

BABY-FRIENDLY HOSPITAL INITIATIVE
Revised, Updated and Expanded for
Integrated Care

SECTION 2
STRENGTHENING AND SUSTAINING
THE BABY-FRIENDLY HOSPITAL INITIATIVE:
A COURSE FOR DECISION-MAKERS



2009

Revision of BFHI course for hospital administrators
prepared by WHO and Wellstart International, 1996



WHO Library Cataloguing-in-Publication Data

Baby-friendly hospital initiative : revised, updated and expanded for integrated care. Section 2, Strengthening and sustaining the baby-friendly hospital initiative: a course for decision-makers.

Produced by the World Health Organization, UNICEF and Wellstart International.

1.Breast feeding. 2.Hospitals. 3.Maternal welfare. 4.Maternal health services. I.World Health Organization. II.UNICEF. III.Wellstart International. IV.Title: Background and implementation.

ISBN 978 92 4 159497 4 (v. 2)

(NLM classification: WQ 27.1)

ISBN 978 92 4 159495 0 (set)

© World Health Organization and UNICEF 2009

All rights reserved. Publications of the World Health Organization can be obtained from WHO Press, World Health Organization, 20 Avenue Appia, 1211 Geneva 27, Switzerland (tel: +41 22 791 3264; fax: +41 22 791 4857; email: bookorders@who.int).

The World Health Organization and UNICEF welcome requests for permission to reproduce or translate their publications — whether for sale or for noncommercial distribution. Applications and enquiries should be addressed to WHO, Office of Publications, at the above address (fax: +41 22 791 4806; email: permissions@who.int or to UNICEF email: pdimas@unicef.org with the subject: attn. nutrition section.

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the World Health Organization or UNICEF concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by the World Health Organization or UNICEF in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

The World Health Organization and UNICEF do not warrant that the information contained in this publication is complete and correct and shall not be liable for any damages incurred as a result of its use.

Printed by the WHO Document Production Services, Geneva, Switzerland

Cover image "Maternity", 1963.

© 2003 Estate of Pablo Picasso/Artists Rights Society (ARS), New York.

Acknowledgements

The development of the original course, “Promoting breast-feeding in health facilities: A short course for administrators and policy-makers”, was a collaborative effort among staff at the World Health Organization (WHO) and Wellstart International.

The revision of this course was coordinated by Ann Brownlee, Clinical Professor at University of California, San Diego (abrownlee@ucsd.edu), as a consultant of the World Health Organization. The Course has been re-titled “Strengthening and sustaining the Baby-friendly Hospital Initiative: A course for decision-makers” and integrated with the other updated BFHI documents. Revisions of various course sessions were prepared by Ann Brownlee; Randa Saadeh at the Department of Nutrition for Health and Development at WHO; Mary Kroeger, formerly at the Academy of Education Development; and Wendelin Slusser at UCLA. Carol Guenther assisted with the design of the document layout and the development of the graphics for the slides. Carmen Casanovas at the Department of Nutrition for Health and Development at WHO conducted the final review of the revised Course, in collaboration with colleagues at the Department of Child and Adolescent Health and Development.

Acknowledgement is given to all the BFHI decision-makers, health professionals, and field workers, who, through their diligence and caring, have implemented and improved the Baby-friendly Hospital Initiative through the years, and thus contributed to the content of this revised course.

Members of various national BFHI coordination groups used the original version of the course through the years and have provided valuable feedback that contributed to the revision of the course. Constanza Vallenias and Peggy Henderson at the Department of Child and Adolescent Health and Development at WHO and Ellen Piwoz at the Academy for Educational Development also provided valuable feedback and new information and results for the new HIV-related sessions.

These multi-country and multi-organizational contributions were invaluable in helping to fashion a course designed to provide decision-makers with the understanding and commitment needed to encourage their health facilities to attain and sustain Baby-friendly status, thus providing the best support possible for the mothers and babies using their maternity services.

Preface for the 2009 BFHI materials: Revised, Updated and Expanded for Integrated Care

Since the Baby-friendly Hospital Initiative (BFHI) was launched by UNICEF and WHO in 1991-1992, the Initiative has grown, with more than 20,000 hospitals having been designated in 156 countries around the world over the last 15 years. During this time, a number of regional meetings offered guidance and provided opportunities for networking and feedback from dedicated country professionals involved in implementing BFHI. Two of the most recent were held in Spain, for the European region, and Botswana, for the Eastern and Southern African region. Both meetings offered recommendations for updating the Global Criteria, related assessment tools, as well as the “18-hour course”, in light of experience with BFHI since the Initiative began, the guidance provided by the new Global Strategy for Infant and Young Child Feeding, and the challenges posed by the HIV pandemic. The importance of addressing “mother-friendly care” within the Initiative was raised by a number of groups as well.

As a result of the interest and strong request for updating the BFHI package, UNICEF, in close coordination with WHO, undertook the revision of the materials in 2004-2005, with various people assisting in the process (Genevieve Becker, Ann Brownlee, Miriam Labbok, David Clark, and Randa Saadeh). The process included an extensive “user survey” with colleagues from many countries responding. Once the revised course and tools were drafted they were reviewed by experts worldwide and then field-tested in industrialized and developing country settings. The full first draft of the materials was posted on the UNICEF and WHO websites as the “Preliminary Version for Country Implementation” in 2006. After more than a year’s trial, presentations in a series of regional multi-country workshops, and feedback from dedicated users, UNICEF and WHO¹ met with the co-authors above² and resolved the final technical issues that had been raised. The final version was completed in late 2007. It is expected to update these materials no later than 2018.

The revised BFHI package includes:

Section 1: Background and Implementation, which provides guidance on the revised processes and expansion options at the country, health facility, and community level, recognizing that the Initiative has expanded and must be mainstreamed to some extent for sustainability, and includes:

- 1.1 Country Level Implementation
- 1.2 Hospital Level Implementation
- 1.3 The Global Criteria for BFHI
- 1.4 Compliance with the International Code of Marketing of Breast-milk Substitutes
- 1.5 Baby-friendly Expansion and Integration Options
- 1.6 Resources, references and websites

¹ Moazzem Hossain, UNICEF NY, played a key role in organizing the multi-country workshops, launching the use of the revised materials. He, Randa Saadeh and Carmen Casanovas of WHO worked together with the co-authors to resolve the final technical issues.

² Miriam Labbok is currently Professor and Director, Center for Infant and Young Child Feeding and Care, Department of Maternal and Child, University of North Carolina School of Public Health.

Section 2: Strengthening and sustaining the Baby-friendly Hospital Initiative: A course for decision-makers was adapted from the WHO course "Promoting breast-feeding in health facilities: A short course for administrators and policy-makers". This can be used to orient hospital decisions-makers (directors, administrators, key managers, etc.) and policy-makers to the Initiative and the positive impacts it can have and to gain their commitment to promoting and sustaining "Baby-friendly". There is a Course Guide and eight Session Plans with handouts and PowerPoint slides. Two alternative session plans and materials for use in settings with high HIV prevalence have been included.

Section 3: Breastfeeding Promotion and Support in a Baby-friendly Hospital, a 20-hour course for maternity staff, which can be used by facilities to strengthen the knowledge and skills of their staff towards successful implementation of the Ten Steps to Successful Breastfeeding. This section includes:

- 3.1 Guidelines for Course Facilitators including a Course Planning Checklist
- 3.2 Outlines of Course Sessions
- 3.3 PowerPoint slides for the Course

Section 4: Hospital Self-Appraisal and Monitoring, which provides tools that can be used by managers and staff initially, to help determine whether their facilities are ready to apply for external assessment, and, once their facilities are designated Baby-friendly, to monitor continued adherence to the Ten Steps. This section includes:

- 4.1 Hospital Self-Appraisal Tool
- 4.2 Guidelines and Tools for Monitoring

Section 5: External Assessment and Reassessment, which provides guidelines and tools for external assessors to use both initially, to assess whether hospitals meet the Global Criteria and thus fully comply with the Ten Steps, and then to reassess, on a regular basis, whether they continue to maintain the required standards. This section includes:

- 5.1 Guide for Assessors, including PowerPoint slides for assessor training
- 5.2 Hospital External Assessment Tool
- 5.3 Guidelines and Tool for External Reassessment
- 5.4 The BFHI Assessment Computer Tool

Sections 1 through 4 are available on the UNICEF website at http://www.unicef.org/nutrition/index_24850.html or by searching the UNICEF website at <http://www.unicef.org/> and, on the WHO website at <http://www.who.int/nutrition/publications/infantfeeding/9789241594950/en/index.html> or by searching the WHO website at www.who.int/nutrition.

Section 5: External Assessment and Reassessment, is not available for general distribution. It is only provided to the national authorities for BFHI who provide it to the assessors who are conducting the BFHI assessments and reassessments. A computer tool for tallying, scoring and presenting the results is also available for national authorities and assessors. Section 5 can be obtained, on request, from the country or regional offices or headquarters of UNICEF Nutrition Section and WHO, Department of Nutrition for Health and Development.

SECTION 2

A COURSE FOR DECISION-MAKERS

Course Guide

Background	Guide-1
Course description.....	Guide-1
Course preparation	Guide-3
Course site	Guide-7
Course materials.....	Guide-7
Initial course activities	Guide-10
Evaluation and reporting	Guide-10
Follow-up	Guide-10
Annexes	
Annex A: Suggested agendas	A-1
Annex B: Sample evaluation forms	B-1
Annex C: Photo slide inventory	C-1

Session Plans*

Session 1:	The national infant feeding situation	1-1
Session 2:	Benefits of breastfeeding	2-1
Session 3:	The Baby-friendly Hospital Initiative.....	3-1
Session 4:	The scientific basis for the “Ten steps to successful breastfeeding”	4-1
Session 4 HIV:	The scientific basis for the “Ten steps to successful breastfeeding” for settings with high HIV prevalence	4-1 HIV
Session 5:	Becoming Baby-friendly	5-1
Session 5 HIV:	Becoming Baby-friendly for settings with high HIV prevalence	5-1 HIV
Session 6:	Costs and savings.....	6-1
Session 7:	Appraising policies and practices	7-1
Session 8:	Developing action plans	8-1

* Each session includes a session plan and its related handouts. The website featuring this Course contains links to the slides and transparencies for the sessions in Microsoft PowerPoint files. The slides (in colour) can be used with a laptop computer and LCD projector, if available. Alternatively, the transparencies (in black and white) can be printed out and copied on acetates and projected with an overhead projector. The transparencies are also reproduced as the first handout for each session, with 6 transparencies to a page.

Course guide

Background

Since the Baby-friendly Hospital Initiative (BFHI) was launched in 1991, it has served as a motivating force for maternity facilities around the world to implement policies and practices that support breastfeeding.

Change can be difficult and slow to bring about in some health facilities, but enlightened decision-makers can play a pivotal role in enabling the transformation needed. They know how to work with personnel and budgets, and how to initiate institutional change. Once higher level administrators and policy-makers have been sensitized to the importance of breastfeeding support in health facilities and the changes necessary to attain it, they will be more likely to encourage and support the continuing education needs of mid-level health workers.

This course is designed primarily for health facility decision-makers in countries where there is a commitment to breastfeeding at the central level, but progress is slow. The course is brief (about 10-12 hours in duration), practical, and addresses specific topics relevant to their needs, such as policies and procedures, costs and savings, and how to address common barriers to change. It complements other courses that provide the knowledge and skills needed by health workers who care for mothers and infants.

The course has been fully updated, with recent studies, new data and current websites added in whenever appropriate. Since HIV/AIDS poses such a challenge, HIV-related content that may be useful in all settings has been added into the session plans. In addition, two new alternative session plans have been developed that can be substituted for sessions 4 and 5 in settings with high HIV prevalence. These sessions give useful information on HIV and infant feeding and valuable guidance on how to best implement the Ten Steps in a way that best supports both HIV positive mothers and those whose status is negative or unknown.

The course website contains links to PowerPoint slides and transparencies for the various sessions. The slides (in colour) can be used with a laptop computer and LCD projector, if available. Alternatively, the transparencies (in black and white) can be printed out and copied on acetates and projected with an overhead projector. The transparencies are also reproduced as the first handout for each of the sessions, with 6 transparencies to a page.

Course description

The course comprises eight sessions that can be presented over a period of one-and-a-half to two days. Each session contributes to the final outcome: developing an action plan to implement the “Ten steps to successful breastfeeding”.

- **Session 1: The national infant feeding situation** enables participants to review the current infant feeding situation in their own country and addresses practices that affect breastfeeding rates.
- **Session 2: Benefits of breastfeeding** discusses the advantages of breastfeeding and disadvantages of artificial feeding.
- **Session 3: The Baby-friendly Hospital Initiative** describes the history and background of the BFHI and the related assessment process.

- **Session 4: The scientific basis for the “Ten steps to successful breastfeeding”** reviews the research that supports the policy recommendations.
- **Session 4: The scientific basis for the “Ten steps to successful breastfeeding for settings with high HIV prevalence”** is similar to Session 4, with added HIV and infant feeding content useful in these settings.
- **Session 5: Becoming Baby-friendly** examines strategies for the successful conversion and management of baby friendly health facilities and provides the opportunity for discussing barriers and potential solutions.
- **Session 5: Becoming Baby-friendly for settings with high HIV prevalence** is similar to Session 5, with added content in how to implement BFHI in these settings.
- **Session 6: Costs and savings** enables participants to examine the investment in breastfeeding promotion in their own health facilities and the savings that can be realized.
- **Session 7: Appraising policies and practices** provides the participants an opportunity to assess their own facilities by using the “Hospital Self-Appraisal Tool for the WHO/UNICEF Baby-friendly Hospital Initiative”.
- **Session 8: Developing action plans** enables participants to prepare a written plan for change in their own health facilities and programmes.

Each session is organized using the same basic format. The session cover sheet provides:

- **Objectives** for the session.
- **Duration.**
- **Teaching methods**, such as lecture, discussion, small group work, and participant presentations.
- **Preparation for the session**, such as obtaining local breastfeeding data and reviewing research studies.
- **Training materials** to be used in the session, such as summaries of studies used in the session, handouts, transparencies, and PowerPoint slides. In some cases visual aids are recommended, with information on how to obtain them.
- **References** that will assist the faculty to prepare for the session, as well as additional reading for participants who would like more information or who would like to review the original research studies.

The session outline follows the cover sheet and is arranged in a 2-column format. The left-hand column outlines the **content** to be presented. The right-hand column presents **trainer’s notes**, which provide suggestions for teaching strategies, teaching aids, and discussion points.

The course is designed to be brief and practical. All material can be covered in about 10-12 hours, not including opening and closing sessions. There is some flexibility to the course in that sessions may be shortened or expanded, depending upon the needs of a particular group and time constraints in specific situations. **Three sample agendas** for the course, provided in Annex A, illustrate how it can be conducted for varying lengths of time, depending on the time decision-makers have for this activity.

- **Sample agenda 1 (2 days)** is the preferred version, if it is possible for all participants (top-level decision-makers, policy-makers and hospital managers) to attend a full two-day event. It allows for adequate time to explore the key topics related to implementing or revitalizing BFHI that are important for decision-makers, and provides enough time for useful exercises (such as those related to “becoming Baby-friendly”) and for developing full action plans).
- **Sample agenda 2 (1 ½ days)** has been adapted so that the first day would be for all the top-level decision-makers and hospital managers. The morning of the second day could be provided to all participants or, if the top-level decision-makers are “too busy” to stay, it could be attended just by the hospital managers tasked in developing BFHI action plans).
- **Sample agenda 3 (1 day)** has been adapted to include only a ½ day orientation for busy top-level decision-makers, along with hospital managers, and an additional afternoon session for hospital managers tasked in developing BFHI action plans. If this shortest version of the course is selected, it will be necessary for course planners to streamline each of the Sessions, choosing the content and PowerPoint slides of most relevance for their audience. If desired, this one-day version of the course can also be used with all participants staying for the entire day).

The order of the sessions can be changed if necessary to accommodate the needs of the group. In the first sample agenda, Session 1 (The national infant feeding situation) is presented first, to get participants thinking about their own situations. Some groups may need the motivation provided by Session 2 (Benefits of breastfeeding) before they can fully appreciate their own situation. The second sample agenda starts with this session, as this ordering may be best for some groups. If senior decision-makers will not stay for all of the Sessions, it is important to schedule all key informational sessions, including Session 6 (Costs and savings), before they leave. Thus, in the one-day program, Session 6 is scheduled before Session 5.

The time for opening and/or closing ceremonies is not included in the 8 -12 hour course duration estimate. Remember to consider the time such ceremonies will add to the length of the course. If one or both ceremonies are important to the success of the course, the time will be well spent. Mid-morning and mid-afternoon breaks are essential, as are question/discussion periods after each session; remember to plan for them. Other social events are optional.

Decide whether to have optional sessions. Some groups have suggested they would be interested in acquiring additional clinical information. One way to provide such information outside of a formal course is to offer optional viewing of videos, perhaps in the evening. Suggested videos are listed under the “Course materials” section of this course guide.

Course preparation

Budget

Cost issues will affect all course planning decisions and thus need to be determined early. If the decision is made to charge participants, the fee should be as low as possible while still recouping costs. Offering continuing education credits provides added incentive for participants to pay for the programme. If hospitals are charged for sending a team, consideration can be given to allowing the chief executive to come at no charge in order to further encourage high-level participation.

If course costs are a substantial problem, consideration can be given to adjusting the selection of participants and the course schedule so participants can return home at the end of the day; however, a “residential” course, with participants remaining overnight, is preferable, as the interaction and networking among facilitators and participants “after hours” is quite valuable.

Organizing committee

It is recommended that a committee be organized to oversee course planning, implementation, and follow-up activities. Members should include those who will be involved in follow-up. The national breastfeeding or infant and young child feeding coordinator or person responsible for BFHI activities can serve as chair or facilitator.

Committee responsibilities include selection of course presenters, participants, and course site, and the planning of the schedule, protocol (ceremonies or social events), opportunities for media coverage, evaluation and follow-on activities. The committee may appoint an overall course coordinator and see that secretarial and other support services are provided. The committee should assign chairpersons and report writers for various sessions or portions of the course.

Chairpersons are responsible for serving as “master of ceremonies”, coordinating one or several session(s). They introduce the speaker(s), keep the session(s) progressing on schedule, and distribute and collect the evaluation forms.

Selection of presenters and other resource persons

Presenters for the sessions should be identified by the organizing committee. They should have appropriate credentials to be credible and convincing to the high-level participants envisioned for this course. There can be a mix of national and international faculty. It is helpful to include one or more presenters who have already taught, facilitated or attended a previous course.

The presenters can be a mix of speakers from among the facilitators who will attend the entire course and, in a few cases, outside resource persons who are scheduled just for a particular session. It is essential that the presenters be knowledgeable about specific subject areas. For example:

- **Session 1** will utilize the expertise of someone with access to the data regarding the local breastfeeding situation, such as the national breastfeeding or infant and young child feeding coordinator, a policy-maker or researcher (someone involved in a KAP study, for example). This person may present part of the session in collaboration with the facilitator.
- **Sessions 2 and 4** require a presenter with a strong scientific/medical background (either a course facilitator or outside resource person) who can discuss the research implications of the material. The presenter for session 4 should be familiar with the studies featured in the session (summaries are provided) and will need sufficient time to prepare. If the course is being given for settings with high HIV prevalence and the alternative Session 4 is being used, the presenter should also have expertise on HIV and infant feeding.
- **Session 3** provides an opportunity for the national breastfeeding or infant and young child feeding coordinator or the WHO or UNICEF representative to describe the BFHI assessment process and to give a national status report.
- **Session 5** should be led by a facilitator familiar with the issues involved in converting and managing “Baby-friendly” health facilities. If the alternative Session 5 for settings with high HIV prevalence is being used, the presenter should have expertise and, if possible, experience on implementing BFHI in these types of settings.

- **Session 6** should utilize an individual knowledgeable about cost and savings involved in breastfeeding promotion at the health facility level.
- **Sessions 7 and 8** should be led by a facilitator familiar with the teams attending the course and the settings from which they come and knowledgeable about program planning. The national breastfeeding or infant and young child feeding coordinator or another official who could also be assigned to follow up with the teams on implementation of their plans would be a good choice.

In the sessions requiring small group work, there should be some extra facilitators, depending upon the size of the small groups (approximately one for every five participants). Small group facilitators should have some experience with implementing the BFHI, programme planning, and working with groups.

The team of presenters needs to be arranged as far ahead as possible and their assignments made clear. Presenters should be thoroughly familiar with the curriculum guide and understand how their session(s) fit into the course as a whole.

Pre-course planning activities/session for speakers

It is essential that course sponsors and organizers meet or correspond very actively several months prior to the course. The organizing committee will need to assign teaching responsibilities and distribute session plans to faculty/facilitators several weeks before the course. Faculty will need plenty of time to become familiar with the materials and to obtain or prepare overheads or documents that describe the local situation.

Just prior to the course, a two-day session for faculty/facilitators can be held to make the final preparations needed. The agenda can be discussed and finalized, and speakers can review their responsibilities and individual session arrangements. A session-by-session discussion and/or practice session will familiarize all the faculty with the entire course so each member can see how his or her piece fits into the whole. This “walk through” will help ensure all speakers are prepared, assist in final selection of audio-visual aids and materials for audience appropriateness, and allow presenters to coordinate sessions and avoid duplication.

Selection of participants

Participants should be key decision-makers responsible for hospitals or other health facilities serving mothers and infants. The large majority of participants should be responsible for hospitals that are not yet involved in the BFHI or are unsure of the importance of supporting breastfeeding. A few can be in the “committed” category or already “Baby-friendly” to provide good models for others to follow.

Examples are:

- hospital administrator or director;
- head of key department of a large hospital;
- hospital manager;
- provincial or district medical officer (responsible for managing one or more health facilities);
- policy-maker with responsibility for health facility policies or administration at the national or regional level.

The committee should decide whether to involve participants from one type of facility, such as regional hospitals or large teaching hospitals, or whether to have a mix of representatives from public and private hospitals, large and small institutions, maternities and other maternal/child health facilities. Including representatives from different types of health facilities may contribute to livelier discussions. Budget constraints and judgments of which participants are most likely to effect change should help guide selection.

Course organizers may wish to invite several representatives from the same health facility so they can work on plans together. Experience has shown that change happens more quickly when a team of people are working towards the same goals. On the other hand, more institutions can be reached if only one representative attends from each facility.

Another decision concerns whether participants will all be from one region of the country or from the country as a whole. One advantage of inviting participants from one region is that the interaction during the course can encourage networking among the participants and their institutions in support of breastfeeding. Again, budget considerations will probably influence these decisions, as well as how many courses of this type are planned.

Groups of 15-20 people are ideal for promoting discussion during the sessions, although some countries may find it more cost-efficient to invite more participants.

Pre-course communication with participants

A high-level person within the health system, such as the minister of health, should issue **letters of invitation** in order to ensure attendance of key administrators and policy-makers who have influence and authority.

A **questionnaire** may be sent with the letter of invitation requesting the participant's name, mailing address, phone, place of work, title/job position, responsibilities, whether working in or associated with a BFHI hospital, most important challenges/problems faced in making their health facility "Baby-friendly" or supporting breastfeeding, and what is expected from the course (see Annex B for a sample questionnaire).

Participants should be requested to bring to the course **data related to infant feeding** in their local area or region. This could include rates of exclusive breastfeeding, rates of any breastfeeding, average age infants begin receiving other liquids and food (and types of food), rates of diarrhoeal disease, and KAP studies of mothers, families, and health professionals related to breastfeeding practices. This information will be helpful during discussions on the national situation (Session 1), and for use during the sessions on hospital self-appraisal (Session 7) and development of action plans (Session 8).

Consider the possibility of distributing **reading material** prior to the course, such as:

- WHO/UNICEF. Protecting, Promoting and Supporting Breast-feeding: The Special Role of Maternity Services. A Joint WHO/UNICEF Statement. Geneva, World Health Organization, 1989.
- *International Code of Marketing of Breast-milk Substitutes*. Geneva, World Health Organization, 1981.
- WHO/UNICEF. *Baby-friendly Hospital Initiative, Section 1 – 1.2 Hospital Level Implementation and 1.3 The Global Criteria for BFHI*, In: Baby-friendly Hospital Initiative: revised, updated and expanded for integrated care. Geneva, World Health Organization, 2009.

Emphasize in the cover letter that participants should bring the reading material with them to the course, as it will be referred to during discussions.

Course site

Site selection is important to the success of the course. The course facility needs to be attractive to senior level participants with a decision-making capacity, and yet within the budget. If possible, it should be outside the main city, so that participants can concentrate on the course without being distracted by other responsibilities. Travel time and cost of transportation are other important considerations.

The availability of support services and communication systems, such as copy machine, computer and printer, telephones, and fax greatly facilitate organizing and conducting of the course. Nevertheless, if some elements are missing, organizers should do their best to adapt to local conditions.

Appropriate audio-visual equipment and room conditions should be available for presentations (source of electricity, projectors, screens, room-darkening shades or curtains).

A number of smaller breakout rooms or areas for small group work are necessary for sessions 5 and 8. They should be easily accessible to the larger room so facilitators and participants do not waste time going from one site to the other.

Course materials

If possible, a copy of this full course guide should be provided for each facilitator who has overall responsibility for the course. All presenters need a copy of the relevant course sessions, as well as the PowerPoint file or transparencies to be used for their presentation.

The **Session Plans** and **handouts** for each of them are presented in this document, following the Course Guide. **PowerPoint files with slides and transparencies** for each of the sessions except Session 7 (which has none) can be accessed through links on the course website.

Handouts need to be duplicated for each participant. The handouts can be put in binders for each participant along with the course schedule, lists of participants and presenters, and other relevant documents. At the start of each session, presenters should refer to the documents in the participant binder that pertain to that particular session. Alternatively, handouts can be distributed at the beginning of each session, although this has been found to consume valuable time (worksheets or group work instructions should be passed out when they are needed). A condensed version of the slides is included as a handout and should be copied for participants. This handout allows participants to concentrate on the session while also taking notes.

