Sociocultural determinants</b></p> <p><sup>6</sup> social expectations and cultural norms</p> <p><sup>7</sup> breastfeeding support from community, family and peers</p> <p><sup>8</sup> public attitudes and media portrayals of breastfeeding and breastfeeding women</p> <p><b>Healthcare determinants</b></p> <p><sup>9</sup> promotion and support of breastfeeding in health care systems through policies, services and practitioners</p> <p><b>Maternal determinants</b></p> <p><sup>12</sup> perceptions, attitudes, knowledge and experience of breastfeeding</p>
<b>Intervention Category: Allergies</b>	
<b>Target population</b>	Pregnant women, mothers and their partners who have a family history of allergy (including eczema, asthma and hay fever)
<b>Who should take action</b>	Midwives, health visitors, GPs, paediatricians, community dietitians and pharmacists
<b>Recommended action(s)</b>	<ol style="list-style-type: none"> <li>1. Advise mothers to feed the baby only on breast milk and to continue breastfeeding while introducing solid foods, when the infant is 6 months.<sup>9, 12</sup></li> <li>2. Advise mothers who choose not to breastfeed that there is insufficient evidence to suggest that infant formula based on partially or extensively hydrolysed cow's milk protein helps to prevent allergies.<sup>9, 12</sup></li> </ol>

**Data extraction sheet: NICE public health guidance 11, cont...**

<b>Analytical framework category</b>	<p><b>Healthcare determinants</b>  <sup>9</sup> promotion and support of breastfeeding in health care systems through policies, services and practitioners</p> <p><b>Maternal determinants</b>  <sup>12</sup> perceptions, attitudes, knowledge and experience of breastfeeding</p>
<b>Intervention Category: Pre-school settings</b>	
<b>Target population</b>	Parents and carers of infants and pre-school children
<b>Who should take action</b>	Nursery nurses, home-based child carers and others working in pre-school day care settings such as nurseries, creches and playgroups
<b>Recommended action(s)</b>	<p>1. Support breastfeeding mothers by:</p> <p>a. offering them the opportunity to breastfeed when they wish.<sup>9, 12</sup></p> <p>b. encouraging them to bring expressed breast milk in a cool bag.<sup>12</sup></p> <p>c. ensuring expressed breast milk is labelled with the date and name of the infant and stored in the main body of the fridge.<sup>4</sup></p>
<b>Analytical framework category</b>	<p><b>Economic determinants</b>  <sup>4</sup> financial investment in breastfeeding promotion and support</p> <p><b>Healthcare determinants</b>  <sup>9</sup> promotion and support of breastfeeding in health care systems through policies, services and practitioners</p> <p><b>Maternal determinants</b>  <sup>12</sup> perceptions, attitudes, knowledge and experience of breastfeeding</p>
<b>Recommendations for research: Commissioning</b>	
<b>Target population</b>	Pre-analytical women, pregnant and breastfeeding women and young children
<b>Who should take action</b>	Research commissioners and funders
<b>Recommended action(s)</b>	<p>1. Commission research into effective ways of improving the nutritional status of pre-analytical women, pregnant and breastfeeding women and young children.<sup>2, 13</sup> This should identify effective ways of engaging with women both before and during pregnancy. It should pay particular attention to:</p> <p>a. teenage parents, low-income families and families from minority ethnic or disadvantaged groups.<sup>14, 15</sup></p> <p>b. promoting oily fish, vegetable and fruit consumption.</p> <p>c. helping women who may become pregnant, particularly those who are obese, to achieve a healthy body weight prior to pregnancy.<sup>13</sup></p> <p>d. promoting uptake of folic acid supplements prior to conception and the uptake of vitamin D supplements during pregnancy and while breastfeeding.<sup>13</sup></p> <p>2. Commission research into how best to encourage and support women to breastfeed exclusively during first 6 months and ensure all women breastfeed for longer.<sup>2, 13</sup></p>

**Data extraction sheet: NICE public health guidance 11, cont...**

<b>Analytical framework category</b>	<b>Socio-political determinants</b> <sup>2</sup> public health initiatives in breastfeeding promotion and support <b>Maternal determinants</b> <sup>13</sup> maternal/infant health status <sup>14</sup> demographics <sup>15</sup> <b>Breastfeeding inequalities</b>
<b>Recommendations for research: Methods and reporting</b>	
<b>Target population</b>	Clinical researchers and policymakers
<b>Who should take action</b>	Research councils, national and local research commissioners and funders, research workers and journal editors
<b>Recommended action(s)</b>	<ol style="list-style-type: none"> <li>1. Include as standard in nutritional research and policy evaluation reports: <ol style="list-style-type: none"> <li>a. a clear, detailed description of what was delivered, over what period, to whom and in what setting.<sup>9</sup></li> <li>b. the costs of delivering the intervention.<sup>4</sup></li> <li>c. measurable and clearly defined health outcomes.<sup>13</sup></li> <li>d. an estimation of the sample size required to demonstrate, with adequate statistical power, the impact on health.<sup>13</sup></li> <li>e. differences in access, recruitment and (where relevant data are available) uptake according to socioeconomic and cultural variables such as social class, education, gender, income or ethnicity.<sup>6, 12, 14, 15</sup></li> <li>f. a description and rationale of the research methods and forms of interpretation used. (no direct match)</li> <li>g. embedded process evaluations that include recipient perspectives (for example, using qualitative techniques such as interviews and focus groups).<sup>12</sup></li> </ol> </li> <li>2. Develop methods for synthesising and interpreting results across studies conducted in different localities, policy environments and population groups.<sup>12, 14, 15</sup></li> <li>3. Formulate rigorous and transparent methods for assessing external validity and for translating evidence into practice. (no direct match)</li> </ol>
<b>Analytical framework category</b>	<b>Economic determinants</b> <sup>4</sup> financial investment in breastfeeding promotion and support <b>Sociocultural determinants</b> <sup>6</sup> social expectations and cultural norms <b>Healthcare determinants</b> <sup>9</sup> promotion and support of breastfeeding in health care systems through policies, services and practitioners <b>Maternal determinants</b> <sup>13</sup> maternal/infant health status <sup>14</sup> demographics <sup>15</sup> <b>Breastfeeding inequalities</b>

**Data extraction sheet: NICE public health guidance 11, cont...**

<b>Recommendations for research: Monitoring and evaluation</b>	
<b>Target population</b>	Public health researchers and policymakers
<b>Who should take action</b>	Policy makers, research commissioners and local services
<b>Recommended action(s)</b>	<ol style="list-style-type: none"> <li>1. Collect baseline data before implementing local interventions or policy changes that may impact health and ensure evaluation is part of the funding proposal.<sup>2, 13, 14</sup></li> <li>2. Work in partnership with health authorities, public health observatories or universities to evaluate local initiatives, but allow adequate time for the intervention to take effect. Monitoring and evaluation should always estimate the potential impact on maternal and child health among different social groups.<sup>2, 4, 13, 14, 15</sup></li> </ol>
<b>Analytical framework category</b>	<p><b>Socio-political determinants</b>  <sup>2</sup> public health initiatives in breastfeeding promotion and support</p> <p><b>Economic determinants</b>  <sup>4</sup> financial investment in breastfeeding promotion and support</p> <p><b>Maternal determinants</b>  <sup>13</sup> maternal/infant health status  <sup>14</sup> demographics  <sup>15</sup> <b>Breastfeeding inequalities</b></p>
<b>Recommendations for research: Cost-effectiveness</b>	
<b>Target population</b>	Public health research funders
<b>Who should take action</b>	Policy makers, research funders and health economists
<b>Recommended action(s)</b>	<ol style="list-style-type: none"> <li>1. As a priority, commission research on the cost-effectiveness of maternal and child nutrition interventions. This includes balancing the cost of primary prevention of nutrition-related ill health against the costs of detecting and treating disease (both short and long term).<sup>4</sup></li> </ol>
<b>Analytical framework category</b>	<p><b>Economic determinants</b>  <sup>4</sup> financial investment in breastfeeding promotion and support</p>

*Note: Information in table does not include all recommendations in PGH11, only those that pertain directly or indirectly to the promotion and support of breastfeeding and/or breastfeeding inequalities. Intervention categories are those designated in the policy document.*

## Appendix F

### Data extraction sheet: *Breastfeeding: HHS Blueprint for Action on Breastfeeding*

<b>Breastfeeding: HHS Blueprint for Action on Breastfeeding (20 pages)</b>
<b>Country:</b> United States
<b>Source:</b> Office on Women's Health, U.S. Department of Health and Human Services
<b>Issue date:</b> October 2000
<b>Categories:</b> Public health; breastfeeding inequalities
<b>Purpose of policy:</b> Establish a comprehensive breastfeeding policy for the nation. Introduce an action plan for breastfeeding based on education, training, awareness, support and research.
<b>Composition of group that developed the guideline:</b> See Appendix I – Subcommittee on Breastfeeding
<b>Contributing agencies:</b> Administration for Children and Families, Agency for Healthcare Research and Quality, Agency for Toxic Substances and Disease Registry, Centers for Disease Control and Prevention, Environmental Protection Agency, Food and Drug Administration, Health Resources and Services Administration, Indian Health Service, National Institutes of Health Office of Disease Prevention and Health Promotion, Office of HIV/AIDS Policy, Office of the Assistant Secretary for Planning and Evaluation
U.S. Department of Agriculture, U.S. Agency for International Development.
<b>Agency commissioned to conduct a systematic review:</b>
No systematic review reported to have been commissioned.
<b>Systematic reviews used:</b>
Cronenwett, L.R., & Reinhardt, R. (1987). Support and breastfeeding: a review. <i>Birth</i> , 14; 199–2003.
<b>Other sources of evidence used:</b>
Members of the Subcommittee on Breastfeeding review of science-based findings. See Appendix I for list of subcommittee members.
<b>All factors from analytical framework:</b>
<b>Socio-political determinants</b>
<sup>1</sup> legislation and policy to promote and support breastfeeding,
<sup>2</sup> public health initiatives in breastfeeding promotion and support
<sup>3</sup> the Baby-Friendly Initiative
<b>Economic determinants</b>
<sup>4</sup> financial investment in breastfeeding promotion and support
<sup>5</sup> countermanding the commercial promotion of infant formula and artificial feeding
<b>Sociocultural determinants</b>
<sup>6</sup> social expectations and cultural norms
<sup>7</sup> breastfeeding support from community, family and peers
<sup>8</sup> public attitudes and media portrayals of breastfeeding and breastfeeding women
<b>Healthcare determinants</b>
<sup>9</sup> promotion and support of breastfeeding in healthcare systems through policies, services and practitioners
<sup>10</sup> education and training of healthcare personnel
<sup>11</sup> the Baby-Friendly Hospital Initiative