The **PowerPoint slides** can be used in settings where a laptop computer and the appropriate projector are available. The sets include slides with text, bar graphs and other data presentations and, when appropriate, photos. All the slides are in colour. Some of the slide sets include photos, which are all listed in Annex C. Slides presenting local data or local photos may, of course, be substituted or added. Presenters should sort through the presentations provided and feel free to adjust them by adding or deleting slides and substituting their own data or photos as desired.

The presenter may decide to use **overhead transparencies** when a laptop computer and the required projector to show the PowerPoint slides are not available or for sessions for which there are many locally made overheads and it is difficult to switch back and forth between the two media. The **PowerPoint transparency files** present the “slides” in black and white format suitable for printing and making into transparencies. These files do not include the coloured photo slides, as they do not reproduce well in black and white. Transparencies and slides have identical numbers so that either medium can be used.

The following booklets are considered core resources for the course. There is usually a charge for these documents. If budget permits, it would be best to have a copy for each participant.

- World Health Organization and UNICEF. *Protecting, Promoting and Supporting Breast-feeding: The Special Role of Maternity Services*. A Joint WHO/UNICEF Statement. Geneva, World Health Organization, 1989.
- *International Code of Marketing of Breast-milk Substitutes*. Geneva, World Health Organization, 1981.
http://www.who.int/nutrition/publications/infantfeeding/code_english.pdf

Both are available from:

World Health Organization

WHO - Press

CH-1211 Geneva 27

Switzerland

Tel : +41 22 791 24 76

Fax : +41 22 791 48 57

Email to place orders: bookorders@who.int

For questions about publications: publications@who.int

A poster of the “Ten Steps” that can be displayed in the classroom is helpful. Contact the UNICEF or BFHI office for a copy.

A slide set or video on “Baby-friendly” for the country or region where the course is being given is recommended for Session 3, if available.

The video/DVD “Delivery Self Attachment” (Dr. L. Righard’s study, 6 minutes, 1992) is recommended for Session 4. It is available from:

Geddes Productions
PO BOX 41761
Los Angeles CA 90041-0761
USA
Voice: +1 323 344-8045
Fax: +1 323 257-7209

orders@geddesproduction.com

<http://www.geddesproduction.com/breast-feeding-delivery-selfattachment.html>

The following are other optional videos currently available. Locally produced videos can also be used to reflect the national experience.

“Breast is Best: About Mother’s Milk, Breast-feeding and Early Contact with the Newborn” by Gro Nylander (1994), 35 minutes. Available in a number of languages from:

Video Vital A/S
Skovveien 33
Pb. 5058, Majorstua
0301 Oslo, Norway
Tel.: +47 22- 55-45-88
Fax: +47 22-56-19-91
E-mail: health-info@videovital.no or mediabasement@videovital.no
<http://www.videovital.no/english/videovitaleng.htm>

“Hand Expressing and Cup Feeding” by Nursing Mothers’ Association of Australia (1994), 30 minutes. Available from:

ABA Waverley Group,
PO Box 3006, Syndal
VIC 3149, Australia.
Tel.: +613 9803 9239 - Jenny
<http://www.breastfeeding.asn.au/products/groupprojs.html#v1>

Publications that provide additional background information can be purchased if funds are available. Presenters/facilitators may wish to use them in session preparation. They could also be made available to participants as a core library. The following are suggested as general resources:

Lawrence RA and Lawrence RM. *Breastfeeding: A Guide for the Medical Profession, Sixth Edition* St. Louis, MO: Elsevier/C.V. Mosby, Inc., 2005.

Savage-King F (1992) *Helping Mothers to Breastfeed, Revised Edition* Nairobi, Kenya: African Medical and Research Foundation, 1992 (this document is available in a number of languages).

The educational supplies and equipment that will likely be needed for the course are noted in the following checklist.

Prepare for participants ahead of time:

- binders, folders or special bags with schedule and handouts inserted;
- notebooks or paper;
- name tags and place cards (stand up cardboard);
- registration forms;
- necessary paperwork for “out of pocket” money, if applicable;
- evaluation forms;
- lists of names and contact information for presenters, facilitators, and participants.

Have available during the course:

- copier, paper;
- computer and printer, paper;
- overhead projector, extra bulbs;

- laptop computer and LCD (data video) projector for showing PowerPoint presentations, extra bulbs;
- projection stand or table;
- video player, monitor, videos in correct format;
- extension cord(s);
- projection screen;
- flip charts, flip chart stands, markers (ideally one for each small group);
- chalk and erasers if using a blackboard;
- overhead transparencies and markers (if used for reporting group work);
- stapler, staples, paper clips, tape;
- scissors, hole puncher;
- pencils, pencil sharpener, pens;
- books and other documents.

Initial course activities

Registration: Distribution of name tags, folders containing course schedule, documents and handouts.

Questionnaire distribution: The questionnaire described under “Pre-course communication with participants” can be distributed and collected at the beginning of the course if it was not sent out earlier. It is best, however, to ask that it be returned earlier, as participants often arrive just before the course starts and have little time to complete forms.

Introductions: Introduction of speakers/facilitators and participants (they should be name).

Opening ceremonies: Keep as simple and short as possible (optional).

Evaluation and reporting

Responsibility for distribution and collection of evaluation forms and compilation of data needs to be assigned. Sample **evaluation forms** that can be used during the course are provided in Annex B. They include:

Session evaluation forms to be completed by participants and speakers. These forms may be particularly useful the first few times the course is given.

An overall course evaluation form for the end of the course. An alternative to using the final evaluation form is to schedule a brief discussion period for feedback following the last course session.

A **debriefing/evaluation meeting** for course organizers and facilitators can be held after the course is over. If additional courses of this type will be held in the future, organizers can learn from this experience in planning for the next one.

Course sponsors and the organizing committee should decide prior to the course what type of **report** is needed (its purpose and content), and should assign responsibility for report preparation and distribution. This way, those who are responsible can take notes as needed.

Follow-up

Successful implementation of action plans is usually greater if participants know they will need to submit progress reports at a later date and whether technical and financial support is possible. As budget permits, follow-up activities may be carried out following the course by either the national breastfeeding or infant and young child feeding coordinator or the BFHI coordinator. At an

appropriate period after completing the course, participants can be sent letters/forms requesting progress reports and statistical data. Lessons learned can be applied to future courses for administrators and policy makers.

It will be necessary at the end of the course to announce exactly what type of monitoring/follow-up will be conducted and when, and what support will be available.

This course can play an important role in continuing the effort to assist maternity facilities to implement the “Ten steps to successful breastfeeding”. Dialogue and problem-solving among colleagues provides the motivation for initiating change. Lasting policy change leading to practices that support breastfeeding is an outcome well worth the effort.

Annex A: Sample agendas for the Decision-makers Course

Sample agenda 1: Two-day version

(note: this two-day version of the agenda is the preferred version, if it is possible for all participants (top-level decision-makers, policy-makers and hospital managers) to attend a full two-day event. It allows for adequate time to explore the key topics related to implementing or revitalizing BFHI that are important for decision-makers, and provides enough time for useful exercises (such as those related to “becoming Baby-friendly”) and for developing full action plans).

Session #	Timing	Activity	Presenter
Day 1			
	15 minutes	Introduction	
1	45 minutes	The national infant feeding situation	
2	1 hour	Benefits of breastfeeding	
	30 minutes	<i>Break</i>	
3	1 hour	The Baby-friendly Hospital Initiative	
	1 hour	<i>Lunch</i>	
4 or 4-HIV	1 ½ hours	The scientific basis for the “Ten steps to successful breastfeeding” (generic or HIV version)	
	30 minutes	<i>Break</i>	
5 or 5-HIV	1 ½ hours	Becoming Baby-friendly (generic or HIV version) — Introduction and working groups	
5 or 5-HIV	30 minutes	Becoming Baby-friendly (generic or HIV version) — Reports from working groups	
		<i>Dinner</i>	
		Optional evening session: video and slide show	
Day 2			
6	1 to 1 ¾ hours	Costs and savings	
7	30 minutes	Appraising policies and practices — Introduction and working groups	
	15 minutes	<i>Break</i>	
8	1 to 1½ hours	Developing action plans — Working groups (health facility teams)	
	1 hour	<i>Lunch</i>	
8	1 hour	Results from self-appraisals and action planning — Team reports and discussion	
	1 hour	Wrap up discussion and feedback (may include discussion of regional coordination on BFHI or special issues related to revitalizing BFHI in the context of HIV and recommendations)	

Sample agenda 2: One-and-a-half-day version

(note: this day-and-a-half version of the course has been adapted so that the first day would be for all the top-level decision-makers and hospital managers. The morning of the second day could be provided to all participants or, if the top-level decision-makers are “to busy” to stay, it could be attended just by the hospital managers tasked in developing BFHI action plans).

Session #	Timing	Activity	Presenter
Day 1			
	15 minutes	Introduction	
2	1 hour	Benefits of breastfeeding	
1	45 minutes	The national infant feeding situation	
	30 minutes	<i>Break</i>	
3	1 hour	The Baby-friendly Hospital Initiative	
	1 hour	<i>Lunch</i>	
4 or 4-HIV	1 hour	The scientific basis for the “Ten steps to successful breastfeeding” (generic or HIV version)	
5 or 5-HIV	30 minutes	Becoming Baby-friendly (generic or HIV version) — Introduction and working groups	
	15 minutes	<i>Break</i>	
5 or 5-HIV	30 minutes	Becoming Baby-friendly (generic or HIV version) — Reports from working groups	
6	1 hour	Costs and savings	
		<i>Dinner</i>	
		Optional evening session: video and slide show	
Day 2			
7	30 minutes	Appraising policies and practices — Introduction and working groups	
	15 minutes	<i>Break</i>	
8	1 ¼ hours	Developing action plans — Working groups (health facility teams)	
8	1 hour	Results from self appraisals and action planning — Team reports and discussion	
	15 minutes	Wrap up discussion and feedback	

Sample agenda 3: One-day version

(note: this one-day version of the course has been adapted to include only a ½ day orientation for busy top-level decision-makers, along with hospital managers, and an additional afternoon session for hospital managers tasked in developing BFHI action plans. If this shortest version of the course is selected, it will be necessary for course planners to streamline each of the Sessions, choosing the content and PowerPoint slides of most relevance for their audience. If desired, this one-day version of the course can also be used with all participants staying for the entire day).

Session #	Timing	Activity	Presenter
	15 minutes	Introduction	
2	30 minutes	Benefits of breastfeeding	
1	30 minutes	The national infant feeding situation	
3	30 minutes	The Baby-friendly Hospital Initiative	
	30 minutes	<i>Break</i>	
4 or 4-HIV	45 minutes	The scientific basis for the “Ten steps to successful breastfeeding” (generic or HIV version)	
6	45 minutes	Costs and savings	
	30 minutes	Discussion concerning key strategies for action plans	
	1 hour	<i>Lunch</i>	
7	30 minutes	Appraising policies and practices — Introduction and working groups	
5 or 5-HIV	30 minutes	Becoming Baby-friendly (generic or HIV version) — Introduction and working groups	
5 or 5-HIV	30 minutes	Becoming Baby-friendly (generic or HIV version) — Reports from working groups	
8	1 ¼ hours	Developing action plans — Working groups (health facility teams) – <i>with coffee/tea available</i>	
8	45 minutes	Results from self appraisals and action planning — Team reports and discussion	
	15 minutes	Wrap up discussion and feedback	

Annex B:

**Strengthening and sustaining the Baby-friendly Hospital Initiative:
A course for decision-makers**

Pre-course questionnaire

Name: _____

Mailing Address: _____

Telephone: _____ Fax: _____

E-mail address: _____

Title/Position: _____

Institution: _____

Key responsibilities: _____

Date: _____

Please answer these questions before the course begins:

1. What is the status of your health facility, concerning “Baby-friendly” designation?
(Please check one of the following:)
 - Has not been involved at all with the “Baby-friendly Hospital Initiative”
 - Has not yet decided whether to become “Baby-friendly”
 - Has received a “Certificate of Commitment” to work to become “Baby-friendly”
 - Has been officially designated as “Baby-friendly”
 - I’m not associated with a health facility (please skip to Question 5)

2. Please list and describe any positive changes that have been made at your health facility to support breastfeeding.

3. What are the most important difficulties/challenges your facility still faces in supporting breastfeeding?

Please list and describe at least 3 difficulties.

4. How could this course be most useful in helping you address these difficulties/challenges and in assisting your facility(ies) to fully support breastfeeding?

5. Please list any (other) expectations you have of this course.

Date: _____

Place: _____

Discipline of
respondent: _____

Strengthening and sustaining the Baby-friendly Hospital Initiative: A course for decision-makers

Participant's form for evaluating course sessions

Session Title: _____

1. The **time allotted** to the session was:

Too short About right Too long

2. **Relevance of the content** in assisting participants in making their health facilities “baby friendly”:

Extremely relevant Somewhat relevant Not very relevant Not at all relevant

Suggestions for improving the relevance of the session:

3. The **quality of the teaching** was:

Very high Somewhat high Somewhat low Very low

Suggestions for improving the quality of the teaching:

4. Other comments and suggestions for improving the session:

Date: _____

Place: _____

Discipline of
respondent: _____

Strengthening and sustaining the Baby-friendly Hospital Initiative: A course for decision-makers

Participant's form for evaluating course sessions

Session Title: _____

1. The **time allotted** to the session was:

Too short About right Too long

2. **Relevance of the content** in assisting participants in making their health facilities “baby friendly”:

Extremely relevant Somewhat relevant Not very relevant Not at all relevant

Suggestions for improving the relevance of the session:

3. The **quality of the teaching** was:

Very high Somewhat high Somewhat low Very low

Suggestions for improving the quality of the teaching:

4. Other comments and suggestions for improving the session:

5. The **teaching methods** used in the session were:

Appropriate Need adjustment

Suggestions for adjusting/improving the teaching methods:

6. The **interest level of the participants** in the session was:

Very high Somewhat high Somewhat low Very low

Suggestions for increasing the interest level:

7. The success of the session (in your opinion) **in motivating and convincing the participants of the need for change:**

Very high Somewhat high Somewhat low Very low

Suggestions for improving the success of the session in motivating and convincing participants of the need for change:

8. Suggestions for improving the session before the next time the course is given:

Annex C:

Course for decision-makers photo slide inventory

Photographs to supplement session 2 (optional):

- 2a** Breast milk protects against infection. The older, thinner child on the left, who was weaned from the breast early and given human milk substitutes, has been in the hospital several times and is malnourished. The younger sibling, who has been fully breastfed, is healthy and growing normally (Philippines).
- 2b** Breast milk is a dynamic fluid that changes to meet the infant's needs (illustrates the changing appearance of breast milk over time).
- 2c** Foremilk differs from hindmilk, which has a higher fat content.
- 2d** This baby, fed human milk substitutes, has been hospitalized for severe diarrhoea.
- 2e** Allergies are less common in exclusively breastfed babies. This child, whose family had a strong history of allergy, was given formula twice in the hospital nursery; she developed atopic dermatitis in spite of being fully breastfed.
- 2f** Breastfeeding helps mother and baby to bond (new parents gazing at newborn at breast).
- 2g** Mother breastfeeding baby (benefits for the mother).
- 2h** Smiling mother and well-nourished, happy infant (illustrates optimal growth and development).

Photographs to supplement session 4 (optional):

- 4a** Baby holding the booklet, *Protecting, promoting and supporting breast-feeding*, Thailand (can be used as an introduction to the session).
- 4b** Health professionals consulting a written policy during “on the job” training, USA (Step 1).
- 4c** Health professionals attending a classroom session, Philippines (Step 2).
- 4d** Group discussion during training, Jordan (Step 2).
- 4e** Group antenatal class, Indonesia (Step 3).
- 4f** Antenatal breastfeeding counselling, USA (Step 3).
- 4g** Early initiation of breastfeeding, with nurse helping (Step 4).
- 4h, i, j** Three photos illustrating how a baby will find the mother’s nipple and begin to suck on his own, if time is allowed for this process (Step 4).
- 4k** Show how to breastfeed, nurse helping, USA (Step 5).
- 4l** Show how to breastfeed, nurse helping, China (Step 5).
- 4m** Hand expression into a cup (Step 5).
- 4n** No food or drink other than breast-milk -- bottles of water, and formula (Step 6).
- 4o** Give no food or drink, with nurse giving bottle (Step 6).
- 4p** Rooming-in, Thailand (Step 7).
- 4q** Rooming-in, Philippines (Step 7).
- 4r** Feed on demand, China (Step 8).
- 4s** Feed on demand, Thailand (Step 8).
- 4t** No artificial teats/nipples – sample teats (Step 9).
- 4u** No pacifiers, dummies, or soothers – sample pacifiers (Step 9).
- 4v** Cup-feeding expressed breast milk (Step 9).
- 4w** Mother support, home visit, USA (Step 10).
- 4x** Mother support group, health center, Thailand (Step 10).
- 4y** Mother support group, Ghana (Step 10)
- 4z** Community support, “Breastfeeding motivators”, Swaziland (Step 10).

Session 1: The national infant feeding situation

Objectives

At the conclusion of this session participants will be able to:

- Describe and apply WHO's infant and young child feeding recommendations.
- Describe the terms used for breastfeeding and complementary feeding.
- Describe the infant and young child feeding situation in their countries, including breastfeeding and complementary feeding patterns, and trends over time.

Duration

45 minutes

Teaching methods

Presentation by national breastfeeding or infant and young child feeding coordinator or other knowledgeable official

Discussion

Preparation for session

It is important to start preparing for this session long enough in advance to allow for much of the required materials to be collected from outside sources. What exactly is needed will vary from country to country. The following are some general ideas of how to prepare for the session:

- Review breastfeeding and complementary feeding definitions and recommendations (see slides/transparencies 1.4-1.6 for overview).
- Collect national data and other relevant information on breastfeeding and complementary feeding practices and trends over time, reviewing recent national and local surveys/studies.
- Determine how patterns compare with those in neighbouring countries or elsewhere in the region.
- Contact government health officials, local researchers (e.g. at universities and nutrition institutes) WHO and UNICEF country, and regional officers for additional data.

- Consult the *WHO Global Data Bank on Infant and Young Child Feeding (IYCF)* and collect nationally representative data on breastfeeding and complementary feeding.
- Check for country information from Macro International's *Demographic and Health Surveys (DHS)*, UNICEF's *State of the World's Children*, UNICEF's *Multiple Indicator Cluster Surveys (MICS)*, La Leche League branches, other national or international breastfeeding non-governmental organizations (NGOs) such as WABA or IBFAN, and any other relevant sources (see Handout 1.4 for details on how to access this data).
- For data on HIV prevalence, including prevalence among pregnant women, search for statistics on the UNAIDS website (see Handout 1.4 for details on how to access this data).
- Prepare PowerPoint presentations or overheads to display the data.

Training materials

Handouts

- 1.1 Presentation for session 1
- 1.2a The *WHO Global Data Bank on Infant and Young Child Feeding*
- 1.2b "Requested Survey Information" for the *WHO Global Data Bank on Infant and Young Child Feeding*
- 1.3a Breastfeeding indicators for household surveys
- 1.3b Breastfeeding indicators for health facility surveys
- 1.4 Possible sources of infant and young child feeding data

Copies of relevant data on the country/regional infant and young child feeding situation (their number depends on how much material and data are available).

Slides/transparencies

- 1.1-3 Facts on infant and young child feeding
- 1.4 WHO's infant and young child feeding recommendations
- 1.5-6 Breastfeeding and complementary feeding terms and definitions
- 1.7 Key questions to compare the country situation with WHO infant and young child feeding recommendations
- 1.8 Key questions to compare health facility data with WHO recommendations

Additional slides/overheads with country-related data available from surveys, studies and research.

The website featuring this Course contains links to the slides and transparencies for this session in two Microsoft PowerPoint files. The slides (in colour) can be used with a laptop computer and LCD projector, if available. Alternatively, the transparencies (in black and white) can be printed out and copied on acetates and projected with an overhead projector. The transparencies are also reproduced as the first handout for this session, with 6 transparencies to a page.

References

15 Years After Innocenti Declaration, Breastfeeding Saving Six Million Lives Annually [press release]. New York, UNICEF, 2005. http://www.unicef.org/media/media_30011.html

Butte NF, Lopez-Alarcon MG, Garza C. *Nutrient adequacy of exclusive breastfeeding for the term infant during the first six months of life*. Geneva, World Health Organization, 2002. http://www.who.int/nutrition/publications/nut_adequacy_of_exc_bfeeding_eng.pdf

Chandra RK. Prospective studies of the effect of breastfeeding on incidence of infection and allergy. *Acta Paed Scand*, 1979, 68: 691-694.

Duncan B, Ey J, Holberg CJ, et al. Exclusive breast-feeding for at least 4 months protects against otitis media. *Pediatrics*, 1993, 91(5): 867-872.

Feachem RG, Koblensky MA. Interventions for the control of diarrhoeal diseases among young children: promotion of breastfeeding. *Bulletin of the World Health Organization*, 1993, 62: 271-291.

Fifty-fifth World Health Assembly A55/15. Provisional agenda item 13.10 16 April 2002. Infant and young child nutrition. Global strategy on infant and young child feeding. World Health Organization, Geneva 2002. http://www.who.int/gb/ebwha/pdf_files/WHA55/ea5515.pdf

Global Data Bank on Infant and Young Child Feeding. World Health Organization, Geneva 2002. <http://www.who.int/nutrition/en/>

Indicators for assessing health facility practices that affect breastfeeding, Report of the Joint WHO/UNICEF Informal Interagency Meeting 9-10 June, 1992, Geneva, Switzerland. Geneva, World Health Organization, 1993 (WHO/CDR/93.1, UNICEF/SM/93.1).

USAID/AED/UCDAVIS/IFPRI/UNICEF/WHO. *Indicators for assessing infant and young child feeding practices. Part I: Definitions*. Geneva, World Health Organization, 2008. http://www.who.int/child_adolescent_health/documents/9789241596664/en/index.html

Jones, G, Steketee RW, Black R, Bhutte ZA, Morris S, The Bellagio Child Survival Group. How many child deaths can we prevent this year? *Lancet*, 2003 362:65-71.

Kleinman RL, Senanayake P (eds). *Breastfeeding: fertility and contraception*. London, International Planned Parenthood Federation, 1987.

Kramer MS, Kakuma R. *The optimal duration of exclusive breastfeeding: A systematic review*, Geneva, World Health Organization, 2001. http://www.who.int/nutrition/publications/optimal_duration_of_exc_bfeeding_review_eng.pdf

The optimal duration of exclusive breastfeeding. Report of an expert consultation. Geneva, World Health Organization, 28-30 March, 2001. http://www.who.int/nutrition/publications/optimal_duration_of_exc_bfeeding_report_eng.pdf

UNICEF/WHO/UNESCO/UNFPA. *Facts for life: A communication challenge*, revised ed. Wallingford, UK, P and LA, 1993. http://eric.ed.gov/ERICWebPortal/custom/portlets/recordDetails/detailmini.jsp?_nfpb=true&_ERICExtSearch_SearchValue_0=ED368481&ERICExtSearch_SearchType_0=no&accno=ED368481

Victora CG, Vaughan JP, Lombardi C, et al. Evidence for protection by breast-feeding against infant deaths from infectious diseases in Brazil. *Lancet*, 1987, 2:319-322.

WHO and LINKAGES. *Infant and young child feeding: A tool for assessing national practices, policies and programmes*. World Health Organization, Geneva, 2003.
http://www.who.int/nutrition/publications/inf_assess_nnpp_eng.pdf)

WHO infant and young child nutrition (progress and evaluation report; and status of implementation of the International Code of Marketing of Breast-milk Substitutes), forty -seventh World Health Assembly, provisional agenda item 19, 23 March 1994. Geneva, World Health Organization, 1994.

WHO/UNICEF. *Global Strategy for Infant and Young Child Feeding*. World Health Organization, Geneva 2003. <http://www.who.int/nutrition/publications/infantfeeding/en/index.html>

WHO/UNICEF. *Innocenti declaration on the protection, promotion and support of breastfeeding*, adopted by participants at the WHO/UNICEF policymaker's meeting on "Breastfeeding in the 1990s: A Global Initiative", Spedale degli Innocenti, Florence, Italy, 30 July – 1 August, 1990.