**Data extraction sheet: *Breastfeeding: HHS Blueprint for Action on Breastfeeding, cont...***

**Maternal determinants**

<sup>12</sup> perceptions, attitudes, knowledge and experience of breastfeeding

<sup>13</sup> maternal/infant health status

<sup>14</sup> demographics

**<sup>15</sup> Breastfeeding inequalities**

**Factors from analytical framework missing in policy: None**

**Intervention category: Healthcare system**

<b>Target population</b>	Breastfeeding mothers
<b>Who should take action</b>	All health care providers who interact with women or infants; maternity care and newborn facilities
<b>Recommended action(s)</b>	<ol style="list-style-type: none"> <li>1. Train healthcare professionals who provide maternal and child care on the basics of lactation, breastfeeding counseling, and lactation management during coursework, clinical and in-service training and continuing education.<sup>10</sup></li> <li>2. Ensure that breastfeeding mothers have access to comprehensive, up-to-date and culturally tailored lactation services provided by trained physicians, nurses, lactation consultants, and nutritionists/dietitians.<sup>6, 9</sup></li> <li>3. Establish hospital and maternity center practices that promote breastfeeding, e.g. the ‘Ten Steps to Successful Breastfeeding’.<sup>3-5, 9</sup></li> <li>4. Develop breastfeeding education for women, their partners, and other significant family members during the prenatal and postnatal visits.<sup>6, 7, 12</sup></li> <li>5. Special attention should be given to barriers to breastfeeding for all women, especially African American and other minority women.<sup>14, 15</sup></li> </ol>
<b>Analytical framework category</b>	<p><b>Socio-political determinants</b>  <sup>3</sup> the Baby-Friendly Initiative</p> <p><b>Economic determinants</b>  <sup>4</sup> financial investment in breastfeeding promotion and support  <sup>5</sup> countermanding the commercial promotion of infant formula and artificial feeding</p> <p><b>Sociocultural determinants</b>  <sup>6</sup> social expectations and cultural norms  <sup>7</sup> breastfeeding support from community, family and peers</p> <p><b>Healthcare determinants</b>  <sup>9</sup> the promotion and support of breastfeeding in healthcare systems through policies, services and practitioners  <sup>10</sup> education and training of healthcare personnel</p> <p><b>Maternal determinants</b>  <sup>12</sup> perceptions, attitudes, knowledge and experience of breastfeeding  <sup>14</sup> demographics</p> <p><b><sup>15</sup> Breastfeeding inequalities</b></p>

**Data extraction sheet: *Breastfeeding: HHS Blueprint for Action on Breastfeeding***

<b>Intervention category: The workplace</b>	
<b>Target population</b>	Breastfeeding mothers working outside the home
<b>Who should take action</b>	Employee administrators and managers
<b>Recommended action(s)</b>	<ol style="list-style-type: none"> <li>1. Facilitate breastfeeding or breast milk expression in the workplace by providing:<sup>4,7</sup> <ol style="list-style-type: none"> <li>a. private rooms.</li> <li>b. commercial grade breast pumps.</li> <li>c. milk storage arrangements.</li> <li>d. adequate breaks during the day.</li> <li>e. flexible work schedules.</li> <li>f. onsite childcare facilities.</li> </ol> </li> <li>2. Establish family and community programs that enable breastfeeding continuation when women return to work in all possible settings.<sup>2,7</sup></li> <li>3. Encourage childcare facilities to provide quality breastfeeding support.<sup>4</sup></li> </ol>
<b>Analytical framework category</b>	<p><b>Socio-political determinants</b>  <sup>2</sup> public health initiatives in breastfeeding promotion and support</p> <p><b>Economic determinants</b>  <sup>4</sup> financial investment in breastfeeding support</p> <p><b>Sociocultural determinants</b>  <sup>7</sup> breastfeeding support from community, family and peers</p>
<b>Intervention category: Family and community</b>	
<b>Target population</b>	Breastfeeding mothers and their partners
<b>Who should take action</b>	Lactation consultants or specialists, peer counselors, other women who have breastfed; schools, public health educational campaigns; public media
<b>Recommended action(s)</b>	<ol style="list-style-type: none"> <li>1. Develop social support and information resources for breastfeeding women such as hotlines, peer counseling and mother-to-mother support groups.<sup>6,7</sup></li> <li>2. Launch and evaluate a public health marketing campaign portraying breastfeeding as normal, desirable, and achievable.<sup>2,8</sup></li> <li>3. Encourage the media to portray breastfeeding as normal, desirable, and achievable for women of all cultures and socioeconomic levels.<sup>8</sup></li> <li>4. Encourage fathers, particularly African American fathers, and other family members to be actively involved throughout the breastfeeding experience.<sup>7, 14, 15</sup></li> <li>5. Be aware that social support, particularly by peers, is critical for special populations with lower breastfeeding rates, e.g. African American and teen mothers.<sup>6, 7, 14, 15</sup></li> </ol>



**Data extraction sheet: *Breastfeeding: HHS Blueprint for Action on Breastfeeding***

<b>Analytical framework category</b>	<p><b>Socio-political determinants</b>  <sup>2</sup> public health initiatives in breastfeeding promotion and support</p> <p><b>Sociocultural determinants</b>  <sup>6</sup> social expectations and cultural norms  <sup>7</sup> breastfeeding support from community, family and peers  <sup>8</sup> public attitudes and media portrayals of breastfeeding and breastfeeding women</p> <p><b>Maternal determinants:</b>  <sup>14</sup> demographics  <sup>15</sup> <b>Breastfeeding inequalities</b></p>
<p><b>Recommendations for research</b></p>	
<b>Target population</b>	<p>Breastfeeding mothers</p>
<b>Who should take action</b>	<p>Public health researchers, clinical researchers, epidemiologists, social scientists and healthcare economists; funding bodies of clinical, public health, and healthcare research</p>
<b>Recommended action(s)</b>	<ol style="list-style-type: none"> <li>1. Conduct research that identifies the social, cultural, economic and psychological factor that influence infant feeding behaviours, especially among African American and other minority and ethnic groups.<sup>14, 15</sup></li> <li>2. Improve understanding of the health benefits of breastfeeding, especially in reducing the risk for chronic childhood diseases among disadvantaged infants and children.<sup>13, 15</sup></li> <li>3. Monitor trends on the incidence and duration of exclusive, partial and minimal breastfeeding, including minority and ethnic groups.<sup>14</sup></li> <li>4. Compare the cost-effectiveness of different programmes that promote, protect and support breastfeeding to ensure optimal use of resources.<sup>2, 4</sup></li> <li>5. Conduct research to better understand the role of fathers in promoting breastfeeding.</li> <li>6. Evaluate the influence of brief postpartum hospital stays on breastfeeding initiation and duration.<sup>10</sup></li> <li>7. Determine the safety of over-the-counter and prescription products taken by lactating women on infant health.<sup>13</sup></li> <li>8. Conduct a large, well-designed case-control study on the effects of breast implants on childhood disorders.<sup>13</sup></li> </ol>
<b>Analytical framework category</b>	<p><b>Socio-political determinants</b>  <sup>1</sup> priorities in legislation and policy to promote and support breastfeeding  <sup>2</sup> public health initiatives in breastfeeding promotion and support</p> <p><b>Economic determinants</b>  <sup>4</sup> financial investment in breastfeeding support</p> <p><b>Healthcare determinants</b>  <sup>10</sup> the promotion and support of breastfeeding in healthcare systems through policies, services and practitioners</p> <p><b>Maternal determinants</b>  <sup>13</sup> maternal/infant health status  <sup>14</sup> demographics  <sup>15</sup> <b>Breastfeeding inequalities</b></p>

## Appendix G

### Data extraction sheet: *CDC Guide to Breastfeeding Interventions*

<b>CDC Guide to Breastfeeding Interventions (85 pages)</b>	
<b>Country:</b>	United States
<b>Source:</b>	U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Atlanta, Georgia
<b>Issue date:</b>	2005
<b>Categories:</b>	Public health, breastfeeding inequalities, nutrition
<b>Goal of report:</b>	Provide guidance and direction in selecting a breastfeeding intervention; offer the most relevant information on each type of intervention to help the reader make wise decisions. Recommendations are divided into two categories that are based on evidence for effectiveness. In the first category, the evidence is significant; in the second, it is limited.
<b>Composition of group that developed the guideline</b>	
<b>Expert panel</b>	
<b>Internal Participants</b>	
<ul style="list-style-type: none"> <li>• Audrey Naylor, MD, DrPH, FABM, Chief Executive Officer, Wellstart International, San Diego, California</li> <li>• Ursuline Singleton, MPH, RD, Nutritionist Coordinator, Lactation Support Food and Nutrition Service/U.S. Department of Agriculture, Alexandria, Virginia</li> <li>• Linda Smith, BSE, FACCE, IBCLC, RLC, Director, Bright Future Lactation Centre, Ltd., Dayton, Ohio</li> <li>• Amy Spangler, MN, RN, IBCLC, RLC, President, Amy's Baby Company, Atlanta, Georgia</li> <li>• Cindy Turner-Maffei, MA, IBCLC, RLC, National Coordinator, Baby-Friendly USA, E Sandwich, Massachusetts</li> </ul>	
<b>From the Maternal and Child Nutrition Branch, Division of Nutrition and Physical Activity, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, Atlanta, Georgia:</b>	
<ul style="list-style-type: none"> <li>• Sandra Benton-Davis, RD, LD, Public Health Nutritionist</li> <li>• Laurence M. Grummer-Strawn, PhD, Branch Chief</li> <li>• Ruowei(Rosie)Li, MD, PhD, Epidemiologist</li> <li>• Katherine R. Shealy, MPH, IBCLC, RLC, Public Health Breastfeeding Specialist</li> </ul>	
<b>External Participants</b>	
<ul style="list-style-type: none"> <li>• Naomi Bar-Yam, PhD, Consultant, Newton, Massachusetts</li> <li>• Cathy Carothers, BLA, IBCLC, RLC, Training and Outreach Coordinator, Best Start Social Marketing, Tampa, Florida</li> <li>• Betty L. Crase, BA, IBCLC, RLC, Manager and Program Director, Breastfeeding Initiatives and Breastfeeding Promotion in Physicians' Office Practices, Division of Community Health Services, American Academy of Pediatrics, Elk Grove Village, Illinois</li> <li>• Gladys Mason, RD, LD, IBCLC, RLC, State WIC Breastfeeding Coordinator, North Carolina Department of Health and Human Services, Nutrition Services Branch/WIC Program, Raleigh, North Carolina</li> </ul>	

## Data extraction sheet: *CDC Guide to Breastfeeding Interventions, cont...*

### All factors from analytical framework

#### Socio-political determinants

- 1 legislation and policy to promote and support breastfeeding
- 2 public health initiatives in breastfeeding promotion and support
- 3 the Baby-Friendly Initiative

#### Economic determinants

- 4 financial investment in breastfeeding promotion and support
- 5 countermanding the commercial promotion of infant formula and artificial feeding

#### Sociocultural determinants

- 6 social expectations and cultural norms
- 7 breastfeeding support from community, family and peers
- 8 public attitudes and media portrayals of breastfeeding and breastfeeding women

#### Healthcare determinants

- 9 promotion and support of breastfeeding in healthcare systems through policies, services and practitioners
- 10 education and training of healthcare personnel
- 11 the Baby-Friendly Hospital Initiative

#### Maternal determinants

- 12 perceptions, attitudes, knowledge and experience of breastfeeding
- 13 maternal/infant health status
- 14 demographics

#### 15 Breastfeeding inequalities

Factors from analytical framework missing in policy: None

Intervention category: Maternity care practices

#### Systematic reviews used:

Anderson GC, Moore E, Hepworth J, Bergman N. Early skin-to-skin contact for mothers and their healthy newborn babies. (Cochrane review). In: The Cochrane Library, Issue 2, 2004. Chichester, UK: John Wiley & Sons, Ltd.

Donnelly A, Snowden HM, Renfrew MJ, Woolridge MW. Commercial hospital discharge packs for breastfeeding women (Cochrane review). In: The Cochrane Library, Issue 2, 2004. Chichester, UK: John Wiley & Sons, Ltd.

Fairbank L, O'Meara S, Renfrew MJ, Woolridge M, Snowden AJ, Lister-Sharp D. A systematic review to evaluate the effectiveness of interventions to promote the initiation of breastfeeding. *Health Technology Assessment* 2000;4(25):1–171.

Hodnett ED, Gates S, Hofmeyr GJ, Sakala C. Continuous support for women during childbirth. *Cochrane Database Systematic Reviews* 2003(3):CD003766.

**Data extraction sheet: CDC Guide to Breastfeeding Interventions, cont....**

**Other sources of evidence used:**

Baumgarder DJ, Muehl P, Fischer M, Pribbenow B. Effect of labor epidural anesthesia on breastfeeding of healthy full-term newborns delivered vaginally. *The Journal of the American Board of Family Practice* 2003;16(1):7–13.

Blomquist HK, Jonsbo F, Serenius F, Persson LA. Supplementary feeding in the maternity ward shortens the duration of breastfeeding. *Acta Paediatrica* 1994;83(11):1122–6.

Casey CE, Neifert MR, Seacat JM, Neville MC. Nutrient intake by breastfed infants during the first five days after birth. *American Journal of Diseases of Children* 1986;140(9):933–6.

Cattaneo A, Buzzetti R. Effect on rates of breastfeeding of training for the Baby Friendly Hospital Initiative. *BMJ (British Medical Journal)* 2001;323(7325):1358–62.

DiGirolamo AM, Grummer-Strawn LM, Fein S. Maternity care practices: implications for breastfeeding. *Birth* 2001;28(2):94–100.

Howard CR, Howard FM, Lanphear B, deBlicke EA, Eberly S, Lawrence RA. The effects of early pacifier use on breastfeeding duration. *Pediatrics* 1999;103(3):E33.

Kramer MS, Chalmers B, Hodnett ED, et al. Promotion of Breastfeeding Intervention Trial (PROBIT): a randomized trial in the republic of Belarus. *JAMA (Journal of the American Medical Association)* 2001;285(4):413–20.

Perez-Escamilla R, Segura-Millan S, Pollitt E, Dewey KG. Effect of the maternity ward system on the lactation success of low-income urban Mexican women. *Early Human Development* 1992;31(1):25–40.

Philipp BL, Merewood A, Miller LW, et al. Baby Friendly Hospital Initiative improves breastfeeding initiation rates in a U.S. hospital setting. *Pediatrics* 2001;108(3):677–81.

Procianoy RS, Fernandes-Filho PH, Lazaro L, Sartori NC. Factors affecting breastfeeding: the influence of caesarean section. *Journal of Tropical Pediatrics* 1984;30(1):39–42.

Righard L, Alade MO. Effect of delivery room routines on success of first breastfeed. *Lancet* 1990;336(8723):1105–7.

World Health Organization/UNICEF. Protecting, Promoting and Supporting Breastfeeding: The Special Role of Maternity Services. A joint WHO/UNICEF statement. Geneva: World Health Organization, 1989.

<b>Target population</b>	Mothers and infants during their intrapartum hospital stay
<b>Who should take action</b>	Hospital administrators and managers of maternity care services; federal and state law and policy makers; public and private healthcare organisations providing maternity care services to disadvantaged groups; national, regional, local breastfeeding support organizations
<b>Recommended action(s)</b>	<ol style="list-style-type: none"> <li>1. Pay for hospital staff to participate in 18-hour training courses in breastfeeding, especially in hospitals serving high concentrations of low-income families.<sup>3, 9, 10, 14, 15</sup></li> <li>2. Examine regulations for maternity facilities and evaluate their evidence base; update or change if necessary.<sup>1</sup></li> <li>3. Establish links between maternity facilities and community breastfeeding support networks.<sup>7, 9</sup></li> <li>4. Sponsor a summit of key decision-making staff at facilities providing maternity care to highlight the importance of evidence-based practices for breastfeeding.<sup>3, 9</sup></li> <li>5. Implement a program within a hospital setting using the philosophy of incremental change—choose one practice that appears particularly widespread and work toward adjusting it to be evidence based and supportive of breastfeeding.<sup>9, 10</sup></li> </ol>

## Data extraction sheet: *CDC Guide to Breastfeeding Interventions, cont...*

<b>Analytical framework category</b>	<p><b>Socio-political determinants</b>  <sup>1</sup> legislation and policy to promote and support breastfeeding,</p> <p><b>Economic determinants</b>  <sup>3</sup> financial investment in breastfeeding support</p> <p><b>Sociocultural determinants</b>  <sup>7</sup> breastfeeding support from community, family and peers</p> <p><b>Healthcare determinants</b>  <sup>9</sup> the promotion and support of breastfeeding in healthcare systems through policies, services and practitioners  <sup>10</sup> education and training of healthcare personnel</p> <p><b>Maternal determinants</b>  <sup>14</sup> demographics</p> <p><sup>15</sup> <b>Breastfeeding inequalities</b></p>
<b>Intervention category: Support for breastfeeding in the workplace</b>	
<b>Systematic reviews used:</b> <i>None reported</i>	
<b>Other sources of evidence used:</b>	
<p>Arizona Department of Health Services. Employee Breastfeeding Policy. Level 1, Section Adm, No. 019. Phoenix, AZ: Arizona Department of Health Services, 2002 (August 14).</p> <p>Bar-Yam NB. Nursing mothers at work: an analysis of corporate and maternal strategies to support lactation in the workplace [dissertation]. Waltham, MA: Heller School, Brandeis University, 1997.</p> <p>Bar-Yam NB. Workplace lactation support, Part II: working with the workplace. <i>Journal of Human Lactation</i> 1998;14(4):321–5.</p> <p>Cohen R, Mrtek MB. The impact of two corporate lactation programs on the incidence and duration of breastfeeding by employed mothers. <i>American Journal of Health Promotion</i> 1994;8(6):436–41.</p> <p>Cohen R, Mrtek MB, Mrtek RG. Comparison of maternal absenteeism and infant illness rates among breastfeeding and formula-feeding women in two corporations. <i>American Journal of Health Promotion</i> 1995;10(2):148–53.</p> <p>Corbett-Dick P, Bezek SK. Breastfeeding promotion for the employed mother. <i>Journal of Pediatric Health Care</i> 1997;11(1):12–9.</p> <p>Dodgson JE, Duckett L. Breastfeeding in the workplace. Building a support program for nursing mothers. <i>AAOHN J (official journal of the American Association of Occupational Health Nurses)</i> 1997;45(6):290–8.</p> <p>Fein SB, Roe B. The effect of work status on initiation and duration of breastfeeding. <i>American Journal of Public Health</i> 1998;88(7):1042–6.</p> <p>Frank E. Breastfeeding and maternal employment: two rights don't make a wrong. <i>Lancet</i> 1998;352(9134):1083–4.</p> <p>Lindberg LD. Trends in the relationship between breastfeeding and postpartum employment in the United States. <i>Social Biology</i> 1996;43(3-4):191–202.</p> <p>McLeod D, Pullon S, Cookson T. Factors influencing continuation of breastfeeding in a cohort of women. <i>Journal of Human Lactation</i> 2002;18(4):335–43.</p> <p>National Healthy Mothers Healthy Babies Coalition. 2001 Workplace Models for Excellence. Washington, DC: National Healthy Mothers Healthy Babies Coalition, 2002.</p> <p>U.S. Department of Health and Human Services. HHS Blueprint for Action on Breastfeeding. Washington, DC: U.S. Government Printing Office, 2000.</p> <p>U.S. Breastfeeding Committee: Workplace breastfeeding support . Washington, DC, 2002.</p> <p>U.S. Department of Labor. Women's Jobs: 1964–1999. Washington, DC: U.S. Department of Labor, Women's Bureau, 1999.</p> <p>Whaley SE, Meehan K, Lange L, Slusser W, Jenks E. Predictors of breastfeeding duration for employees of the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). <i>Journal of the American Dietetic Association</i> 2002;102(9):1290–3.</p>	

**Data extraction sheet: CDC Guide to Breastfeeding Interventions, cont...**

<b>Target population</b>	Mothers working outside the home
<b>Who should take action</b>	Federal and state law and policy makers; funders of public health programs; employers in private and public sectors; national, regional and local breastfeeding support organizations
<b>Recommended action(s)</b>	<ol style="list-style-type: none"> <li>1. Provide educational materials to employers about how supporting their employees who breastfeed benefits employers.<sup>4</sup></li> <li>2. Establish a model lactation support program for all state employees.<sup>1, 4</sup></li> <li>3. Promote legislation to support work site lactation programs through mandates or incentives.<sup>1</sup></li> <li>4. Create work site recognition programs to honor employers who support their breastfeeding employees.<sup>7, 8</sup></li> </ol>
<b>Analytical framework category</b>	<p><b>Socio-political determinants</b>  <sup>1</sup>legislation and policy to promote and support breastfeeding</p> <p><b>Economic determinants</b>  <sup>4</sup>financial investment in breastfeeding support</p> <p><b>Sociocultural determinants</b>  <sup>7</sup>breastfeeding support from community, family and peers  <sup>8</sup>public attitudes/media portrayals of breastfeeding and breastfeeding women</p>

**Intervention category: Peer support**

**Systematic reviews used:**

Cronenwett LR, Reinhardt R. Support and breastfeeding: a review. *Birth* 1987;14:199–203.

Fairbank L, O’Meara S, Renfrew MJ, Woolridge M, Snowden AJ, Lister-Sharp D. A systematic review to evaluate the effectiveness of interventions to promote the initiation of breastfeeding. *Health Technology Assessment* 2000;4(25):1–171.

Sikorski J, Renfrew MJ, Pindoria S, Wade A. Support for breastfeeding mothers (Cochrane review). In: *The Cochrane Library, Issue 3, 2003*. Oxford: Update Software.

**Other sources of information used:**

Best Start Social Marketing. Using Loving Support to Implement Best Practices in Peer Counseling. Tampa, FL: Best Start Social Marketing, 2004.

Chapman DJ, Damio G, Perez-Escamilla R. Differential response to breastfeeding peer counseling within a low-income, predominantly Latina population. *Journal of Human Lactation* 2004;20(4):389–96.

Kistin N, Abramson R, Dublin P. Effect of peer counselors on breast-feeding initiation, exclusivity, and duration among low-income urban women. *Journal of Human Lactation* 1994;10(1):11–44.

McLorg PA, Bryant CA. Influence of social network members and health care professionals on infant feeding practices of economically disadvantaged mothers. *Medical Anthropology* 1989;10(4):265–78.

Mitra AK, Khoury AJ, Hinton AW, Carothers C. Predictors of breastfeeding intention among low-income women. *Maternal Child Health Journal* 2004;8(2):65–70.

Shields M. Parenting study gives birth to new media strategy: no media. *Media Daily News* 2004, July 22.

Wright CM, Parkinson KN, Drewett RF. Why are babies weaned early? Data from a prospective population based cohort study. *Archives of Disease in Childhood* 2004;89(9):813–6.