Outline

Content	Trainer's Notes
	Mention that a mini-version of the presentation is reproduced in Handout 1.1 and included in the participants' folder.
1. Key facts on infant and young child feeding	
Breastfeeding facts	Show slides/transparencies 1.1 - 1.3. Briefly mention each point, emphasizing the important role that breastfeeding plays in protecting the health and nutrition of children and their mothers.
2. Current infant and young child feeding recommendations	
<ul style="list-style-type: none"> ■ Summary and discussion of the recommendations: 	Show slide/transparency 1.4
<ul style="list-style-type: none"> ■ Early initiation of breastfeeding (breastfeeding within one hour of birth) ■ Exclusive breastfeeding for the first 6 months ■ Thereafter give nutritionally adequate and safe complementary foods to all children ■ Continue breastfeeding for up to 2 years of age or beyond 	<p>Refer to the recommendations in the <i>Global Strategy for Infant and Young Child Feeding</i>, paragraph 10, pages 7-8.</p> <p>Discuss the new interpretation of “Step 4” of the “Ten Steps to Successful Breastfeeding”:</p> <p><i>Place babies in skin-to-skin contact with their mothers immediately following birth for at least an hour. Encourage mothers to recognize when their babies are ready to breastfeed and offer help if needed.</i></p>
3. Breastfeeding and complementary feeding terms	
<ul style="list-style-type: none"> ■ Definitions of the main terms used internationally to describe different ways of feeding infants and young children: <ul style="list-style-type: none"> ■ Exclusive breastfeeding ■ Partial breastfeeding ■ Mixed feeding ■ Bottle-feeding ■ Artificial feeding ■ Replacement feeding ■ Complementary feeding 	Use slides/transparencies 1.5 and 1.6 to summarize the definitions of the different terms. Be familiar with the rationale for selecting these definitions for use at the global level.
<ul style="list-style-type: none"> ■ Other terms commonly used locally 	

Content	Trainer's Notes
<p>4. National infant and young child feeding patterns</p> <ul style="list-style-type: none"> ■ Data related to breastfeeding and complementary feeding 	
<p>Review national data comparing the country situation with the WHO infant and young child feeding recommendations, including, if available, information on the following core indicators:</p> <ul style="list-style-type: none"> ■ Early initiation of breastfeeding ■ Exclusive breastfeeding under 6 months ■ Continued breastfeeding at 1 year ■ Introduction of solid, semi-solid and soft foods ■ Minimum dietary diversity ■ Minimum meal frequency 	<p>Show slide/transparency 1.7 summarizing key questions that can be asked to compare the country situation with WHO's infant and young child feeding recommendations.</p> <p>Show slides/transparencies that present country data related to breastfeeding initiation, exclusivity and duration and complementary feeding practices. If possible, show trends over time. If practices do not meet the WHO recommendations, discuss some of the factors that may contribute to this.</p> <p>Some of these data can be obtained from the <i>WHO Global Data Bank on Infant and Young Child Feeding</i>. Refer participants to handout 1.2 (a-b), "<i>WHO Global Data Bank on Infant and Young Child Feeding</i>" and briefly explain that this is a global database containing data on prevalence and duration of breastfeeding and on complementary feeding worldwide.</p> <p>Mention that the Expert Committee (refer to WHO (2001) reference) recommends exclusive breastfeeding for 6 months, with introduction of complementary feeds and continued breastfeeding thereafter. This recommendation applies to all populations.</p> <p>WHO has developed indicators for breastfeeding at the household level to guide data collection worldwide. Refer participants to handout 1.3a that lists these key indicators</p> <p>Mention that the Expert Committee (refer to WHO (2001) reference) recommends exclusive breastfeeding for 6 months, with introduction of complementary feeds and continued breastfeeding thereafter. This recommendation applies to all populations.</p> <p>WHO has developed indicators for breastfeeding at the household level to guide data collection worldwide. Refer participants to handout 1.3a that lists these key indicators.</p>

Content	Trainer's Notes
<p>Indicators in relation to HIV-exposed infants:</p> <ul style="list-style-type: none"> ▪ Exclusively breastfeeding at 3 months of age ▪ Exclusive replacement feeding at 3 months of age ▪ Mixed feeding at 3 months of age 	
<ul style="list-style-type: none"> ■ Data related to infant feeding practices following delivery in maternity services. <p>Review health facility data that compare infant feeding practices with WHO recommendations:</p>	<p>Show slide/transparency 1.8 summarizing key questions.</p> <p>Mention that WHO has developed indicators for breastfeeding in maternity services to guide data collection worldwide. Refer participants to handout 1.3b that lists these key indicators.</p>
<ul style="list-style-type: none"> ▪ Breastfeeding initiation: Percentage of babies who start breastfeeding within 1 hour of birth ▪ Rooming-in: Percentage of babies who “room-in” on a 24-hour basis with their mothers after delivery ▪ Exclusive breastfeeding: Percentage of babies who are exclusively breastfed from birth to discharge in maternity wards or hospitals ▪ Bottle-feeding: Percentage of babies getting any feeds from bottles between birth and discharge (include babies delivered by caesarean-section and babies in special care units) 	<p>Show slides/transparencies that present country or health facility data related to infant feeding practices following delivery in maternity services. If information is available from Baby-friendly Hospital Initiative assessments or other sources, summarize the results.</p> <p>Present this information and any other important data related to the implementation of the “Ten steps to successful breastfeeding”.</p>
<ul style="list-style-type: none"> ■ Discussion 	<p>Ask participants to contribute information from their own settings. They might be asked to suggest what they believe are the reasons for certain types of data (e.g. the local beliefs and practices that lead to a low level of exclusive breastfeeding).</p> <p>Respond to any other questions participants may have related to the session.</p>

Handout 1.1

Presentation for session 1: The national infant feeding situation

Facts on infant and young child feeding

- About 2 million child deaths could be prevented every year through optimal breastfeeding.
- Exclusively breastfed infants have at least 2½ times fewer illness episodes than infants fed breast-milk substitutes.
- Infants are as much as 25 times more likely to die from diarrhoea in the first 6 months of life if not exclusively breastfed.
- Among children under one year, those who are not breastfed are 3 times more likely to die of respiratory infection than those who are exclusively breastfed.

From: Jones et al., 2003.; Chandra, 1979; Feachem, 1984; and Victora, 1987.

Transparency 1.1

Facts on infant and young child feeding

- Infants exclusively breastfed for 4 or more months have half the mean number of acute otitis media episodes of those not breastfed at all.
- In low-income communities, the cost of cow's milk or powdered milk, plus bottles, teats, and fuel for boiling water, can consume 25 to 50% of a family's income.
- Breastfeeding contributes to natural birth spacing, providing 30% more protection against pregnancy than all the organized family planning programmes in the developing world.

From: Duncan et al, 1993; UNICEF/WHO/UNESCO/UNFPA, 1993; and Kleinman, 1987.

Transparency 1.2

Facts on infant and young child feeding

- The peak period of malnutrition is between 6 and 28 months of age.
- Malnutrition contributes to about half of under-five mortality & a third of this is due to faulty feeding practices.
- Counselling on breastfeeding and complementary feeding leads to improved feeding practices, improved intakes and growth.
- Counselling on breastfeeding and complementary feeding contributes to lowering the incidence of diarrhoea.

Transparency 1.3

WHO's infant and young child feeding recommendations

- Initiate breastfeeding within one hour of birth.
- Breastfeed exclusively for the first six months of age (180 days).
- Thereafter give nutritionally adequate and safe complementary foods to all children.
- Continue breastfeeding for up to two years of age or beyond.

Adapted from the *Global Strategy*.

Transparency 1.4

Breastfeeding and complementary feeding terms and definitions

- **EXCLUSIVE BREASTFEEDING:** the infant takes only breast milk and no additional food, water, or other fluids with the exception of medicines and vitamin or mineral drops.
- **PARTIAL BREASTFEEDING or MIXED FEEDING:** the infant is given some breast feeds and some artificial feeds, either milk or cereal, or other food or water.
- **BOTTLE-FEEDING:** the infant is feeding from a bottle, regardless of its contents, including expressed breast milk.

Transparency 1.5

Breastfeeding and complementary feeding terms and definitions

- **ARTIFICIAL FEEDING:** the infant is given breast-milk substitutes and not breastfeeding at all.
- **REPLACEMENT FEEDING:** the process of feeding a child of an HIV-positive mother who is not receiving any breast milk with a diet that provides all the nutrients the child needs.
- **COMPLEMENTARY FEEDING:** the process of giving an infant food in addition to breast milk or infant formula, when either becomes insufficient to satisfy the infant's nutritional requirements.

Transparency 1.6

Key questions to compare the country situation with WHO infant and young child feeding recommendations

- Percentage of babies breastfeeding exclusively for the first six months of life (180 days)
- Percentage of babies exclusively breastfeeding by month, up to 6 months
- Percentage of babies with appropriate complementary feeding
- Median duration of breastfeeding (in months)

Transparency 1.7

Key questions to compare health facility data with WHO recommendations

- **Early initiation:** Percentage of babies who start breastfeeding within 1 hour of birth
- **Rooming-in:** Percentage of babies who “room-in” on a 24-hour basis with their mothers after delivery
- **Exclusive breastfeeding:** Percentage of babies who are exclusively breastfed from birth to discharge
- **Bottle-feeding:** Percentage of babies who are getting any feeds from bottles between birth and discharge

Transparency 1.8

The *WHO Global Data Bank on Infant and Young Child Feeding*

The *WHO Global Data Bank on Infant and Young Child Feeding* is maintained by the Department of Nutrition for Health and Development. The Data Bank has been restructured in line with the latest breastfeeding and complementary feeding indicators and definitions, which have been developed to broaden the nomenclature describing different types of breastfeeding behaviour and to increase the coherence, reliability, and comparability of data.

The Data Bank pools information from national, regional, state, department and village level surveys studies, and reviews dealing specifically with the prevalence of breastfeeding and complementary feeding, breastfeeding practices at health facilities, policies and programmes. Every effort is made to achieve worldwide coverage, which will permit:

- monitoring of breastfeeding prevalence and complementary feeding prevalence, and analysis of trends over time;
- comparisons over time within countries, and between countries and regions;
- assessment of breastfeeding and complementary feeding trends and practices as a basis for future action;
- evaluation of the impact of breastfeeding and complementary feeding promotion programmes;
- ready access to current data for use by policy- and decision-makers, scientists, researchers, hospital administrators, health workers, and other interested parties.

For this purpose, it is necessary that global indicators and definitions for breastfeeding and complementary feeding to be disseminated worldwide and that researchers and health professionals supply the Data Bank with up-to-date data. Both conditions have to be fulfilled if the Data Bank is to achieve its full potential and thereby contribute to the health of mothers and infants everywhere.

To this end, a report is prepared every three to four years on infant and young child feeding (IYCF) trends in countries for which data are available. It is hoped that the Data Bank will help enable the competent national authorities to achieve the IYCF goals they have established, while serving to motivate all concerned parties to strengthen programmes in support breastfeeding and complementary feeding.

The Data Bank is accessible on the web at <http://www.who.int/nutrition/en/>.

Information can be accessed by country or region, indicators and year(s) of survey. If you would like to provide data or other information on breastfeeding, complementary feeding and infant and young child feeding practices in your country, you can use the datasheet *Household Survey Information* and the *Health Facility Survey Information* provided as Handout 1.2b

ADDITIONAL INFORMATION

Total Fertility Rate (<i>women age 15–49</i>): _____	No. of hospitals with maternity facilities: _____
Median maternal age at first birth: _____	Proportion of births attended by trained health pers.: _____
Median years of schooling (<i>women age 15–49</i>): _____	Caesarean section rate: _____
Proportion of women age 15-49 with BMI<18.5: _____	No. of designated BFHI hospitals: _____
Proportion of women age 15-49 with BMI>30: _____	No. of hospitals with commitment to BFHI : _____
Proportion of women age 15–49 with HIV/AIDS: _____	(<i>Baby friendly Hospital Initiative</i>)

Handout 1.3a

Breastfeeding indicators for households¹

Exclusive breastfeeding under 6 months:

Proportion of infants 0-5 months of age who are fed exclusively on breast milk

$$\frac{\text{Infants 0-5 months of age who received only breast milk during the previous day}}{\text{Infants 0-5 months of age}}$$

Early initiation of breastfeeding:

Proportion of children born in the last 24 months who were put to the breast within one hour of birth

$$\frac{\text{Children born in the last 24 months who were put to the breast within one hour of birth}}{\text{Children born in the last 24 months}}$$

Continued breastfeeding at 1 year:

Proportion of children 12 – 15 months of age who are fed breast milk

$$\frac{\text{Children 12-15 months of age who received breast milk during the previous day}}{\text{Children 12-15 months of age}}$$

Introduction of solid, semi-solid or soft foods:

Proportion of infants 6-8 months of age who receive solid, semi-solid or soft foods

$$\frac{\text{Infants 6-8 months of age who received solid, semi-solid or soft foods during the previous day}}{\text{Infants 6-8 months of age}}$$

Minimum dietary diversity:

Proportion of children 6-23 months of age who receive foods from ≥ 4 food groups during the previous day

$$\frac{\text{Children 6-23 months of age who received foods from } \geq 4 \text{ food groups during the previous day}}{\text{Children 6-23 months of age}}$$

¹ USAID/AED/UCDAVIS/IFPRI/UNICEF/WHO. *Indicators for assessing infant and young child feeding practices. Part I: Definitions*. Geneva, World Health Organization, 2008. http://whqlibdoc.who.int/publications/2008/9789241596664_eng.pdf

Note: The 7 foods groups used for this indicator are:

- grains, roots and tubers
- legumes and nuts
- dairy products (milk, yogurt, cheese)
- flesh foods (meat, fish, poultry and liver/organ meats)
- eggs
- vitamin-A rich fruits and vegetables
- other fruits and vegetable

Minimum meal frequency:

Proportion of breastfed and non-breastfed children 6-23 months of age who receive solid, semi-solid, or soft foods (but also including milk feeds for non-breastfed children) minimum number of times or more

The indicator will be calculated from the following two fractions:

Breastfed children 6-23 months of age who received solid, semi-solid or soft foods
the minimum number of times or more during the previous day
 Breastfed children 6-23 months of age

and

Non-breastfed children 6-23 months of age who received solid, semi-solid or soft foods or milk
feeds the minimum number of times or more during the previous day
 Non-breastfed children 6-23 months of age

Note: Minimum is defined as:

- 2 times for breastfed infants 6-8 months
- 3 times for breastfed children 9-23 months
- 4 times for non-breastfed children 6-23 months

Minimum acceptable diet:

Proportion of children 6-23. months of age who receive a minimum acceptable diet (apart from breast milk).

This composite indicator will be calculated from the following two fractions:

Breastfed children 6-23 months of age who had at least the minimum dietary diversity
and the minimum feeding frequency during the previous day
 Breastfed children 6-23 months of age

and

Non-breastfed children 6-23 months of age who received at least 2 milk feedings and had at least the minimum dietary diversity

not including milk feeds and the minimum feeding frequency during the previous day
Non-breastfed children 6-23 months of age

Consumption of iron-rich or iron-fortified foods:

Proportion of children 6-23 months of age who receive an iron-rich food or iron-fortified food that is specially designed for infants and young children, or that is fortified in the home.

Children 6-23 months of age who received an iron-rich food
or a food that was specially designed for infants and young children and was fortified with iron,
or a food that was fortified in the home with a product that included iron during the previous day
Children 6-23 months of age

Children ever breastfed:

Proportion of children born in the last 24 months who were ever breastfed

Children born in the last 24 months who were ever breastfed
Children born in the last 24 months

Continued breastfeeding at 2 years:

Proportion of children 20–23 months of age who are fed breast milk

Children 20-23 months of age who received breast milk during the previous day
Children 20-23 months of age

Appropriate breastfeeding:

Proportion of children 0-23 months of age who are appropriately breastfed

The indicator is calculated from the following two fractions:

Infants 0-5 months of age who received only breast milk during the previous day
Infants 0-5 months of age

and

Children 6-23 months of age who received breast milk, as well as solid, semi-solid or soft foods during the previous day
Children 6-23 months of age

Predominant breastfeeding under 6 months:

Proportion of infants 0 – 5 months of age who are predominantly breastfed

$$\frac{\text{Infants 0-5 months of age who received breast milk} \\ \text{as the predominant source of nourishment during the previous day}}{\text{Infants 0-5 months of age}}$$

Duration of breastfeeding:

Median duration of breastfeeding among children less than 36 months of age

The age in months when 50% of children 0-35 months did not receive breast milk during the previous day

Bottle feeding:

Proportion of children 0-23 months of age who are fed with a bottle

$$\frac{\text{Children 0-23 months of age who were fed with a bottle during the previous day}}{\text{Children 0-23 months of age}}$$

Milk feeding frequency for non-breastfed children:

Proportion of non-breastfed children 6-23 months of age who receive at least 2 milk feedings

$$\frac{\text{Non-breastfed children 6-23 months of age} \\ \text{who received at least 2 milk feedings during the previous day}}{\text{Non-breastfed children 0-23 months of age}}$$

Handout 1.3b

Breastfeeding indicators for health facilities²

	TITLE	DEFINITION	SOURCE
MATERNITY SERVICES			
1	Exclusive breastfed by natural mother rate	<u>Numerator</u> : No. of infants exclusively breastfed by their natural mothers from birth to discharge <u>Denominator</u> : No. of infants discharged	Maternal interviews at discharge
2	Breast-milk substitutes and supplies receipt rate	<u>Numerator</u> : No. of mother who received breast-milk substitutes, infant feeding bottles, or teats at any time prior to discharge or during a prenatal visit to this facility <u>Denominator</u> : No of infants discharged	Maternal interviews at discharge
3	Bottle-fed rate	<u>Numerator</u> : No. of infants who received any food or drink from a bottle in the 24 hours prior to discharge <u>Denominator</u> : No of infants discharged	Maternal interviews at discharge
4	Rooming-in rate	<u>Numerator</u> : No. of infants rooming-in 24 hours a day, beginning within 1 hr of birth, not separated from mother for more than 1 hour at any time <u>Denominator</u> : No of infants discharged	Maternal interviews at discharge
5	Breastfed rate	<u>Numerator</u> : No. of infants breastfeeding in 24 hours prior to discharge <u>Denominator</u> : No of infants discharged	Maternal interviews at discharge
6	Timely first-suckling rate	<u>Numerator</u> : No. of infants who first suckled within 1 hour of birth <u>Denominator</u> : No of infants discharged	Maternal interviews at discharge
Opt.1	Exclusively breast-milk fed rate	<u>Numerator</u> : No. of infants exclusively breast-milk fed from birth to discharge <u>Denominator</u> : No of infants discharged	Maternal interviews at discharge
Opt.2	Pacifier use rate	<u>Numerator</u> : No. of infant who received pacifiers at any time prior to discharge <u>Denominator</u> : No of infants discharged	Maternal interviews at discharge

² From *Indicators for assessing health facility practices that affect breastfeeding, Report of the Joint WHO/UNICEF Informal Interagency Meeting 9-10 June 1992, WHO, Geneva, Switzerland.* Geneva, World Health Organization, 1993 (WHO/CDR/93.1, UNICEF/SM/93.1), page 30.

Handout 1.4

Possible sources of infant and young child feeding data

<i>Data source</i>	How to obtain
MEASURE DHS, Macro International. 11785 Beltsville Drive, Suite 300 Calverton, Maryland, 20705 USA.	Country reports are available on the web at http://www.measuredhs.com/countries/
UNICEF. <i>Multiple Indicator Cluster Survey</i> . New York, UNICEF.	Results from specific country surveys may be available from the UNICEF country offices. Information on the MICS, the questionnaires and manuals and specific country reports are also available on the UNICEF website: http://www.childinfo.org/
WHO. <i>WHO Global Data Bank on Infant and Young Child Feeding</i> . Geneva, World Health Organization.	Data from the WHO Global Data Bank is available at the WHO/NHD website: http://www.who.int/nutrition/en/ For more information contact: Department of Nutrition for Health and Development World Health Organization CH-1211 Geneva 27, Switzerland Tel. 41-22-791-3315 Fax: 41-22-791-4156 E-mail: nutrition@who.int
UNAIDS Secretariat, Geneva, Switzerland	Data on HIV prevalence by country can be found on the UNAIDS/WHO website: http://www.unaids.org/en/
WABA World Alliance for Breastfeeding Action	http://www.waba.org.my/
IBFAN The International Baby Food Action Network	http://www.ibfan.org/site2005/Pages/index2.php?iui=1
La Leche League International	http://www.llli.org/
National surveys and studies [please list:]	

Session 2: Benefits of breastfeeding

Objectives

At the conclusion of this session, participants will be able to:

- List and explain at least three benefits of breastfeeding for each of the following: infant, mother, family, and hospital.
- Describe the benefits of breastfeeding in a hospital setting.
- Give at least three risks related to artificial feeding.

Duration

Session: 1 hour

Teaching methods

Small group work

Lecture and discussion

Video (optional - may also be shown during free time)

Preparation for session

- Review slides. If possible, review references listed in this section, concentrating on the references with data featured on the slides.
- Prepare slides or transparencies and handouts whenever possible that present national data, studies, and surveys. Include photo slides, if possible. Some photo slides that may be appropriate for this session are included in the “slides” PowerPoint file accompanying this course. Consider using them if not enough appropriate photo slides are available locally.

Decide whether to show a video, such as *Breast is Best* or others. If there is no time during the session itself, consider showing videos during the lunch break or in the evening.

Training materials

Summaries

Available summaries of research studies presented in Session 2

Handouts

- 2.1 Presentation for session 2
- 2.2 Infant and young child feeding: recommendations for practice
- 2.3 Exclusive Breastfeeding: The Only Water Source Young Infants Need (LINKAGES FAQ Sheet 5)
- 2.4 Health benefits of breastfeeding: a list of references. (a list of references copied, with permission, from the UNICEF UK Baby-friendly Initiative website)
<http://www.babyfriendly.org.uk/health.asp>

Slides/Transparencies

2.1-2.28 and photo slides 2a – 2h

The website featuring this Course contains links to the slides and transparencies for this session in two Microsoft PowerPoint files. The photo slides are included in the “slides” file in the order in which they are listed in the Session Plan. The slides (in colour) can be used with a laptop computer and LCD projector, if available. Alternatively, the transparencies (in black and white) can be printed out and copied on acetates and projected with an overhead projector. The transparencies are also reproduced as the first handout for this session, with 6 transparencies to a page.

Video (optional)

One video to consider is *Breast is Best* (35 minutes). This video from Norway has many potential training uses, including a sequence showing a newborn baby crawling along his mother's abdomen and finding the nipple without assistance. It is available in a number of languages from Health Info/Video Vital A/S, P.O. Box 5058, Majorstua, N-0301, Oslo, NORWAY (Tel: [47](22) 699644, Fax: [47](22) 600789) or e-mail: health-info@videovital.no. It can also be ordered through “Baby Milk Action” at <http://www.babymilkaction.org/shop/videos.html>

Consider using a locally appropriate video, if one is available. Check with the BFHI authorities, the country or regional UNICEF offices, the local IBFAN organization, La Leche League, or other appropriate national or regional organizations to explore what is available.

Other Materials

Flipchart and markers

Blackboard

References

- Aniansson G, Alm B, Andersson B, Hakansson A et al. A prospective coherent study on breast-feeding and otitis media in Swedish infants. *Pediatr Infect Dis J*, 1994, 13: 183-188.
- Beral V. Breast cancer and breastfeeding: collaborative reanalysis of individual data from 47 epidemiological studies in 30 countries, including 50302 women with breast cancer and 96973 women without the disease. *Lancet*, 2002, 360:187-95.
- Betran AP, de Onis M, Lauer JA, Villar J. Ecological study of effect of breast feeding on infant mortality in Latin America. *BMJ*, 2001, 323:1-5.
- Fergusson DM, Beautrais AL, Silva PA. Breastfeeding and cognitive development in the first seven years of life. *Social Science and Medicine*, 1982, 16:1705-1708. Howie PW, Forsyth JS, Ogston SA, Clark A, Florey CV. Protective effect of breastfeeding against infection. *BMJ*, 1990, 300:11-15.
- Kull I, Wickman M, Lilja G, Nordvall SL, Pershagen G. Breast feeding and allergic diseases in infants - a prospective birth cohort study. *Archives of Disease in Childhood*, 2002, 87:478-481.
- Lucas A, Morley R, Cole TJ, Lister G, Leeson-Payne C. Breast milk and subsequent intelligence quotient in children born preterm. *Lancet*, 1992, Feb 1, 339(8788):261-264.
- Morrow-Tlucak M, Haude RH, Ernhart CB. Breastfeeding and cognitive development in the first two years of life. *Social Science and Medicine*, 1988, 26:71-82.
- Mortensen EL, Michaelsen KF, Sanders SA, Reinisch JM. The association between duration of breastfeeding and adult intelligence. *JAMA*, 2002, 287:2365-2371.
- Popkin BM, Adair L, Akin JS, Black R, et al. Breastfeeding and diarrheal morbidity. *Pediatrics*, 1990, 86(6): 874-882.
- Riva E, Agostoni C, Biasucci G, Trojan S, Luotti D, Fiori L, et al. Early breastfeeding is linked to higher intelligence quotient scores in dietary treated phenylketonuric children. *Acta Paediatr*, 1996, 85:56-58.
- Rodgers B. Feeding in infancy and later ability and attainment: a longitudinal study. *Developmental Medicine & Child Neurology*, 1978, 20:421-426.
- Saadeh R, Benbouzid D. Breast-feeding and child spacing: importance of information collection to public health policy. *Bulletin of the World Health Organization*, 1990, 68(5) 625-631.
- Scariati PD, Grummer-Strawn LM, Fein SB. A longitudinal analysis of infant morbidity and the extent of breastfeeding in the United States. *Pediatrics*, 1997, 99(6). von Kries R, Koletzko B, Sauerwald T et al. Breast feeding and obesity: cross sectional study. *BMJ*, 1999, 319:147-150.
- Breastfeeding counselling: A training course*. Geneva, World Health Organization, 1993 (WHO/CDR/93.6).
- Breastfeeding and the use of water and teas*. Division of Child Health and Development UPDATE No.9, Geneva, World Health Organization, November 1997. (http://www.who.int/child-adolescent-health/New_Publications/NUTRITION/Water_Teas.pdf).