**Data extraction sheet: *CDC Guide to Breastfeeding Interventions, cont...***

<b>Target population</b>	Pregnant and breastfeeding women
<b>Who should take action</b>	Government and private agencies providing maternity care services; public health agencies providing maternity care services to disadvantaged groups; national, regional and local breastfeeding support organizations
<b>Recommended action(s)</b>	<ol style="list-style-type: none"> <li>1. Fund one full-time position at the state level to coordinate peer counseling services for women not eligible for WIC in addition to services offered to WIC participants.<sup>1, 4, 7, 15</sup></li> <li>2. Create or expand the coverage of a peer counseling program within WIC.<sup>4</sup></li> <li>3. Improve quality of existing peer counseling services by increased contact hours, enhanced training, earlier prenatal visits.<sup>10</sup></li> <li>4. Ensure and pay for the support and clinical supervision of peer counselors by an IBCLC.<sup>4</sup></li> </ol>
<b>Analytical framework category</b>	<p><b>Socio-political determinants</b>  <sup>1</sup> legislation and policy to promote and support breastfeeding</p> <p><b>Economic determinants</b>  <sup>4</sup> financial investment in breastfeeding promotion and support</p> <p><b>Sociocultural determinants</b>  <sup>7</sup> breastfeeding support from community, family and peers</p> <p><b>Healthcare determinants</b>  <sup>10</sup> education and training of healthcare personnel</p> <p><sup>15</sup> <b>Breastfeeding inequalities</b></p>
<b>Intervention category: Educating mothers</b>	
<b>Systematic reviews used:</b>	
<p>Guise JM, Palda V, Westhoff C, et al. The effectiveness of primary care-based interventions to promote breastfeeding: systematic evidence review and meta-analysis for the U.S. Preventive Services Task Force. <i>Annals of Family Medicine</i> 2003;1(2):70–8.</p> <p>Sikorski J, Renfrew MJ, Pindoria S, Wade A. Support for breastfeeding mothers (Cochrane review). In: <i>The Cochrane Library, Issue 3, 2003</i>. Oxford: Update Software.</p>	
<b>Other sources of information used:</b>	
Taveras EM, Li R, Grummer-Strawn LM, et al. Mothers’ and clinicians’ perspectives on breastfeeding counseling during routine preventive visits. <i>Pediatrics</i> 2004;113(5):E405–11.	
<b>Target population</b>	Pregnant or breastfeeding women, and fathers and others who support the breastfeeding mother
<b>Who should take action</b>	Government and private agencies providing women’s health and maternity care services; public health agencies providing early intervention and women’s health programs to disadvantaged groups; health professional associations; childbirth education organizations; government-funded and private health insurers

**Data extraction sheet: CDC Guide to Breastfeeding Interventions, cont...**

<p><b>Recommended action(s)</b></p>	<ol style="list-style-type: none"> <li>1. Fund training programs for health educators from local health departments who work with women of childbearing age to educate mothers about breastfeeding.<sup>4, 9, 10</sup></li> <li>2. Encourage health professional organizations to provide training for their members who provide services to women of childbearing age in providing breastfeeding education to mothers. <sup>4, 9, 10</sup></li> <li>3. Incorporate maternal breastfeeding education into Early Intervention (federal Individuals with Disabilities Education Act – <b>IDEA</b>) and women’s programs, including Early Head Start, Success by Six, Infant and Toddler Programs (Part C of IDEA), family planning, teen pregnancy, and women’s health.<sup>1, 2, 4, 15</sup></li> <li>4. Encourage childbirth educators to routinely incorporate evidence-based education on breastfeeding as an integrated component of their curricula.<sup>9</sup></li> <li>5. Encourage health plans to routinely offer prenatal classes on breastfeeding to all their members.<sup>4</sup></li> </ol>
<p><b>Analytical framework category</b></p>	<p><b>Socio-political determinants</b>  <sup>1</sup> legislation and policy to promote and support breastfeeding  <sup>2</sup> public health initiatives in breastfeeding promotion and support</p> <p><b>Economic determinants</b>  <sup>4</sup> financial investment in breastfeeding promotion and support</p> <p><b>Healthcare determinants</b>  <sup>9</sup> the promotion and support of breastfeeding in healthcare systems through policies, services and practitioners  <sup>10</sup> education and training of healthcare personnel  <sup>15</sup> <b>Breastfeeding inequalities</b></p>
<p><b>Intervention category: Professional support</b></p>	
<p><b>Systematic reviews used:</b></p>	
<p>Guise JM, Palda V, Westhoff C, et al. The effectiveness of primary care-based interventions to promote breastfeeding: systematic evidence review and meta-analysis for the U.S. Preventive Services Task Force. <i>Annals of Family Medicine</i> 2003;1(2):70–8.</p>	
<p>Sikorski J, Renfrew MJ, Pindoria S, Wade A. Support for breastfeeding mothers (Cochrane review). In: <i>The Cochrane Library</i>, Issue 3, 2003. Oxford: Update Software.</p>	
<p><b>Other sources of information used:</b></p>	
<p>Caulfield LE, Gross SM, Bentley ME, et al. WIC-based interventions to promote breastfeeding among African American women in Baltimore: effects on breastfeeding initiation and continuation. <i>Journal of Human Lactation</i> 1998;14(1):15–22.</p>	
<p>Gross SM, Caulfield LE, Bentley ME, et al. Counseling and motivational videotapes increase duration of breastfeeding in African American WIC participants who initiate breastfeeding. <i>Journal of the American Dietetic Association</i> 1998;98(2):143–8.</p>	
<p>Hawthorne K. Intention and reality in infant feeding. <i>Modern Midwife</i> 1994;4(3):25–8.</p>	
<p>Lieu TA, Wikler C, Braveman P, et al. Predictors of breast-feeding success after early newborn discharge. <i>Pediatric Research</i> 1996;39:108A (abstract).</p>	
<p>Ryser FG. Breastfeeding attitudes, intention, and initiation in low-income women: the effect of the Best Start program. <i>Journal of Human Lactation</i> 2004;20(3):300–5.</p>	
<p>Taveras EM, Li R, Grummer-Strawn LM, et al. Mothers’ and clinicians’ perspectives on breastfeeding counseling during routine preventive visits. <i>Pediatrics</i> 2004;113(5):E405–11.</p>	
<p>Taveras EM, Li R, Grummer-Strawn LM, et al. Opinions and practices of clinicians associated with continuation of exclusive breast-feeding. <i>Pediatrics</i> 2004;113(4):E283–90.</p>	
<p><b>Target pop’n</b></p>	<p>Mothers in pregnancy &amp; postpartum before/after hospital discharge</p>
<p><b>Who should take action</b></p>	<p>Government and private agencies providing women’s health and maternity care services; public health agencies providing women’s health programs to disadvantaged groups; national, regional and local breastfeeding support organizations; government-funded and private health insurers</p>



**Data extraction sheet: CDC Guide to Breastfeeding Interventions, cont...**

<b>Recommended action(s)</b>	<ol style="list-style-type: none"> <li>1. Collaborate with state Medicaid and insurance commissioners to ensure lactation support is included in standard, reimbursable perinatal care services.<sup>1, 4</sup></li> <li>2. Fund establishment of sustainable, financially supported, walk-in breastfeeding clinics available to all new mothers in the community staffed by IBCLCs, reimbursed for all services provided. <sup>4, 9</sup></li> <li>3. Fund a program in which IBCLCs provide breast-feeding support to pregnant adolescents as part of their parenting education at local schools.<sup>4, 12, 14</sup></li> <li>4. Develop and disseminate a resource directory of lactation support services locally available to new mothers.<sup>7</sup></li> <li>5. Integrate lactation support services with home visitation programs to ensure that lactation problems are identified early and that mothers are referred for appropriate help and services.<sup>9</sup></li> </ol>
<b>Analytical framework category</b>	<p><b>Socio-political determinants</b>  <sup>1</sup>legislation and policy to promote and support breastfeeding</p> <p><b>Economic determinants</b>  <sup>4</sup>financial investment in breastfeeding promotion and support</p> <p><b>Sociocultural determinants</b>  <sup>7</sup>breastfeeding support from community, family and peers</p> <p><b>Healthcare determinants</b>  <sup>9</sup>the promotion and support of breastfeeding in healthcare systems through policies, services and practitioners</p> <p><b>Maternal determinants</b>  <sup>12</sup>perceptions, attitudes, knowledge and experience of breastfeeding  <sup>14</sup>demographics</p>
<b>Intervention category: Media and social marketing</b>	
<b>Systematic reviews used:</b>	
<p>Fairbank L, O'Meara S, Renfrew MJ, Woolridge M, Snowden AJ, Lister-Sharp D. A systematic review to evaluate the effectiveness of interventions to promote the initiation of breastfeeding. <i>Health Technology Assessment</i> 2000;4(25):1–171.</p>	
<b>Other sources of information used:</b>	
<p>Andreason A. <i>Marketing Social Change: Changing Behaviors to Promote Health, Social Development, and the Environment</i>. San Francisco, CA: Jossey-Bass Publishers, 1995.</p> <p>Khoury AJ, Bryant CA, Carothers C, et al. The national Loving Support Makes Breastfeeding Work campaign in Mississippi. <i>Maternal Child Health Journal</i>. Forthcoming.</p> <p>Ling JC, Franklin BA, Lindsteadt JF, Gearon SA. Social marketing: its place in public health. <i>Annual Review of Public Health</i> 1992;13:341–62.</p> <p>Weinreich N. <i>Hands-On Social Marketing: A Step by Step Guide</i>. Thousand Oaks, CA: Sage Publishers, 1999.</p>	
<b>Target population</b>	Consumers, their support systems, health care providers, community, general public
<b>Who should take action</b>	Regional and local breastfeeding support organizations; public health agencies providing maternity care services to disadvantaged groups
<b>Recommended action(s)</b>	<ol style="list-style-type: none"> <li>1. Identify local experts who can pitch stories to the media that highlight breastfeeding.<sup>8</sup></li> <li>2. Provide Loving Support materials to interested local physicians, schools, clinics, hospitals, and child care.<sup>9</sup></li> <li>3. Approach local media outlets (television, radio, print) and request them to air or feature the public service announcements they have available as part of the Babies Were Born to Be Breastfed campaign.<sup>8, 12</sup></li> </ol>

**Data extraction sheet: CDC Guide to Breastfeeding Interventions, cont...**

<b>Analytical framework category</b>	<p><b>Sociocultural determinants</b>  <sup>8</sup> public attitudes and media portrayals of breastfeeding and breastfeeding women</p> <p><b>Healthcare determinants</b>  <sup>9</sup> the promotion and support of breastfeeding in healthcare systems through policies, services and practitioners</p> <p><b>Maternal determinants</b>  <sup>12</sup> perceptions, attitudes, knowledge and experience of breastfeeding</p>
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**EFFECTIVENESS NOT ESTABLISHED:**

**Intervention category: Countermarketing and the WHO International Code**

**Systematic reviews used:**

Donnelly A, Snowden HM, Renfew MJ, Woolridge MW. Commercial hospital discharge packs for breastfeeding women (Cochrane review). In: The Cochrane Library, Issue 2, 2004. Chichester, UK: John Wiley & Sons, Ltd.

**Other sources of information used:**

Cutler BD, Wright RF. The U.S. infant formula industry: is direct-to-consumer advertising unethical or inevitable? *Health Marketing Quarterly* 2002;19(3):39–55.

Howard C, Howard F, Lawrence R, Andresen E, DeBlieck E, Weitzman M. Office prenatal formula advertising and its effect on breastfeeding patterns. *Obstetrics and Gynecology* 2000;95(2):296–303.

World Health Organization. International Code of Marketing of Breast-Milk Substitutes. Resolution passed by the 34th World Health Assembly 34.22. Geneva: World Health Organization, 1981.

<b>Target population</b>	Consumers, their support systems, health care providers, the community, and the general public
<b>Who should take action</b>	Hospital administrators and managers of maternity care services; government and private agencies providing women's and infant health or maternity care services; public health agencies providing healthcare services to disadvantaged groups; regional and local breastfeeding support organizations; health professional associations
<b>Recommended action(s)</b>	<ol style="list-style-type: none"> <li>1. Provide noncommercial posters and educational materials on breastfeeding to the offices of pediatricians, family practitioners, obstetrician-gynecologists, and nurse-midwives to be used in place of similar materials provided by commercial manufacturers.<sup>2, 5</sup></li> <li>2. Establish policies that public health clinics and facilities will not display or distribute materials provided by or bearing the logos of infant formula manufacturers.<sup>1, 5</sup></li> <li>3. Collaborate with local associations of health professionals such as pediatricians, obstetrician-gynecologists, family practitioners, and nurses to discourage the use of informational and educational materials provided by or bearing the logos of infant formula manufacturers.<sup>2, 5</sup></li> </ol>
<b>Analytical framework category</b>	<p><b>Socio-political determinants</b>  <sup>1</sup> legislation and policy to promote and support breastfeeding  <sup>2</sup> public health initiatives in breastfeeding promotion and support</p> <p><b>Economic determinants</b>  <sup>5</sup> countermanding the commercial promotion of infant formula and artificial feeding</p>

**Data extraction sheet: CDC Guide to Breastfeeding Interventions, cont...**

<b>Intervention category: Professional education</b>	
<b>Systematic reviews used:</b>	
Fairbank L, O'Meara S, Renfrew MJ, Woolridge M, Snowden AJ, Lister-Sharp D. A systematic review to evaluate the effectiveness of interventions to promote the initiation of breastfeeding. <i>Health Technology Assessment</i> 2000;4(25):1-171.	
<b>Other sources of information used:</b>	
DiGirolamo AM, Grummer-Strawn LM, Fein SB. Do perceived attitudes of physicians and hospital staff affect breastfeeding decisions? <i>Birth</i> 2003;30(2):94-100.	
Freed GL, Clark SJ, Sorenson J, Lohr JA, Cefalo R, Curtis P. National assessment of physicians' breastfeeding knowledge, attitudes, training, and experience. <i>JAMA (Journal of the American Medical Association)</i> 1995;273(6):472-6.	
Schanler RJ, O'Connor KG, Lawrence RA. Pediatricians' practices and attitudes regarding breastfeeding promotion. <i>Pediatrics</i> 1999;103(3):E35.	
Taveras EM, Li R, Grummer-Strawn LM, et al. Opinions and practices of clinicians associated with continuation of exclusive breast-feeding. <i>Pediatrics</i> 2004;113(4):E283-90.	
U.S. Department of Health and Human Services. <i>Healthy People 2010</i> . 2nd ed. 2 vols. Washington, DC: U.S. Government Printing Office, November 2000. ( <a href="http://www.healthypeople.gov/Publications">http://www.healthypeople.gov/Publications</a> ).	
<b>Target population</b>	Health care providers including physicians, nurse-midwives, nurse practitioners and other nurses, nutritionists, lactation consultants, and other members of the health care team such as pharmacists, social workers, speech-language pathologists, physical therapists, and occupational therapists.
<b>Who should take action</b>	Hospital administrators and managers of maternity care services; government and private agencies providing women's and infant health or maternity care services; public health agencies providing maternity care services to disadvantaged groups; regional and local breastfeeding support organizations; health professional associations; academic institutions
<b>Recommended action(s)</b>	<ol style="list-style-type: none"> <li>1. Distribute clinical protocols developed by the Academy of Breastfeeding Medicine to local physicians.<sup>9, 10</sup></li> <li>2. Host a lactation course or send health professionals to such a course.<sup>10</sup></li> <li>3. Provide training to health professionals using the Mississippi WIC curriculum.<sup>10</sup></li> <li>4. Collaborate with medical school faculty to improve the quality and increase the quantity of course content devoted to breastfeeding education management.<sup>10</sup></li> <li>5. Make available and coordinate grand rounds or in-service presentations on breastfeeding by IBCLCs or other professionals with specific training in breastfeeding.<sup>10</sup></li> </ol>
<b>Analytical framework category</b>	<p><b>Healthcare determinants</b></p> <p><sup>9</sup> the promotion and support of breastfeeding in healthcare systems through policies, services and practitioners</p> <p><sup>10</sup> education and training of healthcare personnel</p>

**Data extraction sheet: CDC Guide to Breastfeeding Interventions, cont...**

**Intervention category: Public acceptance**

**Systematic reviews used:**

Fairbank L, O'Meara S, Renfrew MJ, Woolridge M, Snowden AJ, Lister-Sharp D. A systematic review to evaluate the effectiveness of interventions to promote the initiation of breastfeeding. *Health Technology Assessment* 2000;4(25):1-171.

**Other sources of information used:**

Berkowitz AD. Application of social norms theory to other health and social justice issues. In: Perkins HW, editor. *The Social Norms Approach to Preventing School and College Age Substance Abuse: A Handbook for Educators, Counselors, and Clinicians*. San Francisco: Jossey-Bass Publishers, 2003.

Li R, Fridinger F, Grummer-Strawn LM. Public perceptions on breast-feeding constraints. *Journal of Human Lactation* 2002;18(3):227-35.

United Kingdom Department of Health. *Misunderstandings About Breastfeeding*. London: UK Department of Health, 2004 (May).

<b>Target population</b>	Breastfeeding women
<b>Who should take action</b>	Federal and state law and policy makers; commercial and noncommercial companies and organisations
<b>Recommended action(s)</b>	<ol style="list-style-type: none"> <li>1. Identify a state legislator who is supportive of breastfeeding and ask him or her to sponsor quality legislation.<sup>1</sup></li> <li>2. Contact the managers of local shopping malls that do not have nursing mothers' lounges; encourage and help them to make appropriate accommodations for their patrons.<sup>4, 7</sup></li> <li>3. Work with state boards that license child care facilities to distribute guidelines for supporting breast-feeding in these settings.<sup>1</sup></li> <li>4. Recognize companies and noncommercial enterprises that support mothers who breastfeed with publicity and other incentives. Potential recipients include restaurants; businesses (e.g., stores, hair salons); tenants of shopping malls; state, city, and county governments; libraries; zoos, swimming pools, and other recreational facilities; and fitness centers.<sup>7, 8</sup></li> </ol>
<b>Analytical framework category</b>	<p><b>Socio-political determinants</b>  <sup>1</sup>legislation and policy to promote and support breastfeeding</p> <p><b>Economic determinants</b>  <sup>4</sup>financial investment in breastfeeding promotion and support</p> <p><b>Sociocultural determinants</b>  <sup>7</sup>breastfeeding support from community, family and peers  <sup>8</sup>public attitudes and media portrayals of breastfeeding and breastfeeding women</p>

**Intervention category: Hotlines and other information resources**

**Systematic reviews used:**

Guise JM, Palda V, Westhoff C, et al. The effectiveness of primary care-based interventions to promote breastfeeding: systematic evidence review and meta-analysis for the U.S. Preventive Services Task Force. *Annals of Family Medicine* 2003;1(2):70-8.

Sikorski J, Renfrew MJ, Pindoria S, Wade A. Support for breastfeeding mothers (Cochrane review). In: *The Cochrane Library, Issue 3, 2003*. Oxford: Update Software.

**Data extraction sheet: *CDC Guide to Breastfeeding Interventions, cont...***

<b>Other sources of information used:</b> <i>None reported.</i>	
<b>Target population</b>	Breastfeeding mothers
<b>Who should take action</b>	Government and private agencies providing women's and infant health or maternity care services; federal and state policy makers; funders of public health programs; regional and local breastfeeding support organizations
<b>Recommended action(s)</b>	<ol style="list-style-type: none"> <li>1. Create and distribute a community-based directory of services for lactation support, pump rental depots, hotlines, and similar resources and update it annually. Distribution sites can include pediatrician and prenatal care provider offices, health departments, day care facilities, places of worship, stores, and restaurants.<sup>5, 7, 8</sup></li> <li>2. Create and support a statewide hotline providing 24-hour access to trained breastfeeding counselors.</li> <li>3. Make informational tear-off sheets on special breast-feeding issues available to health professionals to aid them in their care of breastfeeding mothers and their breastfed infants.<sup>9, 10</sup></li> </ol>
<b>Analytical framework category</b>	<p><b><u>Economic determinants</u></b>  <sup>5</sup> countermanding the commercial promotion of infant formula and artificial feeding</p> <p><b><u>Sociocultural determinants</u></b>  <sup>7</sup> breastfeeding support from community, family and peers  <sup>8</sup> public attitudes and media portrayals of breastfeeding and breastfeeding women</p> <p><b><u>Healthcare determinants</u></b>  <sup>9</sup> the promotion and support of breastfeeding in healthcare systems through policies, services and practitioners  <sup>10</sup> education and training of healthcare personnel</p>

## Appendix H

### Data extraction sheet: *Primary Care Interventions to Promote Breastfeeding*

<b>Primary care interventions to promote breastfeeding: U.S. Preventive Services Task Force recommendation statement (5 pages)</b>
<b>Country:</b> United States
<b>Source:</b> U.S. Preventive Services Task Force (USPSTF), Agency for Healthcare Research and Quality, U.S. Department of Health & Human Services
<b>Issue date:</b> 2008
This release updates a previously published guideline: U.S. Preventive Services Task Force (USPSTF). Behavioral interventions to promote breastfeeding: recommendations/ rationale. Rockville (MD): Agency for Healthcare Research and Quality (AHRQ); 2003 Jul 27. 12 p.
<b>Categories:</b> Maternal/infant health
<b>Goal of report</b>
To help clinicians, employers, policymakers, and others make informed decisions about the provision of health care services. This report may be used, in whole or in part, as the basis for the development of clinical practice guidelines and other quality enhancement tools, or as a basis for reimbursement and coverage policies.
<b>Composition of group that developed the guideline</b>
Ned Calonge, MD, MPH, Chair (Colorado Dept of Public Health and Environment, Denver, Colorado)
Diana B. Petitti, MD, MPH, Vice Chair (Keck School of Medicine, University of Southern California, Sierra Madre, California)
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Allen Dietrich, MD (Dartmouth Medical School, Lebanon, New Hampshire)
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Lucy N. Marion, PhD, RN (School of Nursing, Medical College of Georgia, Augusta, Georgia)
Virginia A. Moyer, MD, MPH (University of Texas Health Science Center, Houston, Texas)
Judith K. Ockene, PhD (University of Massachusetts Medical School, Worcester, Massachusetts)
George F. Sawaya, MD (University of California, San Francisco, San Francisco, California)
Barbara P. Yawn, MD, MSPH, MSc (Olmsted Medical Center, Rochester, Minnesota)

**Data extraction sheet: *Primary Care Interventions to Promote Breastfeeding, cont...***

**All factors from analytical framework:**

**Socio-political determinants**

- <sup>1</sup> legislation and policy to promote and support breastfeeding
- <sup>2</sup> public health initiatives in breastfeeding promotion and support
- <sup>3</sup> the Baby-Friendly Initiative

**Economic determinants**

- <sup>4</sup> financial investment in breastfeeding promotion and support
- <sup>5</sup> countermending the commercial promotion of infant formula and artificial feeding

**Sociocultural determinants**

- <sup>6</sup> social expectations and cultural norms
- <sup>7</sup> breastfeeding support from community, family and peers
- <sup>8</sup> public attitudes and media portrayals of breastfeeding and breastfeeding women

**Healthcare determinants**

- <sup>9</sup> promotion and support of breastfeeding in healthcare systems through policies, services and practitioners
- <sup>10</sup> education and training of healthcare personnel
- <sup>11</sup> the Baby-Friendly Hospital Initiative

**Maternal determinants**

- <sup>12</sup> perceptions, attitudes, knowledge and experience of breastfeeding
- <sup>13</sup> maternal/infant health status <sup>14</sup>demographics

**Breastfeeding inequalities**

**Factors from analytical framework missing in policy:** None

**Systematic reviews used**

Chung M, Ip S, Yu W, Raman G, Trikalinos T, DeVine D, Lau J. Interventions in Primary Care to Promote Breastfeeding: A Systematic Review. Prepared for the Agency for Healthcare Research and Quality by the Tufts-New England Medical Center Evidence-based Practice Center, under Contract No. 290-02-0022. AHRQ Publication No. 08-05125-EF-1. Rockville, Maryland: Agency for Healthcare Research and Quality, October 2008.

Guise JM, Palda V, Westhoff C, Chan BK, Helfand M, Lieu TA. U.S. Preventive Services Task Force. The effectiveness of primary care-based interventions to promote breastfeeding: systematic evidence review and meta-analysis for the US Preventive Services Task Force. *Ann Fam Med.* 2003;1:70-8.