Outline

Content	Trainer's Notes
<p>1. Introductory discussion</p> <p>Exploration of participants' views of the benefits of breastfeeding</p>	<p>List the following categories in columns on a flipchart or blackboard.</p> <ul style="list-style-type: none"> • infant • mother • family • hospital <p>Divide the participants into four groups and assign one category to each. Ask each group to take five minutes to list the benefits of breastfeeding for its assigned category. Ask each group to report on their ideas. List their responses under the various headings on the flipchart.</p> <p>Mention that a mini-version of the presentation is reproduced in Handout 2.1 and included in the participants' folder.</p>
<p>2. Benefits of breastfeeding for the infant</p> <p>Slide 2a shows two children from the same family. The older child was hospitalized for dehydration and malnutrition. He had stopped breastfeeding earlier than is recommended because the mother was told by a health worker that his diarrhoea had been caused by her breast milk. Since she was economically disadvantaged, she could not afford the formula, often diluted it and used contaminated water to prepare it. The child had many more diarrhoea episodes and became malnourished. The mother became pregnant and decided to breastfeed this next child. The photo was taken when the older child was hospitalized and the mother sat the younger child in the crib beside him.</p>	<p>Show photo slide 2a or other photo slide with a story.</p>

Content	Trainer's Notes
<ul style="list-style-type: none"> ■ Optimal nutrition. <ul style="list-style-type: none"> ■ Breast milk provides high quality nutrients that are easily digested and efficiently used by the baby's body. Breast milk also provides all the water a baby needs. There is no need for any additional liquid. Numerous studies indicate that, for infants breastfed exclusively and on demand, the water in the breast milk exceeds water requirements. The solute levels in the urine and blood of these infants - even those living in very hot, dry climates -- were within normal ranges, indicating adequate water intake. 	<p>Show slide/transparency 2.1 and refer to handout 2.2.</p> <p>Show slide/transparency 2.2. Highlight the differences between the three types of milk.</p> <p>Show slide/transparency 2.3 and refer participants to Handout 2.3 (LINKAGES Infant Feeding Handout).</p>
<ul style="list-style-type: none"> ■ Breast milk is a dynamic fluid that changes to meet the infant's needs. <p>Milk composition is influenced by the <i>gestational age</i> of the infant (preterm milk is different from full-term milk), <i>stage of lactation</i> (colostrum differs from transitional and mature milk, which continues to change as time goes by), and <i>time frame of the feed</i> (foremilk differs from hindmilk, which has a higher fat content).</p> 	<p>Show slide/transparency 2.4. Highlight the dynamic properties of breast milk.</p> <p>Show photo slide 2b to illustrate how milk composition changes as the infant matures.</p> <p>Show photo slide 2c to show the difference between foremilk and hindmilk.</p>
<ul style="list-style-type: none"> ■ Colostrum has special properties and is very important to the infant for a variety of developmental, digestive, and protective factors. 	<p>Show slide/transparency 2.5. Highlight the main points.</p>
<ul style="list-style-type: none"> ■ Breast milk is normally the only food that infants need for the first 6 months of life. Safe and appropriate complementary foods should be given from the sixth month of life while breastfeeding continues. 	<p>Refer to Handout 2.3.</p>
<ul style="list-style-type: none"> ■ Breast milk continues to be an important source of energy and high quality nutrients through the second year of life and beyond. 	<p>Show slide/transparency 2.6.</p>
<ul style="list-style-type: none"> ■ Protective effect of breastfeeding on infant morbidity. 	<p>Show slide/transparency 2.7.</p>

Content	Trainer's Notes
<ul style="list-style-type: none"> ■ Increased immunity. <p>Breast milk is a living fluid that protects the baby against infection. During the first year of a baby's life, because the immune system is not fully developed, the baby depends on mother's milk to fight infections.</p>	
<ul style="list-style-type: none"> ■ Reduced risk of diarrhoea. <ul style="list-style-type: none"> ■ A study from the Philippines showed that artificially fed babies were up to 17 times more at risk of getting diarrhoea than exclusively breastfed infants. Partially breastfed babies were more likely to have diarrhoea than exclusively breastfed babies, but less likely than babies who received no breast milk (<i>Popkin</i>). 	<p>Optional: Show photo slide 2d, which shows a baby fed breast-milk substitutes who has been hospitalized for severe diarrhoea.</p> <p>Show slide/transparency 2.8.</p> <p>Stress the importance of continued breastfeeding during diarrhoeal episodes because of its nutritional value and the fact that it ensures a more speedy recovery from illness.</p>
<ul style="list-style-type: none"> ■ A study in Dundee, Scotland found that breastfed infants had much less diarrhoea. For example, between 0 and 13 weeks of age, almost 20% of bottle-fed infants had diarrhoea compared with only 3.6% of the breastfed infants (<i>Howie et al.</i>). 	<p>Show slide/transparency 2.9.</p>
<ul style="list-style-type: none"> ■ A study of 1743 mother infant pairs in the United States found a protective effect against diarrhoeal disease if infants were breastfed compared to infants who were not breastfed. The risk diminished the more breast milk the infant drank (a dose response) (<i>Scariati et al.</i>). 	<p>Show slide/transparency 2.10.</p>
<ul style="list-style-type: none"> ■ Reduced risk of respiratory infection. <ul style="list-style-type: none"> ■ Another study in Dundee, Scotland found that breastfed infants had much less respiratory illness. For example, between 0 and 13 weeks of age, almost 39% of the bottle-fed infants had respiratory illness compared to only 23% of the breastfed infants (<i>Howie et al.</i>). 	<p>Show slide/transparency 2.11.</p>

Content	Trainer's Notes
<ul style="list-style-type: none"> ■ Reduced risk of otitis media. <ul style="list-style-type: none"> ■ A study in Sweden found that breastfed infants had less otitis media than artificially fed infants. For example, at one to three months of age, 6% of the weaned infants had otitis media, compared to only 1% of the breastfed infants (<i>Aniansson et al.</i>). 	<p>Show slide/transparency 2.12.</p>
<ul style="list-style-type: none"> ■ A study of 1743 mother infant pairs in the United States found a protective effect against otitis media if infants were breastfed compared to infants who were not breastfed. The risk diminished the more breast milk the infant drank (a dose response) (<i>Scariati et al.</i>). 	<p>Show slide/transparency 2.13.</p>
<ul style="list-style-type: none"> ■ Protective effects of breastfeeding on infant mortality. 	<p>Show slide/transparency 2.14.</p>
<ul style="list-style-type: none"> ■ Diarrhoeal disease and respiratory infections. <ul style="list-style-type: none"> ■ In a study on the effects of breastfeeding on infant mortality in Latin America the authors conclude that artificially-fed infants 0-3 months of age were over 14 times more likely to die of diarrhoeal disease and 4 times more likely to die of acute respiratory infections than exclusively breastfed infants. Artificially-fed infants 4-11 months of age were almost 2 times more likely to die of both diarrhoeal disease and acute respiratory infection than partially breastfed infants (<i>Betran et al.</i>). 	<p>Show slide/transparency 2.15 and 2.16.</p>
<ul style="list-style-type: none"> ■ Breastfeeding reduces the risk of chronic disease. 	<p>Show slide/transparency 2.17.</p>
<ul style="list-style-type: none"> ■ Lower risk of allergies. <ul style="list-style-type: none"> ■ It is generally agreed that allergies are less common in completely breastfed babies. A recent study in Sweden in which a birth cohort of 4089 infants was followed prospectively found that exclusive and partial breastfeeding reduced the risk of allergic disorders. 	<p>Show slide/transparency 2.18.</p> <p>Show photo slide 2e.</p>

Content	Trainer's Notes
<p>Children exclusively breastfed during four months or more exhibited less asthma (7.7% vs. 12%), less atopic dermatitis (24% vs. 27%) and less allergic rhinitis (6.5% vs. 9%) (<i>Kull et al.</i>).</p>	
<ul style="list-style-type: none"> ■ Lower risk of obesity. <ul style="list-style-type: none"> ■ A study in Germany found that among 9357 children aged 5 and 6 there was an over 5 times difference in the prevalence of obesity among those children never breastfed compared to those breastfed for over one year. There was a dose effect with the longer an infant had been breastfed the lower prevalence of obesity at the age of 5 and 6 (<i>von Kries et al.</i>). 	<p>Show slide/transparency 2.19.</p>
<ul style="list-style-type: none"> ■ Breastfeeding has psychosocial and developmental benefits. 	<p>Slide/transparency 2.20.</p>
<ul style="list-style-type: none"> ■ Breastfeeding helps mother and baby to bond. Close contact right after delivery promotes development of a loving relationship between mother and baby. Babies cry less and mothers respond better to their babies' needs. 	<p>Show photo slides 2f.</p>
<ul style="list-style-type: none"> ■ The effects of breastfeeding and breast milk on infant and child development and IQ has been a subject of much interest in the scientific field and the findings over decades of research have found consistently better developmental outcomes and higher IQs if breastfed (<i>Ferguson et al. and other studies</i>). 	<p>Show slide/transparency 2.21.</p>
<ul style="list-style-type: none"> ■ Most recent long term study in Copenhagen found that duration of breastfeeding was associated with significantly higher IQ scores at 27.2 years. This study also found a positive dose effect (<i>Mortensen et al.</i>). 	<p>Show slide/transparency 2.22.</p>

Content	Trainer's Notes
3. Benefits of breastfeeding for the mother	Optional: Show slide 2g.
<ul style="list-style-type: none"> ■ Protection of mother's health. <ul style="list-style-type: none"> ■ The oxytocin released during breastfeeding helps the uterus to return to its previous size and helps to reduce postpartum bleeding. 	Show slide/transparency 2.23.
<ul style="list-style-type: none"> ■ Breastfeeding reduces the risk of breast and ovarian cancer in mothers. <p>A reanalysis of data from 47 epidemiological studies in 30 countries found that the relative risk of breast cancer decreased by 4.3% for every year of breastfeeding (<i>Beral</i>).</p> 	Show slide/transparency 2.24.
<ul style="list-style-type: none"> ■ Delaying new pregnancies. <ul style="list-style-type: none"> ■ During the first six months after birth, if a woman is amenorrhoeic and fully breastfeeding her infant, she has about 98% protection against another pregnancy. 	
<ul style="list-style-type: none"> ■ The longer the duration of breastfeeding, the longer the duration of postpartum amenorrhoea, which leads to longer birth intervals (<i>Saadeh and Benbouzid</i>). 	Show slide/transparency 2.25.
<ul style="list-style-type: none"> ■ Dangers of artificial feeding: <ul style="list-style-type: none"> ■ Interference with bonding ■ More diarrhoea and respiratory infections ■ Persistent diarrhoea ■ Malnutrition - Vitamin A deficiency ■ More allergy and milk intolerance ■ Increased risk of some chronic diseases ■ Increased risk of overweight ■ Lower scores on intelligence tests (for low-birth-weight babies) ■ Too frequent pregnancies for the mother ■ Increased risk of anaemia, ovarian and breast cancer for the mother 	Show slide/transparency 2.26. Emphasize the many risks associated with using feeding bottles, water, formula and pacifiers both in the hospital and later when the mother returns home. Stress the fact that the hospital has the responsibility to communicate both the benefits of breastfeeding and the risks of artificial feeding to all mothers.

Content	Trainer's Notes
<p>4. Benefits of breastfeeding for the family</p> <ul style="list-style-type: none"> ■ Better health and nutrition. ■ Breastfeeding benefits the whole family, emotionally and nutritionally. ■ Economic benefits. ■ Breastfeeding costs less than artificial feeding. Money spent on buying infant formula can be used to buy nutritious food for mother and family. 	<p>Show slide/transparency 2.27.</p>
<ul style="list-style-type: none"> ■ Health care. <p>Breastfeeding reduces health-care costs, such as medical consultations, medicines, lab tests, hospitalization, etc.</p>	<p>Mention that data related to the economic benefits of breastfeeding will be covered in Session 6, Costs and savings.</p>
<p>5. Benefits of breastfeeding for the hospital</p> <ul style="list-style-type: none"> ■ Breastfeeding creates an emotionally warmer and calmer atmosphere. Infants cry less, are calmer; mothers can more easily respond to their babies' needs. ■ There is no need for nurseries when there is rooming-in, which means more space for patients and hospital staff. Special care rooms may still be needed for very sick babies. ■ Rooming-in reduces neonatal infections. Exclusively breastfed infants have fewer infections. ■ Less staff time is needed. Mothers are directly responsible for the care of their babies. ■ Rooming-in and breastfeeding support increases hospital prestige and creates an image of a facility doing its best for mothers and babies. ■ There are fewer abandoned children. Mothers who breastfeed are less likely to abuse or abandon their babies. ■ Breastfeeding is the safest feeding method during emergencies. 	<p>Show slide/transparency 2.28.</p>

Content	Trainer's Notes
6. Concluding discussion	<p>Optional: Show photo slide 2h – contented mother and baby.</p> <p>Refer participants to their folder and Handout 2.4 Benefits of Breastfeeding. This handout, which comes from the UNICEF UK Baby Friendly Initiative website, provides further information on scientific studies showing the benefits of breastfeeding. Ask participants for any questions or comments.</p>
7. Video (optional)	<p>Consider showing the video “Breast is Best” if available, and/or other good videos, if time permits. If there isn’t time during the session, consider showings during lunch breaks or in the evening.</p>

Summaries of research studies presented during Session 2

<i>Slide/transparency:</i>	<i>Study:</i>
2.8	Popkin BM, Adair L, Akin JS, Black R, Briscoe J, Flieger W. Breast-feeding and diarrheal morbidity. <i>Pediatrics</i> , 1990, Dec, 86(6):874-82.
2.9 and 2.11	Howie PW, Forsyth JS, Ogston SA, Clark A, Florey CD. Protective effect of breast feeding against infection. <i>BMJ</i> , 1990, Jan 6, 300(6716):11-6.
2.10 and 2.13	Scariati PD, Grummer-Strawn LM, Fein SB. A longitudinal analysis of infant morbidity and the extent of breastfeeding in the United States. <i>Pediatrics</i> , 1997, Jun, 99(6):E5.
2.12	Aniansson G, Alm B, Andersson B, Hakansson A, Larsson P, Nylén O, Peterson H, Rigner P, Svanborg M, Sabharwal H, et al. A prospective cohort study on breast-feeding and otitis media in Swedish infants. <i>Pediatr Infect Dis J</i> , 1994 Mar 13(3):183-8.
2.15 and 2.16	Betran AP, de Onis M, Lauer JA, Villar J. Ecological study of effect of breast feeding on infant mortality in Latin America. <i>BMJ</i> , 2001, Aug 11, 323(7308):303-6.
2.18	Kull I, Wickman M, Lilja G, Nordvall SL, Pershagen G. Breastfeeding and allergic diseases in infants – a prospective birth cohort study. <i>Archives of Disease in Childhood</i> , 2002, 87:478-481.
2.19	von Kries R, Koletzko B, Sauerwald T, von Mutius E, Barnert D, Grunert V, von Voss H. Breast feeding and obesity: cross sectional study. <i>BMJ</i> , 1999, Jul 17, 319(7203):147-50.
2.21	Lucas A, Morley R, Cole TJ, Lister G, Leeson-Payne C. Breast milk and subsequent intelligence quotient in children born preterm. <i>Lancet</i> , 1992, Feb 1, 339(8788):261-4.
2.21	Fergusson DM, Beautrais AL, Silva PA. Breast-feeding and cognitive development in the first seven years of life. <i>Social Science and Medicine</i> , 1982, 16(19):1705-8.
2.21	Morrow-Tlucak M, Haude RH, Ernhart CB. Breastfeeding and cognitive development in the first 2 years of life. <i>Social Science and Medicine</i> , 1988, 26(6):635-9.
2.21	Riva E, Agostoni C, Biasucci G, Trojan S, Luotti D, Fiori L, Giovannini M. Early breastfeeding is linked to higher intelligence quotient scores in dietary treated phenylketonuric children. <i>Acta Paediatr</i> , 1996, Jan, 85(1):56-8.
2.22	Mortensen EL, Michaelsen KF, Sanders SA, Reinisch JM. The association between duration of breastfeeding and adult intelligence. <i>JAMA</i> , 2002, May 8, 287(18):2365-71.

- 2.24 Beral V, Bull D, Doll R, Peto R, Reeves G (Collaborative Group on Hormonal Factors in Breast Cancer). Breast cancer and breastfeeding: collaborative reanalysis of individual data from 47 epidemiological studies in 30 countries, including 50 302 women with breast cancer and 96 973 women without the disease. *Lancet*, 2002, 360:187-95.
- 2.25 Saadeh R, Benbouzid D. Breast-feeding and child-spacing: importance of information collection for public health policy. *Bulletin of the World Health Organization*, 1990, 68(5):625-31.

Breastfeeding and diarrhoeal morbidity

Refers to Slide 2.8

Reference. Popkin BM, Adair L, Akin JS, Black R, Briscoe J, Flieger W. Breast-feeding and diarrheal morbidity. *Pediatrics*, 1990, Dec, 86(6):874-82.

Methods. This study used a unique longitudinal survey of more than 3000 mother-infant pairs observed from pregnancy through infancy. The sample is representative of infants from the Cebu region of the Philippines. The sequencing of breastfeeding and diarrhoeal morbidity events was carefully examined in a longitudinal analysis, which allowed for the examination of age-specific effects of feeding patterns. Because the work controlled for a wide range of environmental causes of diarrhoea, the results can be generalized to other populations with some confidence.

Findings. The addition to the breast-milk diet of even water, teas, and other nonnutritive liquids doubled or tripled the likelihood of diarrhoea. Supplementation of breastfeeding with additional nutritive foods or liquids further increased significantly the risk of diarrhoea; most benefits of breastfeeding alone or in combination with nutritive foods/liquids became small during the second half of infancy. Benefits of breastfeeding were slightly greater in urban environments.

Protective effect of breastfeeding against infection

Refers to Slide 2.9 and 2.11

Reference. Howie PW, Forsyth JS, Ogston SA, Clark A, Florey CD. Protective effect of breast feeding against infection. *BMJ*, 1990, Jan 6, 300(6716):11-6.

Objective. To assess the relations between breastfeeding and infant illness in the first two years of life with particular reference to gastrointestinal disease.

Design. Prospective observational study of mothers and babies followed up for 24 months after birth.

Setting. Community setting in Dundee.

Methods. 750 pairs of mothers and infants, 76 of whom were excluded because the babies were preterm (less than 38 weeks), low birth weight (less than 2500 g), or treated in special care for more than 48 hours. Of the remaining cohort of 674, 618 were followed up for two years. Detailed observations of infant feeding and illness were made at two weeks, and one, two, three, four, five, six, nine, 12, 15, 18, 21, and 24 months by health visitors. The main outcome measure was the prevalence of gastrointestinal disease in infants during follow up.

Findings. After confounding variables were corrected for babies who were breastfed for 13 weeks or more (227) had significantly less gastrointestinal illness than those who were bottle fed from birth (267) at ages 0-13 weeks (p less than 0.01; 95% confidence interval for reduction in incidence 6.6% to 16.8%), 14-26 weeks (p less than 0.01), 27-39 weeks (p less than 0.05), and 40-52 weeks (p less than 0.05). This reduction in illness was found whether or not supplements were introduced before 13 weeks, was maintained beyond the period of breastfeeding itself, and was accompanied by a reduction in the rate of hospital admission. By contrast, babies who were breastfed for less than 13 weeks (180) had rates of gastrointestinal illness similar to those observed in bottle fed babies. Smaller reductions in the rates of respiratory illness were observed at ages 0-13 and 40-52 weeks (p less than 0.05) in babies who were breastfed for more than 13 weeks. There was no consistent protective effect of breastfeeding against ear, eye, mouth, or skin infections, infantile colic, eczema, or nappy rash.

Conclusions. Breastfeeding during the first 13 weeks of life confers protection against gastrointestinal illness that persists beyond the period of breastfeeding itself.

A longitudinal analysis of infant morbidity and the extent of breastfeeding in the United States

Refers to Slide 2.10 and 2.13

Reference. Scariati PD, Grummer-Strawn LM, Fein SB. A longitudinal analysis of infant morbidity and the extent of breastfeeding in the United States. *Pediatrics*, 1997, Jun, 99(6):E5.

Background. Studies on the health benefits of breastfeeding in developed countries have shown conflicting results. These studies often fail to account for confounding, reverse causality, and dose-response effects. We addressed these issues in analyzing longitudinal data to determine if breastfeeding protects US infants from developing diarrhoea and ear infections.

Methods. Mothers participating in a mail panel provided information on their infants at ages 2, 3, 4, 5, 6, and 7 months. Infants were classified as exclusively breastfed; high, middle, or low mixed breast- and formula-fed; or exclusively formula-fed. Diarrhoea and ear infection diagnoses were based on mothers' reports. Infant age and gender; other liquid and solid intake; maternal education, occupation, and smoking; household size; family income; and day care use were adjusted for in the full models.

Findings. The risk of developing either diarrhoea or ear infection increased as the amount of breast milk an infant received decreased. In the full models, the risk for diarrhoea remained significant only in infants who received no breast milk compared with those who received only breast milk (odds ratio = 1.8); the risk for ear infection remained significant in the low mixed feeding group (odds ratio = 1.6) and among infants receiving no breast milk compared with those who received only breast milk (odds ratio = 1.7).

Conclusions. Breastfeeding protects US infants against the development of diarrhoea and ear infection. Breastfeeding does not have to be exclusive to confer this benefit. In fact, protection is afforded in a dose-response manner.

A prospective cohort study on breastfeeding and otitis media in Swedish infants.

Refers to Slide 2.12

Reference. Aniansson G, Alm B, Andersson B, Hakansson A, Larsson P, Nylen O, Peterson H, Rigner P, Svanborg M, Sabharwal H, et al. A prospective cohort study on breast-feeding and otitis media in Swedish infants. *Pediatr Infect Dis J*, 1994 Mar. 13(3):183-8.

Methods. This study analyzed the effect of breastfeeding on the frequency of acute otitis media. The protocol was designed to examine each child at 2, 6, and 10 months of age. At each visit nasopharyngeal cultures were obtained, the feeding pattern was recorded and the acute otitis media (AOM) episodes were documented. The analysis was based on 400 children from whom complete information was obtained. They represented 83% of the newborns in the study areas.

Findings. By 1 year of age 85 (21%) children had experienced 111 AOM episodes; 63 (16%) had 1 and 22 (6%) had 2 or more episodes. The AOM frequency was significantly lower in the breastfed than in the non-breastfed children in each age group ($P < 0.05$). The first AOM episode occurred significantly earlier in children who were weaned before 6 months of age than in the remaining groups. The frequency of nasopharyngeal cultures positive for *Haemophilus influenzae*, *Moraxella catarrhalis* and *Streptococcus pneumoniae* was significantly higher in children with AOM. At 4 to 7 and 8 to 12 months of age, the AOM frequency was significantly higher in children with day-care contact and siblings ($P < 0.05$ and < 0.01 , respectively). The frequency of upper respiratory tract infections was increased in children with AOM but significantly reduced in the breastfed group.

Ecological study of effect of breastfeeding on infant mortality in Latin America

Refers to Slide 2.15 and 2.16

Reference. Betran AP, de Onis M, Lauer JA, Villar J. Ecological study of effect of breast feeding on infant mortality in Latin America. *BMJ*, 2001, Aug 11, 323(7308):303-6.

Objective. To estimate the effect of exclusive breastfeeding and partial breastfeeding on infant mortality from diarrhoeal disease and acute respiratory infections in Latin America.

Design. Attributable fraction analysis of national data on infant mortality and breastfeeding.

Setting. Latin America and the Caribbean.

Main outcome measures. Mortality from diarrhoeal disease and acute respiratory infections and nationally representative breastfeeding rates.

Findings. 55% of infant deaths from diarrhoeal disease and acute respiratory infections in Latin America are preventable by exclusive breastfeeding among infants aged 0-3 months and partial breastfeeding throughout the remainder of infancy. Among infants aged 0-3 months, 66% of deaths from these causes are preventable by exclusive breastfeeding; among infants aged 4-11 months, 32% of such deaths are preventable by partial breastfeeding. 13.9% of infant deaths from all causes are preventable by these breastfeeding patterns. The annual number of preventable deaths is about 52 000 for the region.

Conclusions: Exclusive breastfeeding of infants aged 0-3 months and partial breastfeeding throughout the remainder of infancy could substantially reduce infant mortality in Latin America. Interventions to promote breastfeeding should target younger infants.

Breastfeeding and allergic diseases in infants - a prospective birth cohort study

Refers to Slide 2.18

Reference: Kull I, Wickman M, Lilja G, Nordvall SL, Pershagen G. Breastfeeding and allergic diseases in infants – a prospective birth cohort study. *Archives of Disease in Childhood* 2002, 87:478-481.

Aims: To investigate the effect of breastfeeding on allergic disease in infants up to 2 years of age.

Methods: A birth cohort of 4089 infants was followed prospectively in Stockholm, Sweden. Information about various exposures was obtained by parental questionnaires when the infants were 2 months old, and about allergic symptoms and feeding at 1 and 2 years of age. Duration of exclusive and partial breastfeeding was assessed separately. Symptom related definitions of various allergic diseases were used. Odds ratios (OR) and 95% confidence intervals (CI) were estimated in a multiple logistic regression model. Adjustments were made for potential confounders.

Results: Children exclusively breastfed during four months or more exhibited less asthma (7.7% v 12%, OR(adj) = 0.7, 95% CI 0.5 to 0.8), less atopic dermatitis (24% v 27%, OR(adj) = 0.8, 95% CI 0.7 to 1.0), and less suspected allergic rhinitis (6.5% v 9%, OR(adj) = 0.7, 95% CI 0.5 to 1.0) by 2 years of age. There was a significant risk reduction for asthma related to partial breastfeeding during six months or more (OR(adj) = 0.7, 95% CI 0.5 to 0.9). Three or more of five possible allergic disorders—asthma, suspected allergic rhinitis, atopic dermatitis, food allergy related symptoms, and suspected allergic respiratory symptoms after exposure to pets or pollen—were found in 6.5% of the children. Exclusive breastfeeding prevented children from having multiple allergic disease (OR(adj) = 0.7, 95% CI 0.5 to 0.9) during the first two years of life.

Conclusion: Exclusive breastfeeding seems to have a preventive effect on the early development of allergic disease—that is, asthma, atopic dermatitis, and suspected allergic rhinitis, up to 2 years of age. This protective effect was also evident for multiple allergic disease.

Breastfeeding and obesity: Cross sectional study**Refers to Slide 2.19**

Reference. von Kries R, Koletzko B, Sauerwald T, von Mutius E, Barnert D, Grunert V, von Voss H. Breast feeding and obesity: cross sectional study. *BMJ*, 1999, Jul 17, 319(7203):147-50.

Objective. To assess the impact of breastfeeding on the risk of obesity and risk of being overweight in children at the time of entry to school.