**Other sources of evidence used**

Kramer MS, Chalmers B, Hodnett ED, Sevkovskaya Z, Dzikovich I, Shapiro S, et al. PROBIT Study Group. Promotion of Breastfeeding Intervention Trial (PROBIT): a randomized trial in the Republic of Belarus. *JAMA.* 2001;285:413-20.

**Data extraction sheet: *Primary Care Interventions to Promote Breastfeeding, cont...***

<b>Summary of Recommendation and Evidence<sup>11</sup></b>	
<b>USPSTF Assessment:</b> There is moderate certainty that interventions to promote and support breastfeeding have a moderate net benefit.	
<b>Potential benefits: Effectiveness of interventions to change behavior<sup>12</sup></b>	
The USPSTF recommends interventions during pregnancy and after birth to promote and support breastfeeding. This is a grade B recommendation.	
<b>Potential harms: Harms of interventions<sup>13</sup></b>	
No published studies focus on the potential direct harms from interventions to promote and support breastfeeding. The review did not include a search for potential harms of breastfeeding itself. The USPSTF has bounded the potential harms of interventions to promote and support breastfeeding as no greater than small.	
<b>Intervention category: Healthcare</b>	
<b>Target population</b>	Pregnant women, new mothers, and young children
<b>Who should take action</b>	Advanced practice nurses, allied health personnel, nurses, physician assistants, physicians, and public health departments
<b>Recommended action(s)</b>	<ol style="list-style-type: none"> <li>1. Consider multiple strategies, including:               <ol style="list-style-type: none"> <li>a. formal breastfeeding education for mothers and families.<sup>12</sup></li> <li>b. direct support of mothers during breastfeeding.<sup>9</sup></li> <li>c. training of primary care staff about breastfeeding and techniques for breastfeeding support.<sup>10</sup></li> </ol> </li> <li>2. Peer support<sup>6, 7, 12, 15</sup></li> <li>3. Interventions that include both prenatal and postnatal components may be most effective at increasing breastfeeding duration.<sup>9</sup></li> <li>4. In rare circumstances, for example, for mothers with HIV or infants with galactosemia, breastfeeding is not recommended.<sup>13</sup> Interventions to promote breastfeeding should empower individuals to make informed choices supported by the best available evidence.<sup>10</sup></li> <li>5. System-level interventions with senior leadership support may be more likely to be sustained over time.<sup>4, 9, 1</sup></li> </ol>

<sup>11</sup>USPSTF systematically reviews the evidence concerning both the benefits and harms of widespread implementation of a preventive service. It then assesses the certainty of the evidence and the magnitude of the benefits and harms (Table 1. for recommendations/evidence grid).

<sup>12</sup>On the basis of this assessment, the USPSTF assigns a letter grade to each preventive service signifying its recommendation on provision of the service (Table 2. definitions used in rating scheme).

<sup>13</sup>An important, but often challenging, step is determining the balance between benefits and harms to estimate 'net benefit', that is, benefits minus harms (Table 3 for description of levels of certainty).



**Data extraction sheet: *Primary Care Interventions to Promote Breastfeeding, cont...***

	<p><b>OTHER CONSIDERATIONS</b></p> <p><b>Implementation</b></p> <ol style="list-style-type: none"> <li>1. Although the activities of individual clinicians to promote and support breastfeeding are likely to be positive, additional benefit may result from efforts that are integrated into systems of care.<sup>4, 9</sup></li> <li>2. System-level interventions can incorporate clinician and team member training and policy development, and through senior leadership support and institutionalization, these initiatives may be more likely to be sustained over time.<sup>4, 9, 10</sup></li> <li>3. Although outside the scope of this recommendation and evidence review, community-based interventions to promote and support breastfeeding, such as direct peer-to-peer support, social marketing initiatives, workplace initiatives, and public policy actions, may offer additional sizeable benefits.<sup>1-9, 12</sup></li> </ol> <p><b>Research needs and gaps</b></p> <ol style="list-style-type: none"> <li>1. Additional research is needed to better understand the effects of health care-based interventions to promote and support breastfeeding in the U.S.<sup>9</sup></li> <li>2. Future research should include data collection on exclusive breastfeeding rates in addition to partial breastfeeding rates.<sup>14</sup></li> <li>3. Studies will be more useful if they are designed to allow some assessment of relative contributions of individual components of multi-component support programs. (no correlation found)</li> <li>4. Research on costs and cost-benefits of interventions is also needed.<sup>4</sup></li> <li>5. Additional research is needed to allow the tailoring of interventions to the needs of individual women and families.<sup>7, 12</sup></li> <li>6. Good-quality prospective studies are needed to understand the effectiveness of compliance with the Baby-Friendly Hospital Initiative in the U.S., the contributions of individual components, and the interactive effect of the components with particular focus on post-discharge breastfeeding support.<sup>2, 11</sup></li> </ol>
<p><b>Analytical framework category</b></p>	<p><b>Socio-political determinants</b></p> <ol style="list-style-type: none"> <li><sup>1</sup> legislation and policy to promote and support breastfeeding</li> <li><sup>2</sup> public health initiatives in breastfeeding promotion and support</li> <li><sup>3</sup> the Baby-Friendly Initiative</li> </ol> <p><b>Economic determinants</b></p> <ol style="list-style-type: none"> <li><sup>4</sup> financial investment in breastfeeding promotion and support</li> <li><sup>5</sup> countermanding the commercial promotion of infant formula and artificial feeding</li> </ol> <p><b>Sociocultural determinants</b></p> <ol style="list-style-type: none"> <li><sup>6</sup> social expectations and cultural norms</li> <li><sup>7</sup> breastfeeding support from community, family and peers</li> <li><sup>8</sup> public attitudes and media portrayals of breastfeeding and breastfeeding women</li> </ol> <p><b>Healthcare determinants</b></p> <ol style="list-style-type: none"> <li><sup>9</sup> the promotion and support of breastfeeding in healthcare systems through policies, services and practitioners</li> <li><sup>10</sup> education and training of healthcare personnel</li> </ol> <p><b>Maternal determinants</b></p> <ol style="list-style-type: none"> <li><sup>12</sup> perceptions, attitudes, knowledge and experience of breastfeeding</li> <li><sup>13</sup> maternal/infant health status</li> <li><sup>14</sup> demographics</li> </ol> <p><sup>15</sup> <b>Breastfeeding inequalities</b></p>

## Appendix I

### Subcommittee on Breastfeeding

#### Breastfeeding: HHS Blueprint for Action on Breastfeeding

Members	
CHAIRPERSON: Suzanne G Haynes, Ph.D. Office on Women's Health U.S. Dept of Health & Human Services	Scott Grosse, Ph.D. National Center for Environmental Health Centers for Disease Control and Prevention
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***Breastfeeding: HHS Blueprint for Action on Breastfeeding, cont...***

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Joyce Dougherty, Ph.D., M.S. Washington State Department of Health	Elaine Locke, M.P.A. American College of Obstetricians and Gynecology	Michael Young, M.D. National Medical Association

## Appendix J

### Data extraction sheets for systematic reviews

Anderson GC, Moore E, Hepworth J, Bergman N. Early skin-to-skin contact for mothers and their healthy newborn infants. *Cochrane Database of Systematic Reviews* 2003, Issue 2. Art. No.: CD003519. DOI: 10.1002/14651858.CD003519.

#### Implications for practice

1. Skin-to-skin contact [between mother and baby at birth] has a positive effect on long-term breastfeed.
2. No negative short or long-term effects were found related to infant physiological and attachment outcomes.

#### Implications for research

1. More research is needed on the effects of early skin-to-skin contact on preterm infants who were judged healthy enough to remain on the postpartum ward, and on mothers who deliver by caesarean birth.
2. Future research in this area should involve outcome measures consistent with the best measures used in previous studies or measures developed recently to increase methodological rigor.
3. Suggestions for improvement of clinical trials examining early SSC and breastfeeding outcomes include the following:
  - a. The mother's prenatal breastfeeding intention.
  - b. The degree of breastfeeding exclusivity.
  - c. A valid measure of effective suckling at a single feeding is needed.
  - d. Maternal attachment behaviors.
  - e. More details in research reports regarding the method of random assignment, allocation concealment scheme, measures used to control for selection bias: context, timing, and modality of outcome measurements and means and standard deviations for the interval or ratio level outcome variables.

Donnelly A, Snowden HM, Renfrew MJ, Woolridge MW. Commercial hospital discharge packs for breastfeeding women (Cochrane review). In: *The Cochrane Library*, Issue 2, 2004. Chichester, UK: John Wiley & Sons, Ltd.

#### Implications for practice

1. As there was a detrimental effect from giving commercial discharge packs leading to a small negative effect on the duration of exclusive breastfeeding rates in all populations studied, the giving of commercial discharge packs from the hospital should be considered a non-beneficial practice which disrupts sustained exclusive breastfeeding.
2. The practice should be discontinued.

#### Implications for research

1. In a large proportion of the studies used in this reviews, the study populations were well educated, English speaking women. The validity of these results, therefore, cannot be specified in other population groups. In the trials which studied low income populations, young mother or Hispanic women, the sample numbers were small and may therefore be unreliable.

## Data extraction sheets for systematic reviews, cont...

2. Implications for further research therefore fall into four categories:
  - a. Further studies on whether any form of discharge pack is of beneficial use (e.g. including information about breastfeeding or breast pumps) and if used, the preferred content of non-commercial discharge packs.
  - b. Trials of such non-commercial packs to include a greater diversity of social and economic backgrounds, incorporating larger numbers of women.
  - c. Qualitative research examining women's reactions to contents of discharge packs.
  - d. Further investigation on the impact of commercial packs (with or without free formula) upon the timing of the introduction of solid foods.

National Institute for Clinical Excellence Clinical Guideline 6: *Antenatal care; routine care for the healthy pregnant woman*. (2003). National Collaborating Centre for Women's and Children's Health, London. (in press at time of publication).

1. Routine breast examination during antenatal care is not recommended for the promotion of postnatal breastfeeding.
2. There is a need for research into the effectiveness of routine vitamin D supplementation for pregnant and breastfeeding women.
3. Antenatal information should be given to pregnant women according to the following schedule:
  - a. At booking (ideally by 10 weeks): breastfeeding, including workshops.
  - b. Before or at 36 weeks: breastfeeding information, including technique and good management practices that would help a woman succeed, such as detailed in the UNICEF 'Baby Friendly Initiative'.
4. At the 36-week appointment, all pregnant women should be seen again. Give the following information (supported by written information and antenatal classes), with an opportunity to discuss issues and ask questions:
  - a. Breastfeeding information, including technique and good management practices that would help a woman succeed, such as detailed in the UNICEF 'Baby Friendly Initiative'.

Sikorski J, Renfrew MJ, Pindoria S, Wade A. Support for breastfeeding mothers (Cochrane review). In: *The Cochrane Library*, Issue 3, 2003. Oxford: Update Software.

### Implications for practice

1. Consideration should be given to providing supplementary breastfeeding support as part of routine health service provision.
2. There is clear evidence for the effectiveness of additional professional support in prolonging any breastfeeding but the strength of its effect on exclusive feeding is less certain.
3. WHO/UNICEF training courses appear to be an effective model for professional training.
4. Lay support is effective in promoting exclusive breastfeeding although the strength of its effect on the duration of any breastfeeding is uncertain.
5. Face-to-face support appears to be more effective than support by telephone, but there is as yet no evidence to suggest that the duration of breastfeeding is improved by routine antenatal contact.
6. Evidence supports the promotion of exclusive breastfeeding as central to the management of diarrhoeal illness in partially breast-fed infants.

## Data extraction sheets for systematic reviews, cont...

Implications for research	
1.	Further trials are required to assess the effectiveness of both lay and professional support in different settings – in particular in those communities with low rates of breastfeeding initiation. Trials should test the effectiveness of different training programmes (which should be well defined and reproducible) and should attempt to address impact on both exclusive and any breastfeeding where possible.
2.	Prospective economic analyses are required to accompany trials to establish the cost-effectiveness of different interventions.
3.	Fundamental qualitative research should explore the different elements of breastfeeding support strategies and the mechanisms by which support operates.
Renfrew, M., Dyson, L., Wallace, L., D'Souza, L., McCormick, F., Spiby, H. (2005). The effectiveness of public health interventions to promote the duration of breastfeeding: systematic review 1 <sup>st</sup> edition. National Institute for Health and Clinical Evidence, London.	
Forms of care/practices/policies that have been shown to be effective/beneficial for enhancing breastfeeding duration.	
Postnatal hospital stay	Skilled breastfeeding support, peer or professional, proactively offered to women who want to breastfeed.
	Preventing the provision of discharge packs of formula feeding information/samples.
	Unrestricted feeding from birth onwards.
	Unrestricted mother-baby contact from birth onwards.
	Kangaroo care/skin-to-skin care from birth onwards.
Avoiding additional supplementary fluids unless medically indicated.	
Postnatal care in community	Skilled breastfeeding support, peer or professional, proactively offered to women who want to breastfeed.
Ongoing community care	Skilled breastfeeding support, peer or professional.
Forms of care/practices/policies that appear to be promising, well grounded in theory, and with some research to substantiate, for enhancing breastfeeding duration.	
Pregnancy	Group, interactive, culture-specific education sessions.
	Group education session on positioning and attachment.
	Antenatal education individually tailored to women's needs, for low-income women.
Labour and birth	Basing prevention and treatment of sore nipples on principles of positioning and attachment.
Immediate postnatal care	Cabbage leaves/extract for treatment of engorgement and systemic antibiotics for infected nipples.
	Not separating mothers and babies for treatment of jaundice.
Postnatal care in community	Self-monitoring daily log for women from higher socio-economic groups.
	Combination of supportive care, teaching breastfeeding technique, rest and reassurance for women with 'insufficient milk'.
	Division of the frenulum in infants with signs of congenital ankyloglossia and breastfeeding difficulties.

## Data extraction sheets for systematic reviews, cont...

Wider policy interventions	<p>National policy of encouraging maternity units' adherence to BFI.</p> <p>Regionally/nationally determined targets with supporting activities, and/or penalties and/or incentives.</p>
Multifaceted interventions - across time periods and types of intervention	<p>Tailored antenatal education, combined with proactive postnatal support in hospital and community.</p> <p>Combining antenatal education with partner support, postnatal support and incentives for women in low-income groups.</p>
Forms of care/practices/policies that are unproven, and require further research; and other important research questions, in relation to impact on breastfeeding duration.	
Pregnancy	<p>Giving negative messages about mixed breast and formula feeding to women from deprived groups.</p> <p>Testing group, interactive, culture-specific education sessions for women from low-income groups as part of Sure Start schemes.</p> <p>Short questionnaire reinforcing education on positive aspects of breastfeeding.</p> <p>Impact of current forms of promotion of formula milk on duration.</p> <p>Antenatal expression of colostrums.</p> <p>'Niplette' device for inverted and non-protractile nipples.</p> <p>Surgery for inverted nipples.</p> <p>General support and care for women with inverted and non-protractile nipples.</p> <p>Antenatal treatment for women with history of nipple problems, eg dermatitis, eczema.</p> <p>Care for women with negative feelings about breastfeeding related to history of abuse.</p> <p>Views of women on care needed to advise on breastfeeding in pregnancy.</p>
Forms of care/practices/policies that are unproven, and require further research; and other important research questions, in relation to impact on breastfeeding duration, cont:	
Labour and birth	<p>Birth centre care.</p> <p>Inclusion of breastfeeding duration outcomes in intrapartum research.</p> <p>Immediate post-birth care for breastfeeding for women having caesarean section.</p> <p>Effects of birth experience and pain relief in labour on the baby's feeding behaviour and on the duration of breastfeeding.</p> <p>Delayed clamping of the umbilical cord (up to three minutes after the birth).</p>

<b>Data extraction sheets for systematic reviews, cont....</b>	Self-monitoring daily log.
	Partnership care with baby in hospital room.
Immediate postnatal care	Staffing levels and skill mix in hospital to enable breastfeeding.
	Mother and baby bed-sharing/clip on cots.
	Breastfeeding-only rooms/wards.
	Length of hospital stay and post-discharge support.
	Ways of bridging gap between hospital and community support for breastfeeding women.
	Use of cup or spoon instead of bottle if additional fluids are necessary.
	Continuous epidural analgesia for women following caesarean section.
	Other forms of pain relief for women following caesarean section.
	Contribution of kangaroo care/skin-to-skin in vulnerable sub-groups.
	When are additional fluids medically indicated?
	Reasons for, sequelae of, reluctance to wake and feed in healthy babies/testing of appropriate interventions.
	Are some babies especially susceptible to feeding problems if fed by bottle/teat, and how can they be identified?
	In what form should additional fluids be given, if medically indicated?
	Does supplementation have different sequelae in different countries/communities/sub-groups?
	Ways in which weight and feed charts can be used to support or undermine breastfeeding.
	Are some sub-groups especially vulnerable to the use of pacifiers?
	Identification of causes of sore nipples, and testing appropriate interventions.
	Breastmilk, lanolin, hydrogel dressings, tea bags, breast shells for sore nipples.
	Oral proteolytic enzymes for engorgement.
	Simple measures to treat engorgement – warmth, rest, analgesia, breast binder, massage, expression.
Identification of causes of sore breasts in absence of engorgement and mastitis, with testing of appropriate treatments.	
Work to distinguish different types of ‘milk insufficiency’, with testing of appropriate treatments.	
Relationship between blood loss and milk production problems.	
Factors underlying development of mastitis, with development of appropriate interventions, to include differential diagnosis of infective vs noninfective.	
Examination of skill mix, training and settings for frenotomy for ankyloglossia.	
Neurodevelopmental outcomes in babies with asymptomatic hypoglycaemia.	
Studies to inform care of babies who are reluctant to feed, or who do not wake to feed.	
Lactation instruction combined with palatal obturator and a Haberman feeder for babies with cleft lip with or without a cleft palate.	
Modified Hotz plate for babies with both cleft lip and palate.	
Interventions to limit the impact of diagnosis and treatment of jaundice.	
Examination of late onset jaundice and relationship with breastfeeding duration.	



<p><b>Data extraction sheets for systematic reviews, cont...</b></p> <p>Postnatal care in community</p>	<p>Telephone vs face-to-face support for women in all groups.</p> <p>Support women in communities where breastfeeding not the norm, to breastfeed exclusively.</p> <p>Intensive, comprehensive home visiting by health visitors.</p> <p>Additional postnatal support interventions (offered to women regardless of their infant feeding intention or practice).</p> <p>Care by GP at one week after discharge. Mother-led postnatal care.</p> <p>Theory based research to examine the postnatal care needs of specific sub-groups.</p> <p>Ways in which growth charts can be used to support or undermine breastfeeding.</p> <p>All forms of care for 'insufficient milk', especially in vulnerable groups.</p> <p>Interventions to resolve inconsolable crying/colic, while supporting breastfeeding, aimed both at babies and families.</p> <p>Interventions to support breastfeeding in babies with Down's syndrome, including interventions specific to the range of deformities associated with this syndrome.</p>
<p>Ongoing community care</p>	<p>Ways of supporting women from all groups to breastfeed, at all and exclusively, for longer than three months.</p>
<p>Wider social/political issues</p>	<p>Workplace support for breastfeeding mothers – on-site nurseries, flexible breaks, facilities for expression, loan of breast pumps.</p> <p>Patterns of milk expression and feeding to support breastfeeding when mothers have returned to work.</p> <p>Workplace education and support for fathers.</p> <p>Impact of interventions aimed at community groups – including schools and public – that may influence initiation and duration.</p> <p>Impact of media campaigns that may influence initiation and duration.</p> <p>Interventions to enable and support breastfeeding in public.</p> <p>Interventions to promote positive attitudes to breastfeeding among children.</p> <p>Impact of employment leave.</p> <p>Impact of implementation of the WHO code.</p> <p>Impact of workforce policies to protect breastfeeding women.</p> <p>Impact of restrictions on provision of formula, eg by prescription.</p> <p>Impact of promotion of formula milk.</p>
<p>Multifaceted intervention, across time periods and types of intervention</p>	<p>Ways in which informal/family support can be used in conjunction with professional and peer support, especially for women from disadvantaged groups.</p> <p>Ways in which women from low-income groups can be supported in breastfeeding using combinations of education, support and incentives</p> <p>Inter-agency support for breastfeeding.</p> <p>Social marketing approaches that may influence initiation and duration.</p> <p>Impact of national/regional breastfeeding strategies.</p> <p>Ways in which women who smoke and/or use recreational drugs can be encouraged to continue to breastfeed.</p> <p>Ways in which women who take prescribed or over-the-counter medications can be encouraged to continue to breastfeed.</p> <p>Ways in which women who have undergone breast surgery can be encouraged to continue to breastfeed.</p>

## Data extraction sheets for systematic reviews, cont...

Educational interventions and changing professional practice	<p>How to teach/support women to encourage pain-free, effective feeding.</p> <p>Effectiveness of UNICEF training in UK settings, hospital and community.</p> <p>Education and training for peer supporters and breastfeeding counselors.</p> <p>Ways of changing staff behaviour to encourage early feeding and close contact.</p> <p>Ways of changing health service culture to support breastfeeding.</p> <p>Ways of preparing staff to work in culturally appropriate ways.</p>
Forms of care/practices/policies that may be ineffective or harmful for enhancing breastfeeding duration (as shown by good, though not conclusive, evidence) and should not be used without further evidence of effectiveness.	
Pregnancy	<p>Self-help manual used alone.</p> <p>Antenatal education by paediatrician.</p> <p>Providing formula company-produced materials on infant feeding in early pregnancy.</p>
Postnatal hospital stay	<p>Separating mothers and babies for treatment of jaundice.</p>
Postnatal care in community	<p>Written educational materials used alone.</p> <p>GP clinic visit at one week postpartum.</p> <p>Home visit by community nurse following early discharge.</p> <p>Dopamine antagonists for 'insufficient milk'.</p>
Ongoing community care	<p>Dopamine antagonists for 'insufficient milk'.</p>
Forms of care/practices/policies that have been shown to be ineffective or harmful for breastfeeding duration and should be abandoned or not introduced.	
Pregnancy	<p>Conditioning nipples in pregnancy.</p> <p>Hoffman's exercises for inverted and non-protractile nipples in pregnancy.</p> <p>Breast shells for inverted and non-protractile nipples in pregnancy.</p>
Immediate postnatal care	<p>Restricting the timing and/or frequency of breastfeeds.</p> <p>Restricting mother/baby contact from birth onwards.</p> <p>Routine use of supplementary fluids.</p> <p>Provision of discharge packs containing samples or information on formula feeding.</p> <p>Topical agents for the prevention of nipple pain.</p> <p>Breast pumping before the establishment of breastfeeding in women at risk of delayed lactation.</p>
Multifaceted interventions, across time periods and types of intervention	<p>Combined antenatal education and limited postnatal telephone support for high income women and women who intend to breastfeed (existing high rates suggest resources better spent elsewhere).</p>