Design. Cross sectional survey

Setting. Bavaria, southern Germany.

Methods. Routine data were collected on the height and weight of 134 577 children participating in the obligatory health examination at the time of school entry in Bavaria. In a sub sample of 13 345 children, early feeding, diet, and lifestyle factors were assessed using responses to a questionnaire completed by parents.

Subjects. 9357 children aged 5 and 6 who had German nationality.

Main outcome measures. Being overweight was defined as having a body mass index above the 90th centile and obesity was defined as body mass index above the 97th centile of all enrolled German children. Exclusive breastfeeding was defined as the child being fed no food other than breast milk.

Findings. The prevalence of obesity in children who had never been breastfed was 4.5% as compared with 2.8% in breastfed children. A clear dose-response effect was identified for the duration of breastfeeding on the prevalence of obesity: the prevalence was 3.8% for 2 months of exclusive breastfeeding, 2.3% for 3-5 months, 1.7% for 6-12 months, and 0.8% for more than 12 months. Similar relations were found with the prevalence of being overweight. The protective effect of breastfeeding was not attributable to differences in social class or lifestyle. After adjusting for potential confounding factors, breastfeeding remained a significant protective factor against the development of obesity (odds ratio 0.75, 95% CI 0.57 to 0.98) and being overweight (0.79, 0.68 to 0.93).

Conclusions. In industrialised countries promoting prolonged breastfeeding may help decrease the prevalence of obesity in childhood. Since obese children have a high risk of becoming obese adults, such preventive measures may eventually result in a reduction in the prevalence of cardiovascular diseases and other diseases related to obesity.

Breast milk and subsequent intelligence quotient in children born preterm

Refers to Slide 2.21

Reference. Lucas A, Morley R, Cole TJ, Lister G, Leeson-Payne C. Breast milk and subsequent intelligence quotient in children born preterm. *Lancet*, 1992, Feb 1, 339(8788):261-4.

Summary. There is considerable controversy over whether nutrition in early life has a long-term influence on neurodevelopment. We have shown previously that, in preterm infants, mother's choice to provide breast milk was associated with higher developmental scores at 18 months. We now report data on intelligence quotient (IQ) in the same children seen at 7 1/2-8 years.

Methods. IQ was assessed in 300 children with an abbreviated version of the Weschler Intelligence Scale for Children (revised Anglicised).

Findings. Children who had consumed mother's milk in the early weeks of life had a significantly higher IQ at 7 1/2-8 years than did those who received no maternal milk. An 8.3 point advantage (over half a standard deviation) in IQ remained even after adjustment for differences between groups in mother's education and social class (p less than 0.0001). This advantage was associated with being fed mother's milk by tube rather than with the process of breastfeeding. There was a dose-response relation between the proportion of mother's milk in the diet and subsequent IQ. Children whose mothers chose to provide milk but failed to do so had the same IQ as those whose mothers elected not to provide breast milk.

Conclusions. Although these results could be explained by differences between groups in parenting skills or genetic potential (even after adjustment for social and educational factors), our data point to a beneficial effect of human milk on neurodevelopment.

Breastfeeding and cognitive development in the first seven years of life

Refers to Slide 2.21

Reference. Fergusson DM, Beautrais AL, Silva PA. Breast-feeding and cognitive development in the first seven years of life. *Soc Sci Med*, 1982, 16(19):1705-8.

Methods. The relationship between breastfeeding practices and childhood intelligence and language development at ages 3, 5, and 7 years was examined in a birth cohort of New Zealand children.

Findings. The results showed that even when a number of control factors including maternal intelligence, maternal education, maternal training in child rearing, childhood experiences, family socio-economic status, birth weight and gestational age were taken into account, there was a tendency for breastfed children to have slightly higher test scores than bottle-fed infants. On average, breastfed children scored approximately two points higher on scales with a standard deviation of 10 than bottle-fed infants when all control factors were taken into account.

Conclusions. It was concluded that breastfeeding may be associated with very small improvements in intelligence and language development or, alternatively, that the differences may have been due to the effects of other confounding factors not entered into the analysis.

Breastfeeding and cognitive development in the first 2 years of life

Refers to Slide 2.21

Reference. Morrow-Tlucak M, Haude RH, Ernhart CB. Breastfeeding and cognitive development in the first 2 years of life. *Soc Sci Med*, 1988, 26(6):635-9.

Method. The relationship between breastfeeding and cognitive development in the first 2 years of life was examined in a cohort of children being followed in a study of risk factors in development.

Findings. A significant difference between bottle-fed children, children breastfed less than or equal to 4 months, and those breastfed greater than 4 months was found on the Mental Development Index of the Bayley Scales at ages 1 and 2 years, favouring the breastfed children. At age 6 months, the direction of the relationship was the same but did not reach significance. Supplementary regression analyses examining the strength of the relationship between duration of breastfeeding and cognitive development similarly showed a small but significant relationship between duration of breastfeeding and scores on the Bayley at 1 and 2 years. Alternative explanations for the results are discussed.

Early breastfeeding is linked to higher intelligence quotient scores in dietary treated phenylketonuric children

Refers to Slide 2.21

Reference. Riva E, Agostoni C, Biasucci G, Trojan S, Luotti D, Fiori L, Giovannini M. Early breastfeeding is linked to higher intelligence quotient scores in dietary treated phenylketonuric children. *Acta Paediatr*, 1996, Jan, 85(1):56-8.

Background. Strict control of phenylalanine intake is the main dietary intervention for phenylketonuric children. Whether other dietary-related factors improve the clinical outcome for treated phenylketonuric children in neurodevelopmental terms, however, remains unexplored.

Methods. We retrospectively compared the intelligence quotient (IQ) score of 26 school-age phenylketonuric children who were either breastfed or formula fed for 20-40 days prior to dietary intervention.

Findings. Children who had been breastfed as infants scored significantly better (IQ advantage of 14.0 points, $p = 0.01$) than children who had been formula fed. A 12.9 point advantage persisted also after adjusting for social and maternal education status ($p = 0.02$). In this sample of early treated term infants with phenylketonuria there was no associated between IQ scores and the age at treatment onset and plasma phenylalanine levels during treatment.

Conclusion. We conclude that breastfeeding in the prediagnostic stage may help treated infants and children with phenylketonuria to improve neurodevelopmental performance.

The association between duration of breastfeeding and adult intelligence

Refers to Slide 2.22

Reference. Mortensen EL, Michaelsen KF, Sanders SA, Reinisch JM. The association between duration of breastfeeding and adult intelligence. *JAMA*, 2002, May 8, 287(18):2365-71.

Content. A number of studies suggest a positive association between breastfeeding and cognitive development in early and middle childhood. However, the only previous study that investigated the relationship between breastfeeding and intelligence in adults had several methodological shortcomings.

Objective. To determine the association between duration of infant breastfeeding and intelligence in young adulthood.

Design, setting and participants. Prospective longitudinal birth cohort study conducted in a sample of 973 men and women and a sample of 2280 men, all of whom were born in Copenhagen, Denmark, between October 1959 and December 1961. The samples were divided into 5 categories based on duration of breastfeeding, as assessed by physician interview with mothers at a 1-year examination.

Main outcome measures. Intelligence, assessed using the Wechsler Adult Intelligence Scale (WAIS) at a mean age of 27.2 years in the mixed-sex sample and the Borge Priens Prove (BPP) test at a mean age of 18.7 years in the all-male sample. Thirteen potential confounders were included as covariates: parental social status and education; single mother status; mother's height, age, and weight gain during pregnancy and cigarette consumption during the third trimester; number of pregnancies; estimated gestational age; birth weight; birth length; and indexes of pregnancy and delivery complications.

Findings. Duration of breastfeeding was associated with significantly higher scores on the Verbal, Performance, and Full Scale WAIS IQs. With regression adjustment for potential confounding factors, the mean Full Scale WAIS IQs were 99.4, 101.7, 102.3, 106.0, and 104.0 for breastfeeding durations of less than 1 month, 2 to 3 months, 4 to 6 months, 7 to 9 months, and more than 9 months, respectively ($P = .003$ for overall F test). The corresponding mean scores on the BPP were 38.0, 39.2, 39.9, 40.1, and 40.1 ($P = .01$ for overall F test).

Conclusion. Independent of a wide range of possible confounding factors, a significant positive association between duration of breastfeeding and intelligence was observed in 2 independent samples of young adults, assessed with 2 different intelligence tests.

Breast cancer and breastfeeding: collaborative reanalysis of individual data from 47 epidemiological studies in 30 countries

Refers to Slide 2.24

Reference. Beral V, Bull D, Doll R, Peto R, Reeves G (Collaborative Group on Hormonal Factors in Breast Cancer). Breast cancer and breastfeeding: collaborative reanalysis of individual data from 47 epidemiological studies in 30 countries, including 50 302 women with breast cancer and 96 973 women without the disease. *Lancet*, 2002, 360: 187-95.

Background. Although childbearing is known to protect against breast cancer, whether or not breastfeeding contributes to this protective effect is unclear.

Methods. Individual data from 47 epidemiological studies in 30 countries that included information on breastfeeding patterns and other aspects of childbearing were collected, checked and analysed centrally, for 50,302 women with invasive breast cancer and 96,973 controls. Estimates of the relative risk for breast cancer associated with breastfeeding in parous women were obtained after stratification by fine divisions of age, parity, and women's ages when their first child was born, as well as by study and menopausal status.

Findings. Women with breast cancer had, on average, fewer births than did controls (2.2 vs 2.6). Furthermore, fewer parous women with cancer than parous controls had ever breastfed (71% vs 79%), and their average lifetime duration of breastfeeding was shorter (9.8 vs 15.6 months). The relative risk of breast cancer decreased by 4.3% (95% CI 2.9-5.8; $p < 0.0001$) for every 12 months of breastfeeding in addition to a decrease of 7.0% (5.0-9.0; $p < 0.0001$) for each birth. The size of the decline in the relative risk of breast cancer associated with breastfeeding did not differ significantly for women in developed and developing countries, and did not vary significantly by age, menopausal status, ethnic origin, and number of births a woman had, her age when her first child was born, or any of nine other personal characteristics examined. It is estimated that the cumulative incidence of breast cancer in developed countries would be reduced by more than half, from 6.3 to 2.7 per 100 women by age 70, if women had the average number of births and lifetime duration of breastfeeding that had been prevalent in developing countries until recently. Breastfeeding could account for almost two-thirds of this estimated reduction in breast cancer incidence.

Interpretation. The longer women breastfeed the more they are protected against breast cancer. The lack of or short lifetime duration of breastfeeding typical of women in developed countries makes a major contribution to the high incidence of breast cancer in these countries.

**Breastfeeding and child-spacing:
Importance of information collection for public health policy**

Refers to Slide 2.25

Reference. Saadeh R, Benbouzid D. Breast-feeding and child-spacing: importance of information collection for public health policy. *Bulletin of the World Health Organization*, 1990, 68(5):625-631.

Summary. The presence of lactational amenorrhoea cannot be fully relied upon to protect the individual mother against becoming pregnant. Nevertheless, the use of breastfeeding as a birth-spacing mechanism has important implications for global health policy. This article identifies the information that should be collected and examined as a basis for developing guidelines on how to reduce the dual protection afforded by postpartum lactational amenorrhoea and other family planning methods, and discusses when such methods should be introduced.

Handout 2.1

Presentation for session 2: Benefits of breastfeeding

Benefits of breastfeeding for the infant

- Provides superior nutrition for optimum growth.
- Provides adequate water for hydration.
- Protects against infection and allergies.
- Promotes bonding and development.

Transparency 2.1

Summary of differences between milks

	Human milk	Animal milks	Infant formula
Protein	correct amount, easy to digest	too much, difficult to digest	partly corrected
Fat	enough essential fatty acids, lipase to digest	lacks essential fatty acids, no lipase	no lipase
Water	enough	extra needed	may need extra
Anti-infective properties	present	absent	absent

Adapted from: Breastfeeding counselling: A training course. Geneva, World Health Organization, 1993 (WHO/CDR/93.6).

Transparency 2.2

No water necessary

Country	Temperature °C	Relative Humidity %	Urine osmolarity (mOsm/l)
Argentina	20-39	60-80	105-199
India	27-42	10-60	66-1234
Jamaica	24-28	62-90	103-468
Peru	24-30	45-96	30-544

(Normal osmolarity: 50-1400 mOsm/l)

Adapted from: Breastfeeding and the use of water and teas. Geneva, World Health Organization, 1997.

Transparency 2.3

Breast milk composition differences (dynamic)

- Gestational age at birth (preterm and full term)
- Stage of lactation (colostrum and mature milk)
- During a feed (foremilk and hindmilk)

Transparency 2.4

Colostrum

Property

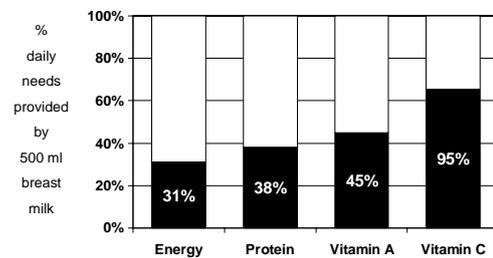
- Antibody-rich
- Many white cells
- Purgative
- Growth factors
- Vitamin-A rich

Importance

- protects against infection and allergy
- protects against infection
- clears meconium; helps prevent jaundice
- helps intestine mature; prevents allergy, intolerance
- reduces severity of some infection (such as measles and diarrhoea); prevents vitamin A-related eye diseases

Transparency 2.5

Breast milk in second year of life



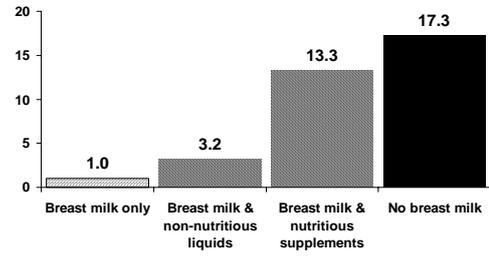
From: Breastfeeding counselling: A training course. Geneva, World Health Organization, 1993 (WHO/CDR/93.6).

Transparency 2.6

Protective effect of breastfeeding on infant morbidity

Transparency 2.7

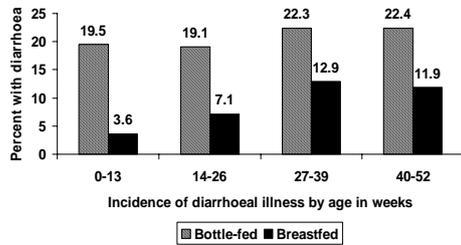
Risk of diarrhoea by feeding method for infants aged 0-2 months, Philippines



Adapted from: Popkin BM, Adair L, Akin JS, Black R, et al. Breastfeeding and diarrheal morbidity. *Pediatrics*, 1990, 86(6): 874-882.

Transparency 2.8

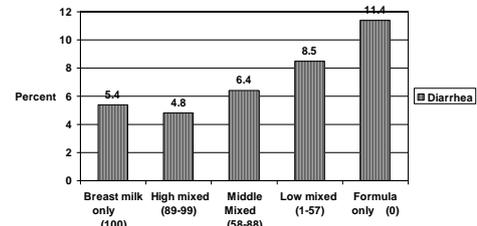
Percentage of babies bottle-fed and breastfed for the first 13 weeks that had diarrhoeal illness at various weeks of age during the first year, Scotland



Adapted from: Howie PW, Forsyth JS, Ogston SA, Clark A, Florey CV. Protective effect of breastfeeding against infection. *Br Med J*, 1990, 300: 11-15.

Transparency 2.9

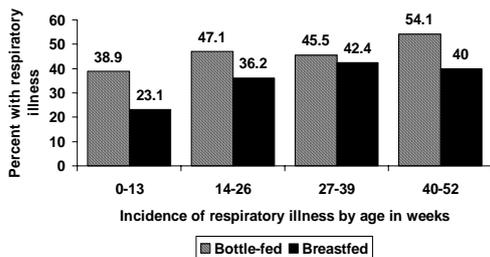
Percentage of infants 2-7 months of age reported as experiencing diarrhoea, by feeding category in the preceding month in the U.S.



Adapted from: Scariati PD, Grummer-Strawn LM, Fein SB. A longitudinal analysis of infant morbidity and the extent of breastfeeding in the United States. *Pediatrics*, 1997, 99(6).

Transparency 2.10

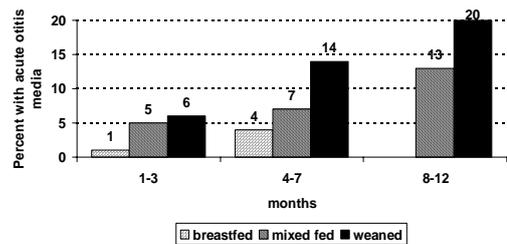
Percentage of babies bottle-fed and breastfed for the first 13 weeks that had respiratory illness at various weeks of age during the first year, Scotland



Adapted from: Howie PW, Forsyth JS, Ogston SA, Clark A, Florey CV. Protective effect of breastfeeding against infection. *Br Med J*, 1990, 300: 11-15.

Transparency 2.11

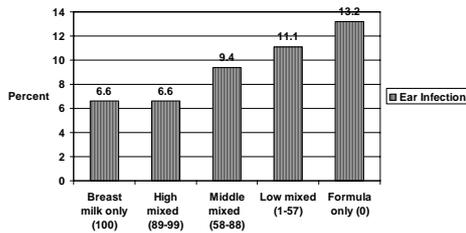
Frequency of acute otitis media in relation to feeding pattern and age, Sweden



Adapted from: Aniansson G, Alm B, Andersson B, Hakansson A et al. A prospective coherent study on breast-feeding and otitis media in Swedish infants. *Pediat Infect Dis J*, 1994, 13: 183-188.

Transparency 2.12

Percentage of infants 2-7 months of age reported as experiencing ear infections, by feeding category in the preceding month in the U.S.

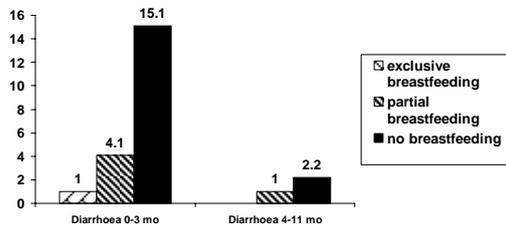


Adapted from: Scariati PD, Grummer-Strawn LM, and Fein SB. A longitudinal analysis of infant morbidity and the extent of breastfeeding in the United States. *Pediatrics*, 1997, 99(6).
Transparency 2.13

Protective effect of breastfeeding on infant mortality

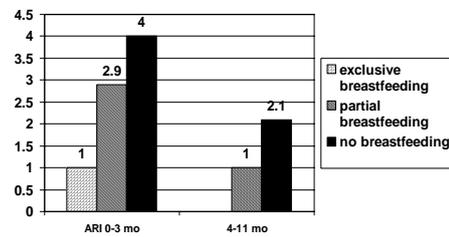
Transparency 2.14

Relative risks of death from diarrhoeal disease by age and breastfeeding category in Latin America



Adapted from: Betran AP, de Onis M, Lauer JA, Villar J. Ecological study of effect of breast feeding on infant mortality in Latin America. *BMJ*, 2001, 323: 1-5.
Transparency 2.15

Relative risks of death from acute respiratory infections by age and breastfeeding category in Latin America



Adapted from: Betran AP, de Onis M, Lauer JA, Villar J. Ecological study of effect of breast feeding on infant mortality in Latin America. *BMJ*, 2001, 323: 1-5.
Transparency 2.16

Breastfeeding reduces the risk of chronic disease

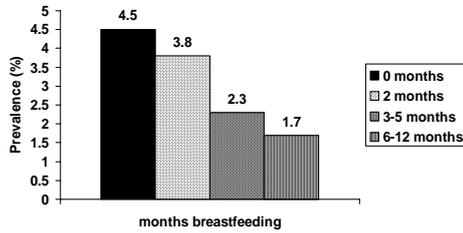
Transparency 2.17

Breastfeeding decreases the risk of allergic disorders – a prospective birth cohort study

Type of feeding	Asthma	Atopic dermatitis	Allergic rhinitis
Children exclusively breastfed 4 months or more	7.7%	24%	6.5%
Children breastfed for a shorter period	12%	27%	9%

Adapted from Kull I, et al. Breastfeeding and allergic diseases in infants - a prospective birth cohort study. *Archives of Disease in Childhood* 2002; 87:478-481.
Transparency 2.18

Breastfeeding decreases the prevalence of obesity in childhood at age five and six years, Germany



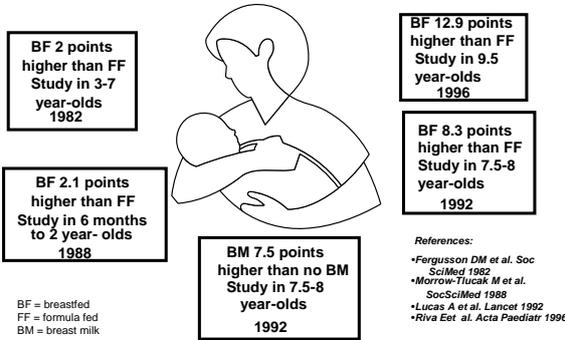
Adapted from: von Kries R, Koletzko B, Sauenwald T et al. Breast feeding and obesity: cross sectional study. *BMJ*, 1999, 319:147-150.

Transparency 2.19

Breastfeeding has psychosocial and developmental benefits

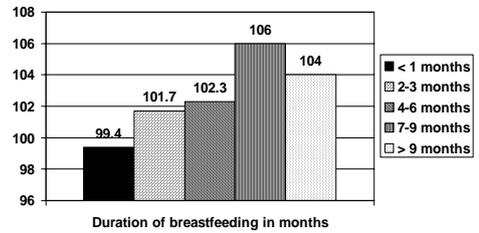
Transparency 2.20

Intelligence quotient by type of feeding



Transparency 2.21

Duration of breastfeeding associated with higher IQ scores in young adults, Denmark



Adapted from: Mortensen EL, Michaelsen KF, Sanders SA, Reinisch JM. The association between duration of breastfeeding and adult intelligence. *JAMA*, 2002, 287: 2365-2371.

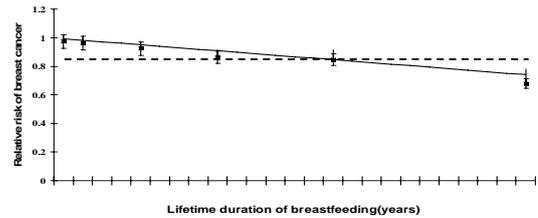
Transparency 2.22

Benefits of breastfeeding for the mother

- Protects mother's health
 - helps reduces risk of uterine bleeding and helps the uterus to return to its previous size
 - reduces risk of breast and ovarian cancer
- Helps delay a new pregnancy
- Helps a mother return to pre-pregnancy weight

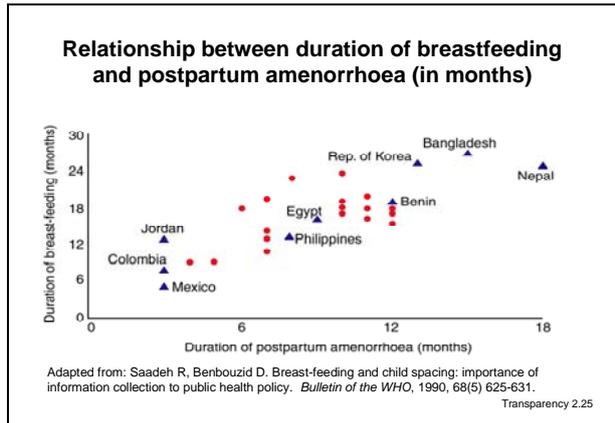
Transparency 2.23

Breast cancer and breastfeeding: Analysis of data from 47 epidemiological studies in 30 countries



Adapted from: Beral V et al. (Collaborative group on hormonal factors in breast cancer). Breast cancer and breastfeeding: collaborative reanalysis of individual data from 47 epidemiological studies in 30 countries... *Lancet* 2002; 360: 187-95.

Transparency 2.24



Risks of artificial feeding

- Interferes with bonding
- More diarrhoea and respiratory infections
- Persistent diarrhoea
- Malnutrition
Vitamin A deficiency
- More likely to die
- More allergy and milk intolerance
- Increased risk of some chronic diseases
- Overweight
- Lower scores on intelligence tests
- May become pregnant sooner
- Increased risk of anaemia, ovarian and breast cancer

Mother

Adapted from: Breastfeeding counselling: A training course. Geneva, World Health Organization, 1993 (WHO/CDR/93.6).
Slide 2.26

Benefits of breastfeeding for the family

- Better health, nutrition, and well-being
- Economic benefits
 - breastfeeding costs less than artificial feeding
 - breastfeeding results in lower medical care costs

Transparency 2.27

Benefits of breastfeeding for the hospital

- Warmer and calmer emotional environment
- No nurseries, more hospital space
- Fewer neonatal infections
- Less staff time needed
- Improved hospital image and prestige
- Fewer abandoned children
- Safer in emergencies

Transparency 2.28

Infant and young child feeding: recommendations for practice¹

The Expert Consultation recommends exclusive breastfeeding for 6 months, with introduction of complementary foods and continued breastfeeding thereafter. This recommendation applies to populations. The Expert Consultation recognizes that some mothers will be unable to, or chose not to, follow this recommendation. These mothers should also be supported to optimize their infants' nutrition.

The proportion of infants exclusively breastfed at 6 months can be maximized if potential problems are addressed:

- The nutritional status of pregnant and lactating mothers.
- Micronutrient status of infants living in areas with high prevalence of deficiencies such as iron, zinc, and vitamin A.
- The routine primary health care of individual infants, including assessment of growth and of clinical signs of micronutrient deficiencies.

The Expert Consultation also recognizes the need for complementary feeding at 6 months of age and recommends the introduction of nutritionally adequate, safe, and appropriate complementary foods, in conjunction with continued breastfeeding.