## Data extraction sheets for systematic reviews, cont.....

<p>Moreton, J.A., King, S.E., D'Souza, L., McFadden, A., McCormick, F., Renfrew, M.J. (2008). <i>The effectiveness of public health interventions to promote safe and healthy milk feeding practices in babies</i>. Maternal and Infant Research Unit, Department of Health Sciences, University of York, Heslington, UK</p>	
<p>Studies on public health interventions to increase the initiation and duration of breastfeeding</p>	
Peer support programmes	<p>Further research is needed to assess what type of peer support programme may effectively increase the initiation and duration of exclusive breastfeeding in disadvantaged groups in the UK.</p>
Professional support	<p>Professional support improves breastfeeding initiation rates and prevents early cessation of 'any' and 'exclusive' breastfeeding. As in the case of peer support, there was a trend towards an increase in breastfeeding duration.</p>
Breastfeeding education	<p>Educational interventions do not consistently appear to be as effective as other interventions. Interventions aimed at partners of women intending to breastfeed merit further research. There was a lack of evidence on interventions aimed at partners of women intending to breastfeed.</p>
Professional training	<p>Although a number of high quality systematic reviews were identified, many of the studies included in the SRs were non-randomised trials or before-after studies.</p>
Multi-faceted interventions	<p>Whether an intervention for a particular study was classified as multi-faceted in each review depended on the individual authors of the reviews' interpretation of the term. Only two RCTs of moderate/good quality, which took place in developed countries, and which had positive outcomes for breastfeeding duration or initiation were identified in all four SRs.</p>
Media programmes	<p>There was a lack of good quality evidence on the impact of media activity on initiation and duration rates of breastfeeding.</p>
Conclusions	<p>No studies were identified to address the wider socio-political influences on breastfeeding such as employment conditions, marketing of breastmilk substitutes, education for schoolchildren, and facilitating breastfeeding in public places. These aspects were considered to be fundamentally important by participants in a national consultation. Similarly, the organisation of the health services has not been addressed in recent studies. No studies were identified to add to the evidence base on BFI in hospital and community settings.</p>
<p>Jacklin, P., Retsa, P., Kwan, I., O'Connell, A-M., Dougherty, M., Whittle, M. (2006). <i>Rapid economic review of public health interventions designed to improve the nutrition of children aged 0-5 years</i>. The National Collaborating Centre for Women's and Children's Health, London.</p>	
<p>Increased breastfeeding rates could produce cost savings by reducing various childhood diseases. However, there is little good quality evidence on the cost-effectiveness on interventions which aim to increase breastfeeding.</p>	
<p>Given the important resources implications of not breastfeeding, breastfeeding education and support should be an integral part of health care, especially under managed care which rewards the prevention of health problems and reduced use of health services.</p>	
<p>Interventions to protect and support breastfeeding are likely to be cost-effective for the public health system.</p>	

## Data extraction sheets for systematic reviews, cont...

Chung M, Ip S, Yu W, Raman G, Trikalinos T, DeVine D, Lau J. Interventions in Primary Care to Promote Breastfeeding: A Systematic Review. Prepared for the Agency for Healthcare Research and Quality by the Tufts-New England Medical Center Evidence-based Practice Center, under Contract No. 290-02-0022. AHRQ Publication No. 08-05125-EF-1. Rockville, Maryland: Agency for Healthcare Research and Quality, October 2008.

The Baby Friendly Hospital Initiative is effective in promoting certain health outcomes in infants from Belarus. Whether those findings are applicable to United States primary care is unclear.

Indirect evidence suggests that interventions with a component of lay support (e.g., peer support or peer counseling) are more effective than interventions with structured education or professional support in increasing both short- and long-term breastfeeding rate, compared to usual care.

Prenatal combined with postnatal interventions are more effective than usual care in prolonging the duration of breastfeeding.

Cronenwett LR, Reinhardt R. Support and breastfeeding: a review. *Birth* 1987;14:199–203.

### Influencing the initial decision

1. Professionals may have to use the media, elementary and secondary school systems, churches, governments, day-care centers, and other influential institutions.
2. If workplaces had electric breast pumps and a private space for breastfeeding mothers, there were pictures of early family life in children's textbooks including pictures of nursing mothers of all social classes and ethnic backgrounds, and the benefits of breastfeeding were taught in health classes, perhaps the culture would change, and people would be socialized to think of breastfeeding when they think of infant feeding.
3. In the long run, these approaches might affect the initial decision regarding infant feeding method more than do our current attempts to influence women during the vulnerable states of pregnancy and postpartum.

### Providing professional support for breastfeeding

1. Breastfeeding mothers' most frequent complaint is the barrage of conflicting advice.
2. Reasons for this probably include lack of good breastfeeding education for many health care providers and use of intuitive or experience-based methods of handling problems when scientific data are unavailable or unknown.

### Methods of providing support

1. Offering a prenatal breastfeeding education class seems to be based on the notion that informational types of support are required.
2. Provision of care by an expert nurse who visits the mother in the hospital during feedings and calls at specified points in the postpartum period incorporates the idea that other forms of support, such as emotional support or task assistance, are also needed.
3. Yet it is likely that different mothers would benefit from different kinds of support.

### Support for breastfeeding or for breastfeeding families?

1. Investigators who find that breastfeeding is a complex process affected by many factors besides professional support often recommend more intensive professional support.
2. Whether the broad-scale application of intensive support to high-risk mothers is effective in increasing the duration of breastfeeding is unknown.
3. If mothers and infants differ in characteristics that affect the ease of breastfeeding, perhaps professional support for breastfeeding might provoke or prolong feelings of
4. anxiety, guilt, or inadequacy in mothers who do not establish breastfeeding relationships with their infants.
5. Perhaps assistance with early termination of breastfeeding is sometimes the appropriate form of support, allowing quicker resolution of feelings of loss or guilt and creation of a more conflict-free bond between parents and infants.

**Data extraction sheets for systematic reviews, cont...**

Guise JM, Palda V, Westhoff C, et al. The effectiveness of primary care-based interventions to promote breastfeeding: systematic evidence review and meta-analysis for the U.S. Preventive Services Task Force. <i>Annals of Family Medicine</i> 2003;1(2):70–8.				
<p>The USPSTF recommends structured breastfeeding education and behavioral counseling programs to promote breastfeeding. B recommendation.</p>	<p>Fair evidence that programs combining breastfeeding education with behaviorally-oriented counseling are associated with increased rates of breastfeeding initiation and its continuation for up to 3 months, although effects beyond 3 months are uncertain. Effective programs generally involved at least 1 extended session, followed structured protocols, and included practical, behavioral skills training and problem-solving in addition to didactic instruction.</p>	<p>Fair evidence that providing ongoing support for patients, through in-person visits or telephone contacts with providers or counselors, increased the proportion of women continuing breastfeeding for up to 6 months. Such support, however, had a much smaller effect than educational programs on the initiation of breastfeeding and its continuation for up to 3 months. Too few studies have been conducted to determine whether the combination of education and support is more effective than education alone.</p>	<p>The USPSTF found insufficient evidence to recommend for or against the following interventions to promote breastfeeding: brief education and counseling by primary care providers; peer counseling used alone and initiated in the clinical setting; and written materials, used alone or in combination with other interventions. I recommendation.</p>	<p>The USPSTF found no evidence for the effectiveness of counseling by primary care providers during routine visits and generally poor evidence to assess the effectiveness of peer counseling initiated from the clinical setting when used alone to promote breastfeeding in industrialized countries. The evidence for the effectiveness of written materials suggests no significant benefit when written materials are used alone and mixed evidence of incremental benefit when written materials are used in combination with other interventions.</p>

## Data extraction sheets for systematic reviews, cont...

U.S. Preventive Services Task Force Recommendations and Ratings The Task Force grades its recommendations according to one of 5 classifications (A, B, C, D, I) reflecting the strength of evidence and magnitude of net benefit (benefits minus harms)

- A. The USPSTF strongly recommends that clinicians routinely provide [the service] to eligible patients. *The USPSTF found good evidence that [the service] improves important health outcomes and concludes that benefits substantially outweigh harms.*
- B. The USPSTF recommends that clinicians routinely provide [this service] to eligible patients. *The USPSTF found at least fair evidence that [the service] improves important health outcomes and concludes that benefits outweigh harms.*
- C. The USPSTF makes no recommendation for or against routine provision of [the service]. *The USPSTF found at least fair evidence that [the service] can improve health outcomes but concludes that the balance of benefits and harms is too close to justify a general recommendation.*
- D. The USPSTF recommends against routinely providing [the service] to asymptomatic patients. *The USPSTF found at least fair evidence that [the service] is ineffective or that harms outweigh benefits.*
- I. The USPSTF concludes the evidence is insufficient to recommend for or against routinely providing [the service]. *Evidence of effectiveness is lacking, of poor quality, or conflicting.*

**Data extraction sheets for systematic reviews, cont....**

Fairbank L, O’Meara S, Renfrew MJ, Woolridge M, Snowden AJ, Lister-Sharp D. A systematic review to evaluate the effectiveness of interventions to promote the initiation of breastfeeding. *Health Technology Assessment* 2000;4(25):1–171.

Implications for practice

<p>Managers and practitioners could consider conducting an internal review of existing breastfeeding education programmes, and, where appropriate, develop a revised breastfeeding education strategy aimed at promoting the initiation, and to a lesser extent, the duration, of breastfeeding among women of all income and ethnic groups.</p>	<p>Audit of existing health education programmes for women of all income and ethnic groups which deliver breastfeeding literature as either a stand-alone intervention or in combination with a more formal, non-interactive method of health education during the antenatal period; this recognises the current lack of evidence that shows these interventions to be effective.</p>	<p>Increased availability of informal, small group, interactive and discursive breastfeeding education sessions (with or without the use of supporting breastfeeding literature) during the antenatal period; this intervention has been demonstrated to be an effective form of health education for increasing both initiation and duration rates among women of all income groups and women from minority ethnic groups.</p>	<p>Inclusion of an evaluation component as part of the implementation of any newly developed health education programme in UK settings.</p>	
<p>Consideration could be given to implementing a ‘package’ of complementary interventions at both a national and local level that aims to promote sustainable increases in the initiation and duration of breastfeeding practices among all women.</p>	<p>Good practice peer support programmes (as detailed in the second point above).</p>	<p>Good practice breastfeeding education programmes (as detailed in the first point above).</p>	<p>Changes in maternity ward practices to promote mother–infant contact and autonomy, as summarised in WHO/ UNICEF 1989 Joint Statement.<sup>27</sup> Rooming -in has been demonstrated effective for increasing both the initiation and duration of breastfeeding.</p>	<p>Inclusion of an evaluation component to assess the effect of both single and combined interventions in UK settings.</p>

**Data extraction sheets for systematic reviews, cont...**

Implications for practice, cont.					
Managers, practitioners and non-government organisations could consider increasing the implementation of peer support programmes, particularly targeting women of low-income groups, to promote both the initiation and increased duration of breastfeeding. In the case of limited additional resources for more extensive breastfeeding promotion programmes, this implication reflects the strength of evidence to increase both the initiation and duration of breastfeeding, particularly among the priority target group of women on low incomes.	Delivery of peer support programmes in both ante- and postnatal periods; this intervention has been demonstrated – particularly in the USA – to be effective at increasing initiation and duration rates among women of low income groups.	Targeting of women on low incomes who have expressed a wish to breastfeed; peer support programmes have been demonstrated to be effective in UK settings in increasing initiation rates of breastfeeding among this group.	Inclusion of groups of women among middle income groups where feasible; this intervention has also been demonstrated to be effective at increasing initiation and duration rates among women of all income groups.	Delivery of complementary good practice breastfeeding education programmes (as detailed above); peer support programmes have also been demonstrated to be effective when combined with good practice breastfeeding education programmes.	Inclusion of an evaluation component as part of the implementation of any peer support programme in a UK setting.
Recommendations for future research					
<i>Recommendations made related to:</i>	Scope of research for evidence-based practice.	Priority research areas.	Methodological issues.		