The Expert Consultation recognizes that exclusive breastfeeding to 6 months is still infrequent. However, it also notes that there have been substantial increases over time in several countries, particularly where lactation support is available. A prerequisite to the implementation of these recommendations is the provision of adequate social and nutritional support to lactating women.

¹ From *The optimal duration of exclusive breastfeeding, Report of an expert consultation, Geneva, Switzerland 28-30 March 2001*, Department of Nutrition for Health and Development and Department of Child and Adolescent Health and Development, Geneva, World Health Organization, 2001, page 2 (WHO/NHD/01.09, WHO/FCH/CAH/01.24). (http://www.who.int/nutrition/publications/optimal_duration_of_exc_bfeeding_report_eng.pdf).

Handout 2.3

Exclusive breastfeeding: The only water source young infants need

FAQ Sheet 5 Frequently Asked Questions (FAQ) October 2002

Healthy newborns enter the world well hydrated and remain so if breastfed exclusively, day and night, even in the hottest, driest climates. Nevertheless, the practice of giving infants water during the first six months—the recommended period for exclusive breastfeeding—persists in many parts of the world, with dire nutritional and health consequences. This FAQ discusses these consequences and the role of breastfeeding in meeting an infant's water requirements.

Q *Why is exclusive breastfeeding recommended for the first six months?*

International guidelines recommend exclusive breastfeeding for the first six months based on scientific evidence of the benefits for infant survival, growth, and development. Breast milk provides all the energy and nutrients that an infant needs during the first six months. Exclusive breastfeeding reduces infant deaths caused by common childhood illnesses such as diarrhea and pneumonia, hastens recovery during illness, and helps space births.

Q *Is early supplementation with water a common practice? And if so, why?*

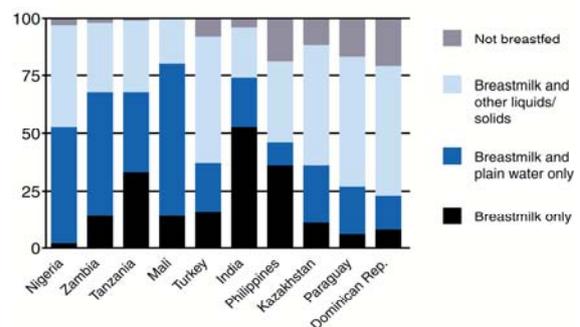
The practice of giving water and other liquids such as teas, sugar water, and juices to breastfed infants in the first months is widespread throughout the world, as illustrated in Figure 1. This practice often begins in the first month of life. Research conducted in the outskirts of Lima, Peru showed that 83 percent of infants received water and teas in the first month. Studies in several communities of the Gambia, the Philippines, Egypt, and Guatemala reported that over 60 percent of newborns were given sugar water and/or teas.

The reasons given for water supplementation of infants vary across cultures. Some of the most common reasons are:

- necessary for life
- quenches thirst
- relieves pain (from colic or earache)
- prevents and treats colds and constipation
- soothes fretfulness.

Cultural and religious beliefs also influence water supplementation in early infancy. Proverbs passed down from generation to generation advise mothers to give babies water. Water may be viewed as the source of life—a spiritual and physiological necessity. Some cultures regard the act of offering water to the newborn as a way of welcoming the child into the world.

Figure 1. Feeding Practices Among Young Infants



Source: Demographic and Health Surveys, 1990-1995. Based on 24 hour recall for respondents' children under 4 months of age at time of survey

The advice of health care providers also influences the use of water in many communities and hospitals. For example, a study in a Ghanaian city found that 93 percent of midwives thought that water should be given to all infants beginning on the first day of life. In Egypt many nurses advised mothers to give sugar water after delivery.

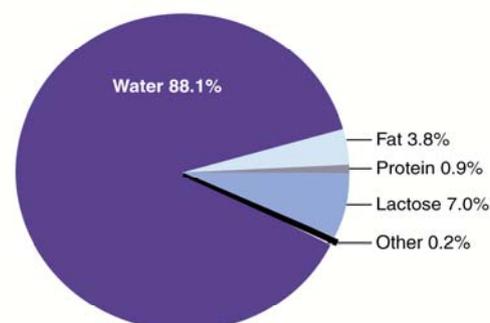
Q *How do breastfed babies get enough water?*

Depending on temperature, humidity, and the infant's weight and level of activity, the average daily fluid requirements for healthy infants ranges from 80–100 ml/kg in the first week of life to 140–160 ml/kg between 3–6 months. These amounts are available from breast milk alone if breastfeeding is exclusive and unrestricted (on-demand day and night) for two reasons:

Breast milk is 88 percent water. The water content of breast milk consumed by an exclusively breastfed baby meets the water requirements for infants and provides a considerable margin of safety. Even though a newborn gets little water in the thick yellowish first milk (colostrum), no additional water is necessary because a baby is born with extra water. Milk with higher water content usually “comes in” by the third or fourth day. Figure 2 shows the principal components of breast milk.

Breast milk is low in solutes. One of the major functions of water is to flush out, through the urine, excess solutes. Dissolved substances (for example, sodium, potassium, nitrogen, and chloride) are referred to as solutes. The kidneys—though immature up to the age of approximately three months—are able to concentrate excess solutes in the urine to maintain a healthy, balanced body chemistry. Because breast milk is low in solutes, the infant does not need as much water as an older child or adult.

Figure 2. Composition of Breastmilk



Source: Lawrence R. *Breastfeeding: A guide for the medical profession*. 4th ed. St. Louis: Mosby-Year Book, Inc. 1994.

Q *What about infants in hot, dry climates?*

Water in breast milk exceeds the infant's water requirements in normal conditions and is adequate for breastfed infants in hot, dry climates. Studies indicate that healthy, exclusively breastfed infants in the first six months of life do not require additional fluids even in countries with extremely high temperatures and low humidity. Solute levels in the urine and blood of exclusively breastfed babies living in these conditions were within normal ranges, indicating adequate water intakes.

Q *Can giving water to an infant before six months be harmful?*

Offering water before the age of six months can pose significant health hazards.

Water supplementation increases the risk of malnutrition. Displacing breast milk with a fluid of little or no nutritional value can have a negative impact on an infant's nutritional status, survival, growth, and development.

Consumption of even small amounts of water or other liquids can fill an infant's stomach and reduce the baby's appetite for nutrient-rich breast milk. Studies show that water supplementation before the age of six months can reduce breast milk intake by up to 11 percent. Glucose water supplementation in the first week of life has been associated with greater weight loss and longer hospital stays.

Water supplementation increases the risk of illness. Water and feeding implements are vehicles for the introduction of pathogens. Infants are at greater risk of exposure to diarrhea-causing organisms, especially in environments with poor hygiene and sanitation. In the least developed countries, two in five people lack access to safe drinking water. Breast milk ensures an infant's access to an adequate and readily available supply of clean water.

Research in the Philippines confirms the benefits of exclusive breastfeeding and the harmful effect of early supplementation with non-nutritive liquids on diarrheal disease. Depending on age, an infant was two to three times more likely to experience diarrhea if water, teas, and herbal preparations were fed in addition to breast milk than if the infant was exclusively breastfed.

Q Should water be given to breastfed infants who have diarrhea?

In the case of mild diarrhea, increased frequency of breastfeeding is recommended. When an infant has moderate to severe diarrhea, caregivers should immediately seek the advice of health workers and continue to breastfeed, as recommended in the Integrated Management of Childhood Illness (IMCI) guidelines. Infants that appear dehydrated may require Oral Rehydration Therapy (ORT),

which should only be given upon advice of a health worker.²

Q How can programs address the common practice of water supplementation?

To address the widespread practice of water supplementation in early infancy, program managers should understand the cultural reasons for this practice, analyze existing data, conduct household trials of improved practices, and develop effective communication strategies for targeted audiences. Health care providers and community volunteers need to be informed that breast milk meets the water requirements of an exclusively breastfed baby for the first six months. They may also require training on how to communicate messages and negotiate behavior change. Examples of messages developed in breastfeeding promotion programs that address local beliefs and attitudes about the water needs of infants are shown in the box.

Providing accurate information, tailoring messages to address the beliefs and concerns of different audiences, and negotiating with mothers to try out a new behavior can help establish exclusive breastfeeding as a new community norm.

²Oral Rehydration Solution (ORS), used in ORT, helps replace water and electrolytes lost during episodes of diarrhea. Super ORS, with a carbohydrate base of rice or cereal for better absorption, has been developed to improve treatment.

Communicating the Message “Don’t Give Water”

The following messages have been used in programs to convince mothers, their families, and health workers that exclusively breastfed infants do not need to be given water in the first six months. The most effective ways of communicating the messages depend on the audience and the practices, beliefs, concerns, and constraints to good practices in a particular setting.

Make clear the meaning of exclusive breastfeeding

- **Exclusive breastfeeding means giving only breast milk. This means no water, liquids, teas, herbal preparations, or foods through the first six months of life. (It is important to name the drinks and foods commonly given in the first six months. One program found that women did not think the advice “do not give water” applied to herbal teas or other fluids).**

Take ideas often associated with water and apply them to colostrum

- **Colostrum is the welcoming food for newborns. It is also the first immunization, protecting a baby from illness.**
- **Colostrum cleans the newborn’s stomach. Sugar water is not needed.**

Explain why exclusively breastfed babies do not need water

- **Breast milk is 88 percent water.**
- **Every time a mother breastfeeds, she gives her baby water through her breast milk.**
- **Breast milk has everything a baby needs to quench thirst and satisfy hunger. It is the best possible food and drink that can be offered a baby so the baby will grow to be strong and healthy.**

Point out the risks of giving water

- **Giving water to babies can be harmful and cause diarrhea and illness. Breast milk is clean and pure and protects against disease.**
- **An infant’s stomach is small. When the baby drinks water, there is less room left for the nourishing breast milk that is necessary for the infant to grow strong and healthy.**

Link good breastfeeding practices to adequate fluid intake

- **When a mother thinks her baby is thirsty, she should breastfeed immediately. This will give the baby all the water that is needed.**
- **The more often a woman breastfeeds, the more breast milk is produced, which means more water for the baby.**

Q *What are the water needs of children after six months of age?*

Guidelines for water intake after six months are less clear than for the first half of infancy. At six months complementary foods—foods given in addition to breast milk to meet an infant’s increased nutrient requirements—should be introduced. The types of foods a child consumes will affect the child’s water needs. For the most part, the water requirements of infants 6–11 months can be met through breast milk. Additional water can be provided through fruits or fruit juices, vegetables, or small amounts of *boiled* water offered after a meal.

Caution should be taken to ensure that water and other liquids do not replace breast milk. Water can also replace or dilute the nutrient content of energy-dense complementary foods. Gruels, soups, broths, and other watery foods given to infants usually fall below the recommended energy density for

complementary foods (0.6 kcal/g). Reducing the amount of water added to these foods could improve the nutritional status of children in this age group.

Related LINKAGES Publications

- Facts for Feeding: Birth, Initiation of Breastfeeding, and the First Seven Days after Birth, 2002.
- Facts for Feeding: Breastmilk: A Critical Source of Vitamin A for Infants and Young Children, 2000.
- Facts for Feeding: Recommended Practices to Improve Infant Nutrition during the First Six Months, 2001.
- Quantifying the Benefits of Breastfeeding: A Summary of the Evidence, 2002.
- Recommended Feeding and Dietary Practices to Improve Infant and Maternal Nutrition, 2001.

References

- Almroth SG. and Bidinger P. No need for water supplementation for exclusively breastfed infants under hot and arid conditions. *T Roy Soc Trop Med H* 1990; 84:602–4.
- Armellini PA, Gonzalez CF. Breastfeeding and fluid intake in a hot climate. *Clin Pediatr* 1979; 18: 424–5.
- Brown K, et al. (1989). Infant-feeding practices and their relationship with diarrheal and other diseases in Huascar (Lima), Peru. *Pediatrics* 1989 Jan;83(1):31–40.
- Glover J and Sandilands M. Supplementation of breastfeeding infants and weight loss in hospital. *J Hum Lact* 1990 Dec;6(4):163–6.
- Goldberg NM, Adams E. Supplementary water for breast-fed babies in a hot and dry climate – not really a necessity. *Arch Dis Child* 1983; 58:73–74.
- Hossain M et al. Pre-lacteal infant feeding practices in rural Egypt. *J Trop Pediatr* 1992 Dec; 38(6):317–22.
- Popkin BM et al. Breast-feeding and diarrheal morbidity. *Pediatrics* 1990 Dec;86(6):874–82.
- Sachdev HPS et al. Water supplementation in exclusively breastfed infants during summer in the tropics. *Lancet* 1991 April; 337:929–33.
- Victoria C et al. Infant feeding and deaths due to diarrhea: A case-control study. *Am J Epidemiol* 1989 May;129(5):1032–41.
- World Health Organization. Breastfeeding and the use of water and teas. Division of Child Health and Development Update, No. 9 (reissued Nov. 1997).
- Exclusive Breastfeeding: The Only Water Source Young Infants Need: Frequently Asked Questions* is a publication of LINKAGES: Breastfeeding, LAM, Related Complementary Feeding, and Maternal Nutrition Program, and was made possible through support provided to the Academy for Educational Development (AED) by the GH/HIDN of the United States Agency for International Development (USAID), under the terms of Cooperative Agreement No. HRN-A-00-97-00007-00. The opinions expressed herein are those of the author(s) and do not necessarily reflect the views of USAID or AED.

Handout 2.4

UNICEF UK BABY FRIENDLY INITIATIVE: Health benefits of breastfeeding



There has been significant reliable evidence produced over recent years to show that breastfeeding has important advantages for both infant and mother, even in the industrialised countries of the world.

Below is a selected list of recently-published studies describing differences in health outcome associated with method of infant feeding. The studies have all adjusted for social and economic variables. All were conducted in an industrialised setting.

We also provide a list of additional health issues with which breastfeeding has been associated by some researchers. Many of these require further investigation to clarify any protective effect of breastfeeding and are included here for the interest and information of readers.

To receive updates by e-mail from the Baby Friendly Initiative on research into breastfeeding click here. <http://www.babyfriendly.org.uk/subscribe/>

This page was last updated on 3 March 2004

Artificially-fed babies are at greater risk of:

- gastro-intestinal infections
- respiratory infections
- necrotising enterocolitis
- urinary tract infections
- ear infections
- allergic disease (eczema, asthma and wheezing)
- insulin-dependent diabetes mellitus

and breastfed babies may have better:

- neurological development

Other studies of health and breastfeeding:

- cardiovascular disease in later life
- childhood cancer
- breastfeeding, bed sharing and cot death
- breastfeeding and HIV transmission
- breastfeeding and dental health

Women who breastfed are at lower risk of:

- breast cancer
- ovarian cancer
- hip fractures and bone density

Other potential protective effects of breastfeeding (more research needed) for the infant:

- multiple sclerosis
- acute appendicitis
- tonsillectomy

for the mother:

- rheumatoid arthritis

Source: <http://www.babyfriendly.org.uk/>

Gastro-intestinal infections

Howie PW et al. (1990). Protective effect of breastfeeding against infection. *BMJ* 300: 11-16. [\[Abstract\]](#)

674 infants were investigated for the relationship between infant feeding and infectious illness. The incidence of gastro-intestinal illness in infants who were exclusively breastfed for 13 weeks or more was 2.9% (after adjusting for confounders). Those who were partially breastfed had an incidence of 15.7% and those who were exclusively artificially fed 16.7%. Therefore bottle-fed infants were at five times the risk of developing gastro-intestinal illness. Interestingly, the study also noted that breastfeeding exclusively for 13 weeks or more was associated with significant protection beyond the period of breastfeeding itself. However, no significant reduction in the incidence of otitis media was found.

Respiratory infections

Wilson AC et al. (1998). Relation of infant diet to childhood health: seven year follow up cohort of children in Dundee infant feeding study. *BMJ* 316: 21-25. [\[Abstract\]](#)

This study followed infants from the above cohort into childhood. Subjects were studied at 7 years of age. After adjustment for significant confounding variables, the estimated probability of ever having respiratory illness was 17% [95% CI: 15.9%-18.1%] for those children exclusively breastfed for at least 15 weeks, 31% [26.8%-35.2%] for those partially breastfed and 32% [30.7%-33.7%] for those who were artificially fed. This means that the bottle-fed infants were at almost twice the risk of developing respiratory illness at any time during the first 7 years of life. This study also found solid feeding before 15 weeks was associated with an increased probability of wheeze during childhood (21.0% [19.9% to 22.1%] v 9.7% [8.6% to 10.8%]) as well as increased percentage body fat and weight in childhood. Systolic blood pressure was raised significantly in children who were exclusively bottle fed compared with children who received breast milk (mean 94.2 (93.5 to 94.9) mm Hg v 90.7 (89.9 to 91.7) mm Hg).

Oddy WH et al (2003). Breast feeding and respiratory morbidity in infancy: a birth cohort study. *Archives of Disease in Childhood*. 88:224-228 [\[Abstract\]](#)

This study of 2602 children in Australia has found that hospital, doctor, or clinic visits and hospital admissions for respiratory illness and infection in the first year of life are significantly lower among babies who are predominantly breastfed. Stopping predominant breastfeeding before six months and stopping breastfeeding before eight months was associated with a significantly increased risk of wheezing lower respiratory illnesses. Upper respiratory tract infections were significantly more common if predominant breastfeeding was stopped before 2 months or if partial breastfeeding was stopped before 6 months.

Galton Bachrach VR et al (2003). Breastfeeding and the risk of hospitalisation for respiratory disease in infancy. A meta-analysis. *Arch Pediatr Adolesc Med* 157:237-243 [\[Abstract\]](#)

This meta-analysis of studies from developed countries concludes that the risk of severe respiratory tract illness resulting in hospitalisation is more than tripled among infants who are not breastfed, compared with those who are exclusively breastfed for 4 months (relative risk = 0.28; 95% CI 0.14 - 0.54).

See also:

Wright AL et al. (1989) Breast feeding and lower respiratory tract illness in the first year of life. *BMJ* 299: 946-9.

Necrotising Enterocolitis (NEC)

Lucas A & Cole TJ (1990). Breast milk and neonatal necrotising enterocolitis. *Lancet* 336: 1519-1522. [\[Abstract\]](#)

926 preterm infants were studied, 51 of whom developed NEC. Exclusively formula fed infants were 6 to 10 times more likely to develop NEC than those who received breast milk. Although NEC is rare in babies over 30 weeks gestation, it was 20 times more common if the baby had received no breast milk.

Urinary tract infection

Pisacane A, Graziano L & Zona G (1992). Breastfeeding and urinary tract infection. *J Pediatr* 120: 87-89. [Abstract]

128 hospitalised infants with urinary tract infection were compared with 128 hospitalised control infants. All infants were less than 6 months old. The infants were matched for age, gender, social class, birth order and maternal smoking habits. Infants who were exclusively bottle fed at the time of admission to the hospital were more than five times as likely to have urinary tract infections compared to those who were breastfed.

Ear infections

Duncan B et al. (1993). Exclusive breast feeding for at least 4 months protects against otitis media. *Pediatrics* 5: 867-872. [Abstract]

1013 infants were studied during the first year of life to assess the relationship between infant feeding and acute and recurrent otitis media. 467 infants had at least one episode and 169 had recurrent otitis media. Infants exclusively breastfed for at least 4 months had 50% fewer episodes of otitis media and those partially breastfed had 40% fewer episodes.

Aniansson G et al. (1994). A prospective cohort study on breast feeding and otitis media in Swedish infants. *Pediatr Infect Dis J* 13: 183-188 [Abstract]

. 400 infants were studied at 2, 6, 10 and 12 months of age. Breastfed babies had significantly lower incidence of acute otitis media at every stage.

See also:

Paradise JL, Elster BA, Tan L (1994) Evidence in infants with cleft palate that breast milk protects against otitis media. *Pediatrics* 94: 853-60.

Niemelä M et al (2000) Pacifier as a risk factor for acute otitis media: a randomized, controlled trial of parental counseling. *Pediatrics* 106: 483-488.

Allergic disease (eczema, asthma and wheezing)

Saarinen UM, Kajosaari M (1995). Breastfeeding as prophylaxis against atopic disease: prospective follow-up study until 17 years old. *Lancet* 346: 1065-1069. [Abstract]

150 children were studied up to the age of 17 years to determine the effect on atopic disease of breastfeeding. The subjects were divided into three groups: prolonged (>6 months) intermediate (1-6 months) and short or no (<1 month) breastfeeding. They were followed up at 1, 3, 5, 10 and 17 years. The prevalence of manifest atopy throughout follow-up was highest in the group who had little or no breastfeeding. Breastfeeding for longer than 1 month without other milk supplements was associated with a significant reduction in the incidence of food allergy at 3 years of age, and also respiratory allergy at 17 years of age. Six months of breastfeeding was associated with significantly less eczema during the first 3 years and less substantial atopy in adolescence.

Lucas A et al. (1990). Early diet of preterm infants and development of allergic or atopic disease: Randomised prospective study. *BMJ* 300: 837-840. [Abstract]

Preterm infants were randomly allocated to receive preterm formula or banked human milk, alone or as supplements to the mother's own milk. The use of human milk was associated with a significantly-reduced incidence of allergic disease, particularly eczema at 18 months in those with a family history of atopic disease. In those without a family history there was no effect.

Oddy WH et al. (1999) Association between breastfeeding and asthma in 6 year old children: findings of a prospective birth cohort study. *BMJ* 319: 815-819. [Abstract]

An Australian study followed 2187 children from birth to age 6 years and found that the introduction of milk other than breastmilk before 4 months of age was a significant risk factor for asthma (odds ratio 1.25; 95% CI 1.02-1.52) after adjustment for confounders. It was also a risk factor for wheeze three or more times since 1 year of age (1.41; 1.14-1.76), wheeze in the past year (1.31; 1.05 to 1.64), sleep disturbance due to wheeze within the past year (1.42; 1.07-1.89) and positive skin prick test reaction to at least one common aeroallergen (1.30; 1.04-1.61).

Oddy WH et al (2002). Maternal asthma, infant feeding, and the risk of asthma in childhood. *J Allergy Clin Immunol* 110: 65-7. [Abstract]

Children aged 6 years were more likely to be asthma sufferers if they had not been exclusively breastfed for at least 4 months, regardless of their mother's asthma status (odds ratio, 1.35; 95% CI 1.00-1.82).

See also:

Kull I et al (2002). Breast feeding and allergic diseases in infants--a prospective birth cohort study. *Arch Dis Child* 87: 478-481.

Wilson AC et al. (1998). Relation of infant diet to childhood health: seven year follow up cohort of children in Dundee infant feeding study. *BMJ* 316: 21-25.(summarised above).

Wright AL et al (1995) Relationship of infant feeding to recurrent wheezing at age 6 years. *Arch Pediatr Adolesc Med* 149: 758-63.

Insulin-dependent diabetes mellitus

Gerstein HC (1994). Cows' milk exposure and type 1 diabetes mellitus. *Diabetes Care* 17: 13-19. [Abstract]

This analysis pooled results from 19 studies of the relationship between infant feeding and insulin dependent diabetes mellitus (IDDM) selected to minimise bias. It concluded that early onset IDDM patients were more likely than healthy controls to have been breastfed for less than 3 months. In separate analyses it also found the IDDM patients were more likely to have been exposed to cows' milk protein before 4 months of age. It estimated that up to 30% of type 1 diabetes cases could be prevented by removing cows' milk products from the diet of 90% of the population in the first 3 months.

Karjalainen J et al. (1992). A bovine albumin peptide as a possible trigger of insulin-dependent diabetes mellitus. *New Engl J Med* 327: 302-307. [Abstract]

This study found that newly diagnosed diabetic children had a much higher level of IgG anti-BSA (bovine serum albumin) than controls. This antibody to a cows' milk protein, BSA, has some structural homology with the pancreatic islet b-cell surface antigen p69. The authors speculated that anti-BSA antibodies attack b-cells in genetically-predisposed children.

Virtanen SM et al. (1991). Infant feeding in children <7 years of age with newly diagnosed IDDM. *Diabetes Care* 14: 415-417. [Abstract]

This case-control study involving nearly 700 diabetic children found that the risk of insulin dependent diabetes was doubled in children who were exclusively breastfed for less than 2 months and doubled among those introduced to dairy products at less than 2 months of age. The risk was lowest in those exclusively breastfed for longest. In multivariate analyses, the introduction of cows' milk products was the most important risk factor. This suggests, along with the previous study, that formula feeding in infancy plays a part in the pathogenesis of juvenile onset diabetes mellitus.

See also:

Paronen J et al (2000) Effect of cow's milk exposure and maternal type 1 diabetes on cellular and humoral immunization to dietary insulin in infants at genetic risk for type 1 diabetes. Finnish Trial to Reduce IDDM in the Genetically at Risk Study Group. *Diabetes* 49: 1657-65.

Young TK et al (2002). Type 2 Diabetes Mellitus in Children: Prenatal and Early Infancy Risk Factors Among Native Canadians. *Arch Pediatr Adolesc Med* 156: 651-655.

Mayer EJ et al (1988) Reduced risk of IDDM among breast-fed children. The Colorado IDDM Registry. *Diabetes* 37: 1625-32

Other studies of interest (requiring further substantiation) on health benefits for the infant:

Pisacane A et al (1994) Breast feeding and multiple sclerosis. *BMJ* 308: 1411-2.

Pisacane A et al (1995) Breast feeding and acute appendicitis. *BMJ* 310: 836-7.

Pisacane, A et al. (1996) Breast feeding and tonsillectomy. *BMJ* 312: 746-747.

Neurological development

Anderson JW et al (1999) Breastfeeding and cognitive development: a meta-analysis. *Am J Clin Nutr* 70: 525-35. [\[Abstract\]](#)

A meta-analysis of observed differences from 20 studies in cognitive development between breast-fed and formula-fed children, which found - after adjustment for appropriate key cofactors - that breastfeeding was associated with significantly higher scores for cognitive development and that the developmental benefits of breastfeeding increased with duration of feeding. After adjustment for covariates, the increment in cognitive function was 3.16 (95% CI: 2.35, 3.98) points. Significantly higher levels of cognitive function were seen in breastfed than in formula-fed children at 6-23 months of age and these differences were stable across successive ages. Low-birth-weight infants showed larger differences (5.18 points; 95% CI: 3.59, 6.77) than did normal-birth-weight infants (2.66 points; 95% CI: 2.15, 3.17).

Lucas A et al. (1992). Breastmilk and subsequent intelligence quotient in children born preterm. *Lancet* 339: 261-264. [\[Abstract\]](#)

300 children who had been born preterm were studied at the age of 7-8 years. After controlling for social class, maternal education, birth weight, gestational age, birth rank, infant sex and maternal age it was discovered that those children who had been fed breast milk in the early weeks of life had an 8.3 point advantage in intelligence quotient (I.Q.) over those who had received artificial milk. This advantage was associated with being fed mother's milk by tube rather than with the process of breastfeeding. There was a dose-response relation between the proportion of breast milk in the diet and subsequent I.Q. Children whose mothers chose to provide breast milk but failed to do so had the same I.Q. as those whose mothers elected to feed artificially.

Morrow-Tlucak M, Haude RH & Ernhart CB (1988). Breastfeeding and cognitive development in the first two years of life. *Soc Sci Med* 26: 71-82. [\[Abstract\]](#)

This study measured cognitive development in children at the age of 2 years. It adjusted for ethnic group, smoking, alcohol consumption, maternal intelligence quotient and attitude. Using the Bayley scale, it showed that those breastfed for four months or less had a 3.7 point advantage over those artificially fed. Those fed for over four months were at a 9.1 point advantage. As with the above study, this study shows a dose response relationship between the duration of breastfeeding and the subsequent I.Q.

Vestergaard M et al (1999) Duration of breastfeeding and developmental milestones during the latter half of infancy. *Acta Paediatr* 88: 1327-32. [\[Abstract\]](#)

Aiming to reduce the role of environmental influence, this study examined infants before 1 year of age. Motor skills and early language development were evaluated at 8 months of age in 1656 healthy, singleton, term infants, with a birth weight of at least 2500g. The proportion of infants who mastered the specific milestones increased consistently with increasing duration of breastfeeding. The relative risk for the highest versus the lowest breastfeeding category was 1.3 (95% CI: 1.0-1.6) for crawling, 1.2 (95% CI: 1.1-1.3) for pincer grip and 1.5 (95% CI: 1.3-1.8) for polysyllable babbling. Little change was found after adjustment for confounding.

Mortensen EL et al (2002). The association between duration of breastfeeding and adult intelligence. *JAMA* 287: 2365-71. [\[Abstract\]](#)

Babies who are breastfed for longest grow up to have significantly increased intelligence as adults according to this study among two samples of Danish adults born between 1959 and 1961.

See also:

Uauy and Peirano (1999) Breast is best: human milk is the optimal food for brain development. *Am J Clin Nutr* 70: 433-434.

Fewtrell MS et al (2002). Double-blind, randomized trial of long-chain polyunsaturated fatty acid supplementation in formula fed to preterm infants. *Pediatrics* 110: 73-82.

Breast cancer

Collaborative Group on Hormonal Factors in Breast Cancer (2002). Breast cancer and breastfeeding: collaborative reanalysis of individual data from 47 epidemiological studies in 30 countries, including 50 302 women with breast cancer and 96 973 women without the disease. *Lancet* 360: 187-95. [\[Abstract\]](#)

A review of 47 breast cancer studies that included information on breastfeeding patterns found that the longer women breastfeed, the more they are protected against breast cancer. The relative risk of breast cancer decreased by 4.3% (95% CI 2.9-5.8; $p < 0.0001$) for every 12 months of breastfeeding. The relative risk remained after controlling for developed versus developing country location, women's age, menopausal status, ethnic origin, parity, her age when her first child was born, or any of nine other personal characteristics examined.

The study group estimate that the cumulative incidence of breast cancer in developed countries would be reduced by more than half (from 6.3 to 2.7 per 100 women by age 70) if women had the average number of births and lifetime duration of breastfeeding that had been prevalent in developing countries until recently. Breastfeeding could account for almost two-thirds of this estimated reduction in breast cancer incidence.

United Kingdom National Case-Control Study Group (1993). Breast feeding and risk of breast cancer in young women. *BMJ* 307: 17-20. [\[Abstract\]](#)

This study of women living in 11 UK health districts matched 755 cases with 675 controls. It showed that the risk of developing breast cancer before the age of 36 was negatively correlated with both the duration of breastfeeding and number of babies breastfed. Adjustment was made for use of oral contraceptives, nulliparity, age at first birth, family history and age at menarche. Cases and controls were similar in respect of marital status, age at leaving school and alcohol consumption.

Newcomb PA et al. (1994). Lactation and a reduced risk of premenopausal breast cancer. *New Engl J Med* 330: 81-87. [\[Abstract\]](#)

This multi-centre trial in the USA included more than 14000 pre- and post-menopausal women. It concluded that breast cancer risk was 22% lower among pre-menopausal women who had ever breastfed than among those who had not. Total duration of lactation was also associated with a reduction in the risk of breast cancer among the pre-menopausal women. The authors of the study estimated that if all women with children breastfed for a total of 4-12 months, breast cancer among pre-menopausal women could be reduced by 11%. In addition, they suggested that if women with children breastfed for a lifetime total of 24 months or longer, the incidence of this form of breast cancer might be reduced by almost 25%.

See also:

Furberg H et al (1999). Lactation and breast cancer risk. *Int J Epidemiol* 28: 396-402.

Layde PM et al (1989) The independent associations of parity, age at first full term pregnancy, and duration of breastfeeding with the risk of breast cancer. Cancer and Steroid Hormone Study Group. *J Clin Epidemiol* 42: 963-73.

Michels KB et al (1996) Prospective assessment of breastfeeding and breast cancer incidence among 89,887 women. *Lancet* 347: 431-6 (this study found no reduced risk).

Ovarian cancer

Rosenblatt KA et al. (1993). Lactation and the risk of epithelial ovarian cancer - The WHO Collaborative Study of Neoplasia and Steroid Contraceptives. *Int J Epidemiol* 22: 499-503 [\[Abstract\]](#)

This multinational study showed a 20-25% decrease in the risk of ovarian cancer among women who lactated for at least 2 months per pregnancy, compared to those who had not. Little or no further decrease in risk was seen with increasing duration of lactation.

See also:

Gwinn ML et al (1990) Pregnancy, breast feeding, and oral contraceptives and the risk of epithelial ovarian cancer. *J Clin Epidemiol* 43: 559-68.

Hip fractures and bone density

Cumming RG & Klineberg RJ (1993). Breastfeeding and other reproductive factors and the risk of hip fractures in elderly women. *Int J Epidemiol* 22: 684-691.

In this study of 311 cases of hip fracture in women over the age of 65 years, it was found that parous women who had not breastfed had twice the risk of hip fracture as nulliparous women and those who had breastfed (after controlling for confounders).

Polatti F et al (1999). Bone mineral changes during and after lactation. *Obstet Gynecol* 94: 52-6.

Among 308 women who breastfed fully for 6 months, bone mineral density decreased during this time, but had increased by 18 months to a level higher than baseline.

See also:

Melton LJ 3d et al (1993) Influence of breastfeeding and other reproductive factors on bone mass later in life. *Osteoporos Int* 3: 76-83.

Sowers M et al (1993) Changes in bone density with lactation. *JAMA* 269: 3130-5.

Kalkwarf HJ, Specker BL (1995) Bone mineral loss during lactation and recovery after weaning. *Obstet Gynecol* 86: 26-32.

Sowers M et al (1995) A prospective study of bone density and pregnancy after an extended period of lactation with bone loss. *Obstet Gynecol* 85: 285-9.

Kalkwarf HJ (1999) Hormonal and dietary regulation of changes in bone density during lactation and after weaning in women. *J Mammary Gland Biol Neoplasia* 4: 319-29.

Other studies of interest (requiring further substantiation) on health benefits for the mother:

Brun JG, Nilssen S, Kvale G (1995) Breast feeding, other reproductive factors and rheumatoid arthritis. A prospective study. *Br J Rheumatol* 34: 542-6.

Risk factors for cardiovascular disease

Toscke AM et al. (2001) Overweight and obesity in 6- to 14-year-old Czech children in 1991: Protective effect of breast-feeding. *J Pediatr* 141: 764-9.

Data were collected in 1991 on 33768 children aged 6 to 14 years in the Czech Republic. Children who had ever been breastfed were less likely to be obese or overweight than those who had never been breastfed. After controlling for parental education, parental obesity, maternal smoking, high birth weight, watching television, number of siblings and physical activity, the adjusted odds ratio for breastfeeding were 0.80 for being overweight (95% CI, 0.71 to 0.90) and 0.80 for being obese (95% CI, 0.66 to 0.96).

von Kries R et al. (1999) Breastfeeding and obesity: cross sectional study. *BMJ* 319: 147-150.

In a study of 9357 German five and six year old children, those who had never been breastfed were more likely to be overweight or obese than those who had been breastfed. A dose response effect was identified - 4.5% of children who had never been breastfed were obese compared with 2.3% of children breastfed for 3-5 months, 1.7% of children breastfed for 6-12 months and 0.8% of children breastfed for more than 12 months. After adjusting for potential confounding factors, breastfeeding remained a significant protective factor against the development of obesity (odds ratio 0.75, 95% CI 0.57 to 0.98) and being overweight (0.79, 0.68 to 0.93). The study authors note that obese children have a high risk of becoming obese adults and suggest that increased breastfeeding duration may eventually result in a reduction in the prevalence of cardiovascular diseases and other diseases related to obesity.

Ravelli AC et al (2000) Infant feeding and adult glucose tolerance, lipid profile, blood pressure, and obesity. *Arch Dis Child* 82: 248-52.

Of 625 subjects aged 48-53 years born around the time of a severe period of famine in Amsterdam (1944-45), those who were bottle fed at hospital discharge had greater risk factors for cardiovascular disease than those who were exclusively breast fed. They had a higher mean 120 minute plasma glucose concentration after a standard oral glucose tolerance test, a higher plasma low density lipoprotein (LDL) cholesterol concentration, a lower high density lipoprotein (HDL) cholesterol concentration, and a higher LDL/HDL ratio. Systolic blood pressure and body mass index were not affected by the method of infant feeding.

Armstrong J et al (2002). Breastfeeding and lowering the risk of childhood obesity. *Lancet* 359: 2003-04.

A study of 32200 Scottish children aged 39-42 months found that the prevalence of obesity was significantly lower among those who had been breastfed, after adjusting for socioeconomic status, birthweight and gender (odds ratio 0.70, 95% CI 0.61-0.80).

See also:

Gillman MW et al (2001). Risk of overweight among adolescents who were breastfed as infants. *JAMA* 285: 2461-7.

Hediger ML et al (2001). Association between infant breastfeeding and overweight in young children. *JAMA* 285: 2453-60.

Wilson AC et al. (1998). Relation of infant diet to childhood health: seven year follow up cohort of children in Dundee infant feeding study. *BMJ* 316: 21-25. (summarised above)

Marmot MG et al (1980) Effect of breast-feeding on plasma cholesterol and weight in young adults. *J Epidemiol Community Health* 34: 164-7.

Stettler N et al (2002). Infant weight gain and childhood overweight status in a multicenter, cohort study. *Pediatrics* 109: 194-9.

Childhood cancers**Shu XO et al (1999) Breast-feeding and risk of childhood acute leukemia. *J Natl Cancer Inst* 91: 1765-72.**

Information regarding breastfeeding was obtained through telephone interviews with mothers of 1744 children with acute lymphoblastic leukaemia (ALL) and 1879 matched control subjects, aged 1-14 years, and of 456 children with acute myeloid leukaemia (AML) and 539 matched control subjects, aged 1-17 years. Ever having breastfed was found to be associated with a 21% reduction in risk of childhood acute leukaemia (odds ratio [OR] for all types combined = 0.79; 95% confidence interval [CI] = 0.70-0.91). The inverse associations were stronger with longer duration of breastfeeding. The authors acknowledge the need for further investigation.

Mathur GP et al (1993) Breastfeeding and childhood cancer. *Indian Pediatr* 30: 651-7.

Total duration of breastfeeding and of exclusive breastfeeding was studied and compared in 99 childhood cancer cases and 90 controls. The difference between the average duration of breastfeeding in cases and controls was significant for all cancers ($p < 0.05$) and for lymphoma ($p < 0.01$). When average duration of exclusive breastfeeding was compared, the difference was highly significant for all cancers ($p < 0.001$) and for lymphoma ($p < 0.001$). Cases and controls were not different with respect to their age, sex, birth year, birth order, age and educational status of mothers, smoking of fathers and socioeconomic status but a positive family history of cancer was present in 4 cases compared with only 1 control.

See also:

Davis MK (1998) Review of the evidence for an association between infant feeding and childhood cancer. *Int J Cancer Suppl* 11: 29-33.

Breastfeeding, bed-sharing and cot death (SIDS)

Research has found associations between breastfeeding and reduced risk of Sudden Infant Death Syndrome (SIDS or cot death) as well as between bed-sharing and successful breastfeeding. Babies sharing a bed with their mother are at greater risk of cot death if a parent smokes, but there is no increased risk for non-smokers.

Blair PS et al (1999) Babies sleeping with parents: case-control study of factors influencing the risk of sudden infant death syndrome. *BMJ* 319: 1457-62.

A three year, case-control study of 325 babies who died and 1300 control infants concluded that there is no association between infants sharing the parental bed and an increased risk of sudden infant death syndrome among parents who do not smoke or infants older than 14 weeks.

There was an increased risk for infants who shared the bed for the whole sleep or were taken to and found in the parental bed (9.78, 95% CI: 4.02 - 23.83), but which was not significant for infants of parents who did not smoke or for older infants (>14 weeks). This risk also became non-significant after adjustment for recent maternal alcohol consumption (>2 units), use of duvets (>4 togs), parental

tiredness (infant slept 4 hours for longest sleep in previous 24 hours), and overcrowded housing conditions (>2 people per room of the house). Infants who slept in a separate room from their parents were at greater risk (10.49; 4.26 - 25.81), as were infants who co-slept with a parent on a sofa (48.99; 5.04 - 475.60).

See also:

Klonoff-Cohen H, Edelstein SL (1995) Bed sharing and the sudden infant death syndrome. *BMJ* 311: 1269-72.

Ford RP et al (1993) Breastfeeding and the risk of sudden infant death syndrome. *Int J Epidemiol* 22: 885-90.

The New Zealand Cot Death Study reviewed data on 356 infant deaths classified as SIDS and 1529 control infants over 3 years. Cases stopped breastfeeding sooner than controls: by 13 weeks, 67% controls were breastfed versus 49% cases. A reduced risk for SIDS in breastfed infants persisted during the first 6 months after controlling for confounding demographic, maternal and infant factors. Infants exclusively breastfed at discharge from hospital (OR = 0.52, 95% CI: 0.35-0.71) and during the last 2 days (OR = 0.65, 95% CI: 0.46-0.91) had a significantly lower risk of SIDS than infants not breastfed.

Klonoff-Cohen HS et al (1995) The effect of passive smoking and tobacco exposure through breast milk on sudden infant death syndrome. *JAMA* 273: 795-8.

A total of 200 parents of infants who died of SIDS between 1989 and 1992 were compared with 200 control parents who delivered healthy infants. There was an increased risk of SIDS associated with passive smoking (OR = 3.50 [95% CI, 1.81 to 6.75]). Breast-feeding was protective for SIDS among nonsmokers (OR = 0.37) but not smokers (OR = 1.38), after adjusting for potential confounders.

See also:

Alm B et al (2002). Breast feeding and the sudden infant death syndrome in Scandinavia, 1992-95. *Arch Dis Child* 86: 400-402.

Gilbert RE et al (1995) Bottle feeding and the sudden infant death syndrome. *BMJ* 310: 88-90. (bottle feeding found not to be associated with increased risk)

McVea KLSP et al (2000) The role of breastfeeding in sudden infant death syndrome. *J Hum Lact* 16: 13-20.

Hooker E, Ball HL, Kelly PJ (2001). Sleeping like a baby: attitudes and experiences of bedsharing in northeast England. *Med Anthropol* 19: 203-222.

An anthropological investigation in the north-east of England found that 65% of parents practiced co-sleeping with their infants, finding it a convenient care strategy. Breastfeeding was significantly associated with co-sleeping.

McKenna JJ, Mosko SS, Richard CA (1997). Bedsharing promotes breastfeeding. *Pediatrics* 100: 214-9.

The effect of mother-infant bed-sharing on nocturnal breastfeeding behaviour was studied in 20 routinely bedsharing and 15 routinely solitary sleeping mother-infant pairs when the infants were 3 to 4 months old. All pairs were healthy and exclusively breastfeeding at night. The most important finding was that routinely bed-sharing infants breastfed approximately three times longer during the night than infants who routinely slept separately: this reflected a two-fold increase in the number of breastfeeding episodes and 39% longer episodes. The authors suggest that, by increasing breastfeeding, bedsharing might be protective against SIDS, at least in some contexts.

See also:

Mosko S, Richard C, McKenna J (1997). Infant arousals during mother-infant bed sharing: implications for infant sleep and sudden infant death syndrome research. *Pediatrics* 100: 841-9.

Ball HL, Hooker E, Kelly PJ (1999). Where will the baby sleep? Attitudes and practices of new and experienced parents regarding co-sleeping with their newborn infants. *American Anthropologist* 101: 143-51.

UNICEF UK Baby Friendly Initiative's Sample policy on bed sharing.

HIV-1 transmission

The HIV virus can be transmitted through breastfeeding. Unfortunately, most research has failed to define exclusive breastfeeding properly, with many studies comparing risk of infection between formula fed babies and babies receiving *any* breast milk. The first study to compare properly-defined exclusive breastfeeding with mixed feeding and artificial feeding found no significant difference in HIV infection between breastfed and artificially-fed babies.

Coutsoudis A et al. (1999) Influence of infant-feeding patterns on early mother-to-child transmission of HIV-1 in Durban, South Africa: a prospective cohort study. *Lancet* 354: 471-476.

Babies born to 549 HIV-1-infected South African women were assessed at 3 months of age. After adjustment for potential confounders, exclusive breastfeeding carried a significantly lower risk of HIV-1 transmission than mixed feeding (hazard ratio 0.52 [95% CI 0.28-0.98]) and a similar risk to no breastfeeding (0.85 [0.51-1.42]). The authors call for further research but point out that exclusively breastfed babies had a (non-significant) lower probability of infection than those never breastfed and suggest that this may be due to virus acquired during delivery being neutralised by immune factors in breast milk. They propose that mixed feeding carries the highest risk due to the beneficial immune factors in breast milk being counteracted by damage to the infant's gut and disruption of immune barriers caused by contaminants in mixed feeds.

There is an editorial on this subject in the same issue of the *Lancet* (Newell M-L (1999) Infant feeding and HIV-1 transmission. *Lancet* 354: 442-3) and correspondence in a subsequent issue (Infant feeding patterns and HIV-1 transmission. *Lancet* 354: 1901-1904).

Coutsoudis A et al. (2001) Method of feeding and transmission of HIV-1 from mothers to children by 15 months of age: prospective cohort study from Durban, South Africa. *AIDS* 15: 379-87.

Babies of HIV-infected mothers who were breastfed exclusively for three months or more were found to be at no greater risk of HIV infection during the first six months than those never breastfed. 551 HIV-infected mothers and their babies were included in the study. Exclusive breastfeeding, defined as a time dependent variable, carried a significantly lower risk of HIV infection than mixed feeding (hazard ratio 0.56, 95% CI 0.32-0.98, p=0.04) and a similar risk to no breastfeeding (HR 1.19, 95% CI 0.63-2.22, p=0.59). The authors suggest that other foods and fluids introduced to the gut of mixed-fed babies damage the bowel and facilitate the entry into the body tissues of the HIV present in these mothers' breast milk. This is supported by the finding that, if mothers continued to breastfeed along with other foods once the period of exclusive breastfeeding had ended, new HIV infections began to occur. The investigators call for further research.

See also:

Coutsoudis A et al (2002). Free formula milk for infants of HIV-infected women: blessing or curse? *Health Policy and Planning* 17: 154-160.

Nicoll A, Newell ML, Peckham C, Luo C, Savage F (2000) Infant feeding and HIV-1 infection. *AIDS* 14: Suppl 3: S57-74.

Latham MC, Preble EA (2000) Appropriate feeding methods for infants of HIV infected mothers in sub-Saharan Africa. *BMJ* 320: 1656-1660.

Information on single bottle pasteurisers

Dental health

Labbok MH, Hendershot GE (1987) Does breastfeeding protect against malocclusion? An analysis of the 1981 Child Health Supplement to the National Health Interview Survey. *Am J Prev Med* 3: 227-32.

Data on 9698 children aged between 3 and 17 years were analysed retrospectively to assess the association between breastfeeding and dental malocclusion. After controlling for confounding factors, increased duration of breastfeeding was associated with a decline in the prevalence of malocclusion.

Palmer B (1998) The influence of breastfeeding on the development of the oral cavity: a commentary. *J Hum Lact* 14:93-8.

An investigation of 600 skulls preserved from ancient cultures in US museums found that nearly all had perfect occlusions (correct alignment of teeth, allowing a proper bite). As the skulls were from people living before the advent of artificial feeding, they would all have been breastfed. The author notes that good occlusion and well formed dental arches were much less common among his own dental patients and among a sample of modern skulls studied.

See also:

Paunio P, Rautava P & Sillanpaa M. (1993) The Finnish Family Competency Study: the effects of living conditions on sucking habits in 3-year old Finnish children and the association between these habits and dental occlusion. *Acta Odontol Scand* 51: 23-29.

Ogaard B, Larsson E & Lindsten R (1994) The effect of sucking habits, cohort, sex, intercanine arch widths and breast or bottle feeding on posterior crossbite in Norwegian and Swedish 3-year old children. *Amer J Ortho & Dentofac Orthopedics* 106: 161-66.

Valaitis R et al. (2000) A systematic review of the relationship between breastfeeding and early childhood caries. *Can J Public Health* 91: 411-7.

Reviews of the benefits of breastfeeding

American Academy Work Group on Breastfeeding (1997). Policy Statement on Breastfeeding and the use of human milk. *Pediatrics* 100: 1035-9.

Heinig M J & Dewey K G (1997). Health effects of breastfeeding for mothers: a critical review. *Nutrition Research Reviews* 10: 35-56.

Heinig M J & Dewey K G (1996). Health advantages of breastfeeding for infants: a critical review. *Nutrition Research Reviews* 9: 89-110.

Standing Committee on Nutrition of the British Paediatric Association (1994). Is breastfeeding beneficial in the UK? *Arch Dis Child* 71: 376-380.

Session 3: The Baby-friendly Hospital Initiative

Objectives

At the conclusion of this session, participants will be able to:

- Describe the history and implementation of the WHO/UNICEF Baby-friendly Hospital Initiative (BFHI) and relevant experience of participants in their institutions and country.
- Describe the guidelines health facilities should follow related to the International Code of Marketing of Breast-milk Substitutes.
- Describe the WHO/UNICEF Global Criteria and the Self-appraisal Tool.
- Describe the BFHI assessment and designation process.
- Discuss the importance of monitoring and reassessing adherence to the “10 steps”.
- Discuss the health facility decision-maker's role in supporting the BFHI.
- Discuss key aspects of the Global Strategy for IYCF and BFHI’s role within it.

Duration

Total: 1 hour

Teaching methods

Presentation
Discussion
Video or slide show (optional)

Preparation for session

- Work with the national breastfeeding coordinator and committee and/or WHO and UNICEF country and regional offices to prepare up-to-date information on the status of BFHI nationally, including transparencies if possible.
- Collect examples of completed self-appraisal tools to gain a general understanding of the BFHI status of health facilities in the country. Make sure that the information on particular hospitals is kept confidential.

- Review the Global Criteria, self-appraisal tool, and assessment and reassessment processes, in preparation for a brief presentation during the session. A copy of the revised Global Criteria and self appraisal tool is attached as Handouts 3.4 and 3.5. Information and links for downloading the revised BFHI course and assessment documents are available at the UNICEF website, http://www.unicef.org/nutrition/index_24850.html?q=printme.
- Review the WHO/UNICEF document, *Global Strategy for Infant and Young Child Feeding*. Geneva, Switzerland, 2003. (<http://www.who.int/nutrition/publications/infantfeeding/en/index.html>; http://www.who.int/child-adolescent-health/NUTRITION/global_strategy.htm). Read in particular sections 30, 31 and 34, pages 13-19, which focus on the importance of continuing to support the *Baby-friendly Hospital Initiative* and implementation of the *Ten Steps to Successful Breastfeeding*, as well as monitoring and reassessing facilities that are already designated and expanding the Initiative to include clinics, health centres, and paediatric hospitals.

Training materials

Handouts

- 3.1 Presentation for session 3
- 3.2 Breastfeeding: An issue on the world's agenda
- 3.3 The International Code of Marketing of Breast-milk Substitutes: summary of main points
- 3.4 *Baby-friendly Hospital Initiative, Section 1 Background and Implementation, Section 1.2: Hospital Level Implementation, and Section 1.3: The Global Criteria for the BFHI*, WHO and UNICEF, 2008. (http://www.unicef.org/nutrition/index_24850.html?q=printme).
- 3.5 *Baby-friendly Hospital Initiative, Section 4 Hospital Self-Appraisal and Monitoring, 4.1: The Hospital Self-Appraisal Tool*, WHO and UNICEF, 2008, (http://www.unicef.org/nutrition/index_24850.html?q=printme)
- 3.6 WHO/UNICEF breastfeeding and young child feeding courses
- 3.7 The Baby-friendly Hospital Initiative: Guidelines and Tools for Monitoring and Reassessment

Slides/Transparencies

- 3.1 Goals of the Baby-friendly Hospital Initiative
- 3.2-3 Ten steps to successful breastfeeding
- 3.4-5 Key dates in the history of breastfeeding and BFHI
- 3.6-12 The International Code: Summary and role of Baby-friendly hospitals
- 3.13 The route to Baby-friendly designation
- 3.14-15 Differences between monitoring and reassessment
- 3.16-17 The role of the hospital administrator in BFHI
- 3.18-21 The Global Strategy for IYCF and the further strengthening of BFHI

The website featuring this Course contains links to the slides and transparencies for this session in two Microsoft PowerPoint files. The slides (in colour) can be used with a laptop computer and LCD projector, if available. Alternatively, the transparencies (in black and white) can be printed out and copied on acetates and projected with an overhead projector. The transparencies are also reproduced as the first handout for this session, with 6 transparencies to a page.

Additional materials to be distributed

The following documents, which can be purchased from the World Health Organization, Geneva or the appropriate WHO regional office, should be distributed to all participants:

- *Protecting, Promoting and Supporting Breastfeeding: The Special Role of Maternity Services. A Joint WHO/UNICEF Statement.* World Health Organization, Geneva, 1989.
- *The International Code of Marketing of Breast-milk Substitutes.* World Health Organization, Geneva, 1981.

Suggested additional audio-visual programmes

- Slide set or video on “Baby-friendly” in the country or region where the course is being given (optional, if available).

References

Global Strategy for Infant and Young Child Feeding. Geneva, World Health Organization, 2003. (<http://www.who.int/nutrition/publications/infantfeeding/en/index.html>; http://www.who.int/child-adolescent-health/NUTRITION/global_strategy.htm).

Global strategy for infant and young child feeding: The optimal duration of exclusive breastfeeding. Fifty-fourth World Health Assembly, Provisional agenda item 13.1, A54/INF.DOC./4. Geneva, World Health Organization, 1 May 2001. (http://www.who.int/gb/EB_WHA/PDF/WHA54/ea54id4.pdf).

Horton S, Sanghvi T, Phillips M, Fiedler J, Perez-Escamilla. Breastfeeding promotion and priority setting in health. *Health Policy and Planning*, 1996, 11(2):156-168.

International Baby Food Action Network. *Protecting infant health: A health workers' guide to the international code of marketing of breast-milk substitutes.* 7th ed. Penang, Malaysia, IBFAN, 1993.

International code of marketing of breast-milk substitutes. Geneva, World Health Organization, 1981.

Kramer MS, Kakuma R. *The optimal duration of exclusive breastfeeding: A systematic review.* Geneva, World Health Organization, 2002 (WHO/NHD/01.08; WHO/FCH/CAH/01.23).

New data on the prevention of mother-to-child transmission of HIV and their policy implications. Conclusions and recommendations. WHO technical consultation on behalf of the UNFPA/UNICEF/WHO/UNAIDS Inter-Agency Task Team on Mother-to-Child Transmission of HIV. Geneva, 11-13 October 2000. Geneva, World Health Organization, 2001 (WHO/RHR/01.28).

Protecting, promoting and supporting breastfeeding: The special role of maternity services. A joint WHO/UNICEF statement. Geneva, World Health Organization, 1989.

Report of the expert consultation on the optimal duration of exclusive breastfeeding, Geneva, Switzerland, 28-30 March 2001. Geneva, World Health Organization, 2001 (WHO/NHD/01.09; WHO/FCH/CAH/01.24).

Resolution WHA 39.28: Infant and Young Child Feeding. Geneva, World Health Organization, 1992.

Resolution WHA 47.5: Infant and Young Child Nutrition. Geneva, World Health Organization, 1994.

Saadeh R et al., eds. *Breastfeeding: the technical basis and recommendations for action*. Geneva, World Health Organization, 1993 (WHO/NUT/MCH/93.1).

The Baby-friendly Hospital Initiative: Revised, Updated and Expanded for Integrated Care, Section 1: Background and Implementation; Section 2: Strengthening and sustaining BFHI: A course for decision-makers; Section 3: Breastfeeding Promotion and Support in a Baby-friendly Hospital; a 20-hour course; Section 4: Hospital Self-Appraisal and Monitoring; Section 5: External Assessment and Reassessment, New York, New York, UNICEF, and Geneva, WHO, 2008. (http://www.unicef.org/nutrition/index_24850.html?q=printme).

The International Code of Marketing of Breast-milk Substitutes: Frequently Asked Questions, Geneva, World Health Organization, 2006. (http://www.who.int/child-adolescent-health/publications/NUTRTION/ISBN_92_4_159429_2.htm).

Additional information from regional/country offices, national breastfeeding committees, local Wellstart Associates, IBFAN groups, or other sources.

Outline

Content	Trainer's Notes
<p>1. The Baby-friendly Hospital Initiative (BFHI) - Description and key dates</p> <ul style="list-style-type: none"> ■ BFHI is a global movement, spearheaded by WHO and UNICEF that aims to give every baby the best start in life by creating a health care environment where breastfeeding is the norm. 	<p>Mention that a mini-version of the presentation is reproduced in Handout 3.1 and included in the participants' folder.</p>
<ul style="list-style-type: none"> ■ BFHI has two main goals: <ul style="list-style-type: none"> ■ To transform hospitals and maternity facilities through implementation of the "Ten Steps". ■ To end the practice of distribution of free and low-cost supplies of breast-milk substitutes to maternity wards and hospitals. 	<p>Show slide/transparency 3.1.</p>
<ul style="list-style-type: none"> ■ The joint WHO/UNICEF statement on breastfeeding and maternity services has become the centrepiece for the BFHI. Maternity wards and hospitals applying the principles described in the joint statement are being designated Baby-friendly to call public attention to their support for sound infant feeding practices. 	<p>Refer participants to the Joint Statement, which they have received as a handout for the course. Describe briefly the information included in the booklet.</p>
<ul style="list-style-type: none"> ■ The "Ten steps to successful breastfeeding" are a convenient yardstick to measure the standards of maternity services. 	<p>Show slides/transparencies 3.2 and 3.3.</p> <p>Mention that the Ten Steps are listed in the Joint Statement.</p>
<ul style="list-style-type: none"> ■ Brief background, reviewing steps in the history and development of the BFHI and related events: <ul style="list-style-type: none"> 1979 - Joint WHO/UNICEF Meeting on Infant and Young Child Feeding (Geneva) 1981 - Adoption of the International Code of Marketing of Breast-milk Substitutes 1989 - Protecting, Promoting and Supporting Breastfeeding: The Special Role of Maternity Services. A Joint WHO/UNICEF Statement 	<p>Show slides/transparencies 3.4 and 3.5.</p> <p>Refer participants to Handout 3.2 "Breastfeeding - An issue on the world's agenda", which describes this history in more detail.</p> <p>Mention that the Innocenti Declaration included four targets – the appointment of a national breastfeeding coordinator and establishment of a multisectoral national breastfeeding committee, ensuring that every facility providing maternity services fully practices all "Ten Steps" set out in the Joint WHO/UNICEF Statement, taking action to give effect to the principles and aim of the International Code of Marketing of Breast-Milk Substitutes, and enacting imaginative legislation protecting the breastfeeding rights of working</p>

Content	Trainer's Notes
<p>Convention on the Rights of the Child</p> <p>1990 - Innocenti Declaration</p> <p>- World Summit for Children</p> <p>1991 - Launching of the Baby-friendly Hospital Initiative</p> <p>2000 - WHO Expert Consultation on HIV and Infant Feeding</p> <p>2001 - WHO Consultation on the optimal duration of exclusive breastfeeding (about 6 months)</p> <p>2002 - Endorsement of the Global Strategy for Infant and Young Child Feeding by World Health Assembly</p> <p>2005 - Innocenti Declaration 2005</p> <p>2007 - Revision of the BFHI documents</p>	<p>women and establishing means for its enforcement. Enforcement of the Code and implementation of the “Ten Steps” were key to the BFHI, launched two years later. In 2005 a follow-up Declaration stressed the importance of revitalizing BFHI, expanding it, and identifying sufficient resources for its continuation.</p> <p>As part of the effort to revitalize BFHI and expand it, the BFHI documents were revised in 2007, with updated information and new modules related to HIV and infant feeding and mother-friendly care.</p> <p>This session will explore the key components of the Code of Marketing and Baby-friendly Hospital Initiative and the role hospital administrators can play in supporting both the Code and BFHI. In many settings with high HIV prevalence there is a need to address issues related to HIV within the Baby-friendly Initiative. These issues are addressed in this course in Sessions 4 and 5.</p> <p>The launching of the Global Strategy for Infant and Young Child Feeding will be reviewed at the end of the session, exploring how it reinforces the importance of both the Code and the “Ten Steps” of BFHI.</p>
<p>2. International Code of Marketing of Breast-milk Substitutes – summary and the role of Baby-friendly hospitals</p>	<p>Note: This overview on “The Code” can come here or later in the session (following the discussion of monitoring and reassessment or at the end) if it will be given by a different presenter.</p> <p>Show slide/transparency 3.6.</p>
<p>■ Aim - The aim of the Code is to contribute to the provision of safe and adequate nutrition for infants, by the protection and promotion of breastfeeding, and by ensuring the proper use of breast-milk substitutes, when these are necessary, on the basis of adequate information and through appropriate marketing and distribution.</p> <p>■ Scope - The Code applies to the marketing, and practices related thereto, of the following products: breast-milk substitutes, including infant formula; other milk products, foods and beverages,</p>	<p>Show slides/transparencies 3.7 and 3.8.</p> <p>Refer participants to the <i>International Code of Marketing of Breast-milk Substitutes</i></p>

Content	Trainer's Notes
<p>including bottle-fed complementary foods, when marketed or otherwise represented to be suitable, with or without modification, for use as a partial or total replacement of breast milk; feeding bottles and teats. It also applies to their quality and availability, and to information concerning their use.</p> <ul style="list-style-type: none"> ■ WHO and UNICEF are striving to put an end to the distribution of free and low-cost supplies of products within the scope of the International Code anywhere in the health care system. 	
<ul style="list-style-type: none"> ■ Main points in the International Code include: <ul style="list-style-type: none"> ■ No advertising of breast-milk substitutes and other products to the public. ■ No donations of breast-milk substitutes and supplies to maternity hospitals. ■ No free samples to mothers. ■ No promotion in the health services. ■ No company personnel to advise mothers. ■ No gifts or personal samples to health workers. ■ No use of space, equipment or educational materials sponsored or produced by companies when teaching mothers about infant feeding. ■ No pictures of infants or other pictures idealizing artificial feeding on the labels of the products. ■ Information to health workers should be scientific and factual. ■ Information on artificial feeding, including that on labels, should explain the benefits of breastfeeding and the costs and dangers associated with artificial feeding. 	<p>Show slides/transparencies 3.9 and 3.10.</p> <p>Refer participants to handout 3.3, “The International Code of Marketing of Breast-milk Substitutes: Summary of main points” which presents the main provisions of the International Code and their rationale.</p>

Content	Trainer's Notes
<ul style="list-style-type: none"> ■ Unsuitable products, such as sweetened condensed milk, should not be promoted for babies. 	
<ul style="list-style-type: none"> ■ Cessation of free and low-cost supplies is an essential element for achieving baby-friendly status. Baby-friendly hospitals and their administrators and staff have an important role to play in upholding the Code: <ul style="list-style-type: none"> ■ Free or low-cost supplies of breast-milk substitutes should not be accepted in health care facilities. ■ Breast-milk substitutes should be purchased by the health care facility in the same way as other foods and medicines, for at least wholesale price. ■ Promotional material for infant foods or drinks other than breast milk should not be permitted in the facility. ■ Pregnant women should not receive materials that promote artificial feeding. ■ Feeding with breast-milk substitutes should be demonstrated by health workers only, and only to pregnant women, mothers, or family members who need to use them. ■ Breast-milk substitutes in the health facility should be kept out of the sight of pregnant women and mothers. ■ The health facility should not allow sample gift packs with breast-milk substitutes or related supplies that interfere with breastfeeding to be distributed to pregnant women or mothers. ■ Financial or material inducements to promote products within the scope of the Code should not be accepted by health workers or their families. ■ Manufacturers and distributors of products within the scope of the Code should disclose to the institution any contributions made to health workers such as fellowships, study tours, research grants, conferences, or the like. Similar disclosures should be 	<p>Show slides/transparencies 3.11 and 3.12 and review the guidelines listed.</p> <p>Mention that samples include all products that might interfere with the successful initiation and establishment of breastfeeding, such as feeding bottles, teats, pacifiers, infant formula and other kinds of formula such as preterm formula.</p>

Content	Trainer's Notes
made by the recipient.	
<ul style="list-style-type: none"> ■ Discussion of current marketing tactics of formula companies in the participants' health facilities and how to deal with them. 	Ask the participants what kind of marketing tactics formula companies are currently using in their hospitals and what suggestions they have for dealing with them.
<p>3. WHO/UNICEF Global Criteria for BFHI</p> <ul style="list-style-type: none"> ■ Description of how the Global Criteria used in the BFHI assessment process were developed: <ul style="list-style-type: none"> ■ Challenge of finding objective methods for measuring each of the Ten Steps. Importance of questioning mothers and observing hospital practices. ■ The Global Criteria were used to develop both the Self-appraisal Tool and tools for the external assessment process. ■ The Global Criteria, self-appraisal tool, course and assessment tools were revised in 2007. They now include criteria and modules related to mother-friendly childbirth practices and HIV and infant feeding. ■ Importance of using the Global Criteria versus nationally developed criteria. 	Refer participants to handout 3.4 <i>Baby-friendly Hospital Initiative, Section 1 Background and Implementation</i> , WHO and UNICEF, revised 2008, which includes a copy of the Global Criteria. Ask the participants to look at the criteria and discuss a few of them.
<p>4. Use of the WHO/UNICEF Hospital Self-appraisal Tool</p> <ul style="list-style-type: none"> ■ The Hospital Self-appraisal Tool can be used by a health facility to take a quick initial look at where it is in the process of creating an institutional environment supportive of breastfeeding. It includes simple "yes" or "no" answers and does not require interviews with mothers or staff. Hospitals and health facilities can apply it themselves without an external assessor. ■ If most answers to the self-appraisal tool are "yes" and at least 75% of the mothers who delivered in the last year exclusive breastfed from birth to discharge or, if not, it was because of acceptable medical reasons, the hospital may wish to consider taking further steps towards being 	<p>Ask participants to take a brief look at the Self-Appraisal Tool which is included in Handout 3.5, <i>"Baby-friendly Hospital Initiative, Section 4: Hospital Self-Appraisal and Monitoring."</i> Indicate that the questions were developed to provide an initial determination (through self-appraisal) of how well the hospital meets the criteria for each of the Ten Steps. It also includes questions on The Code of Marketing, mother-friendly care, and HIV and infant feeding.</p> <p>Pass out an extra copy of the self-appraisal tool (Handout 3.5) to each health facility team. Ask the participants to get together with others from their health facility and fill out the self-appraisal tool before the first session in the morning (unless they filled it in before coming to the course and/or brought it with them). Each group will analyze its results and share them during the session on "Appraising policies and practices" (Session 7).</p>

Content	Trainer's Notes
<p>assessed by an external team and, if it passes, being designated as baby-friendly.</p> <ul style="list-style-type: none"> ■ A hospital with many “no” answers to the self-appraisal questions or with low exclusive breastfeeding may wish to develop a plan of action for making changes which will lead to more successful support of breastfeeding. When improvements have been made the hospital can conduct another self-appraisal and ask for an external assessment, if ready. 	<p>Note: If it will flow better, Session 7 on “Appraising policies and practices” can be given following Session 3, giving the participants a chance to assess how their own facilities are doing on implementing the Ten Steps before Sessions 4 and 5.</p>
<p>5. Hospital assessment and designation</p> <ul style="list-style-type: none"> ■ The process generally includes the following steps: <ul style="list-style-type: none"> ■ Request by hospital for external assessment. ■ Assessment, usually requiring a team of 2-4 trained assessors for 1 to 2 days depending on the size of the hospital. ■ Informal report and feedback of general results to hospital representatives, including achievements and steps still needing further work. ■ Report of results and recommendations to the national BFHI coordination group that makes the final decisions concerning status of hospitals. ■ Designation of hospital as baby-friendly or award of a Certificate of Commitment. ■ If hospital still needs to make changes, collaboration with national BFHI coordination group to determine technical support needed. 	<p>Show slide/transparency 3.13 “The Route to Baby- friendly Designation” and discuss the process. (If the process is somewhat different in your country, adapt accordingly.)</p> <p>Emphasize that all Ten Steps need to be fulfilled (not 8 out of 10, for example) and that no free or low-cost supplies of products within the scope of the International Code are allowed. The criteria on mother-friendly care also need to be met, after facilities have had a chance to train their staff on this component. If the national authority decided that the HIV criteria should be included in the Initiative, these criteria should be met as well.</p> <p>Discuss the fact that the “Certificate of Commitment” is issued to a hospital that, upon official assessment, is not yet found to be fully complying with the standard, i.e. the Global Criteria. This means that the hospital is committed within a specific period of time to draw up a plan of action and make the required changes so as to become truly baby-friendly.</p>
<p>6. BFHI training</p> <ul style="list-style-type: none"> ■ Most hospitals will need to arrange for further training of its staff as part of the process of becoming baby-friendly. At least 20 hours of training on breastfeeding 	

Content	Trainer's Notes
<p>promotion and support is usually needed, including a minimum of three hours of supervised clinical experience.</p>	
<ul style="list-style-type: none"> ■ UNICEF, WHO and other groups have developed training materials which can be used for training staff. These courses are listed on a one-page summary. 	<p>Refer participants to Handout 3.6 “WHO/UNICEF Breastfeeding Courses.” Mention that the materials for training maternity services staff have been revised and that the updated “20-hour course”, “Section 3: Breastfeeding Promotion and Support in a Baby-Friendly Hospital, is available on the UNICEF website, http://www.unicef.org/nutrition/index_24850.html?q=printme Mention any support for training that may be available from the regional or country UNICEF offices or through the national authority for IYCF or BFHI coordination group.</p>
<p>7. Monitoring and reassessment</p> <ul style="list-style-type: none"> ■ Once a hospital has been designed Baby-friendly it is important to maintain the hospital's support for successful breastfeeding. ■ Monitoring and/or reassessing the hospital's adherence to the Ten Steps can help administrators and staff members determine how they are doing and where further work may be needed to maintain standards. ■ Monitoring can either be instituted by the hospital itself or can be arranged by the national BFHI coordination group. ■ Reassessment is usually an external process, much like the original assessment, but often not as extensive. 	
<ul style="list-style-type: none"> ■ There are several key differences between monitoring and reassessment. 	<p>Show slides/transparencies 3.14 and 3.15.</p>
<ul style="list-style-type: none"> ■ The BFHI guidelines and tools for monitoring and reassessing baby-friendly hospitals were revised in early 2007 and are available as part of the updated BFHI documents. ■ Guidelines and tools for monitoring are 	<p>Pass out Handout 3.7, a description of WHO/UNICEF's monitoring and reassessment guidelines and tools, and briefly go over the contents and how the tools can be used.</p>

Content	Trainer's Notes
<p>included in BFHI Section 4, Hospital Self-Appraisal and Monitoring, Section 4.2.</p> <p>Guidelines and a tool for reassessment are included in BFHI Section 5: External Assessment and Reassessment, Section 5.3.</p>	
<p>8. The role of the hospital administrator in BFHI</p> <ul style="list-style-type: none"> ■ Become familiar with the BFHI process. ■ Decide where responsibility for BFHI lies within the hospital structure. This can be a coordinating committee, working group, multidisciplinary-team, etc. ■ Establish the process within the hospital for working with the identified responsible body. ■ Work with key hospital staff to fill in the self-appraisal tool using the Global Criteria and interpret results. ■ Support staff in decisions taken to achieve 'baby-friendliness'. ■ Facilitate any BFHI-related training that may be needed. ■ Collaborate with the national BFHI coordination group and ask for an external assessment team when the hospital is ready for assessment. ■ Encourage staff to sustain adherence to the Ten Steps, arranging for refresher training and periodic monitoring and reassessment. 	<p>Show slides/transparencies 3.16 and 3.17.</p> <p>Mention that in situations where there is high HIV prevalence, hospital administrators need to consider additional issues, as they implement BFHI. These issues will be explored in Sessions 4 and 5.</p>

Content	Trainer's Notes
<p>9. The Global Strategy for Infant and Young Child Feeding</p> <p>The Global Strategy for Infant and Young Child Feeding aims to revitalize efforts to promote, protect and support appropriate infant and young child feeding.</p> <ul style="list-style-type: none"> ■ It builds upon past initiatives, in particular the Innocenti Declaration and the Baby-friendly Hospital Initiative and addresses the needs of all children including those living in difficult circumstances, such as infants of mothers living with HIV, low-birth-weight infants and infants in emergency situations. <p>Its aim is “to improve – through optimal feeding – the nutritional status, growth and development, health, and thus the survival of infants and young children”.</p>	<p>Show slide/transparency 3.18.</p>
<ul style="list-style-type: none"> ■ The strategy reaffirms the relevance and urgency of the operational targets of the Innocenti Declaration, including the implementation of the “Ten steps to successful breastfeeding” in all maternity services and giving effect to the principles and aim of the International Code, which formed the basis for BFHI. ■ The strategy has five additional operational targets, asking that all governments: <ul style="list-style-type: none"> ■ Develop, implement, monitor and evaluate a comprehensive policy on IYCF. ■ Ensure that the health and other relevant sectors protect, promote and support exclusive breastfeeding for six months and continued breastfeeding up to two years of age or beyond, while providing women access to the support they require. ■ Promote timely, adequate, safe and appropriate complementary feeding with continued breastfeeding. ■ Provide guidance on feeding infants and young children in exceptionally difficult circumstances. 	<p>Show slide/transparency 3.19.</p>

Content	Trainer's Notes
<ul style="list-style-type: none"> ■ Consider what new legislation or other suitable measures may be required, as part of a comprehensive policy on infant and young child feeding, to give effect to the principles and aim of the International Code of Marketing of Breast-milk Substitutes and to subsequent relevant Health Assembly resolutions. <p>(see full wording of targets in <i>Global Strategy</i>)</p>	
<ul style="list-style-type: none"> ■ The Global Strategy stresses “that hospital routines and procedures (should) remain fully supportive of the successful initiation and establishment of breastfeeding through implementation of the Baby-friendly Hospital Initiative, monitoring and reassessing already designated facilities, and expanding the Initiative to include clinics, health centres and paediatric hospitals.” ■ It also urges that support be given for feeding infants and young children in exceptionally difficult circumstances, with one aspect of this being to adapt the BFHI by taking account of HIV/AIDS and by ensuring that those responsible for emergency preparedness are well trained to support appropriate feeding practices consistent with the Initiative’s universal principles. 	<p>Show slides/transparencies 3.20 and 3.21.</p>
<p>10. Overview of global and regional BFHI progress</p>	<p>Show current information on the number of baby-friendly hospitals in the world and/or region, if available.</p>

Content	Trainer's Notes
<p>11. Current status of the national BFHI</p> <ul style="list-style-type: none"> ■ Description of the current status of the national BFHI, including, for example: <ul style="list-style-type: none"> ■ Number of hospitals committed to becoming baby-friendly (having certificates of commitment, if used in the country). ■ Number of hospitals designated baby-friendly. ■ Any monitoring or reassessment process in place. ■ Brief description of the country's future plans for BFHI. 	<p>Ask either a national BFHI representative or a knowledgeable WHO or UNICEF representative working in the country to describe the current status of the Initiative.</p> <p>Ask the same presenter to describe future plans for the Initiative. Ask participants for any questions, comments, or suggestions. Allow adequate time for discussion.</p> <p>Mention, again, that in situations where there is high HIV prevalence, hospitals implementing BFHI need to consider additional issues which will be explored in Sessions 4 and 5.</p>
<p>12. Country experience with BFHI (optional)</p> <ul style="list-style-type: none"> ■ Brief case study of "BFHI in Action," such as: <ul style="list-style-type: none"> ■ Experience of a local hospital that has become baby-friendly, or ■ Presentation of the experience of another country. 	<p>If it is appropriate and of interest, arrange for a brief "case study" presentation. An administrator or decision-maker from a local hospital that has become baby-friendly can describe "how they did it". Alternatively, a slide set or video showing experience elsewhere can be shown.</p> <p>Leave time for any questions at the end.</p>

Handout 3.1

Presentation for session 3: The Baby-friendly Hospital Initiative

Goals of the Baby-friendly Hospital Initiative

1. To transform hospitals and maternity facilities through implementation of the "Ten steps".
2. To end the practice of distribution of free and low-cost supplies of breast-milk substitutes to maternity wards and hospitals.

Transparency 3.1



Every facility providing maternity services and care for newborn infants should follow these *Ten steps to successful breastfeeding*

1. Have a written breastfeeding policy that is routinely communicated to all health care staff.
2. Train all health care staff in skills necessary to implement this policy.
3. Inform all pregnant women about the benefits and management of breastfeeding.
4. Help mothers initiate breastfeeding within a half-hour of birth.
5. Show mothers how to breastfeed, and how to maintain lactation even if they should be separated from their infants.

Transparency 3.2



Every facility providing maternity services and care for newborn infants should follow these *Ten steps to successful breastfeeding*

6. Give newborn infants no food or drink other than breast milk, unless medically indicated.
7. Practise rooming-in — allow mothers and infants to remain together — 24 hours a day.
8. Encourage breastfeeding on demand.
9. Give no artificial teats or pacifiers (also called dummies or soothers) to breastfeeding infants.
10. Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic.

Transparency 3.3

Key dates in the history of breastfeeding and BFHI

- 1979 – Joint WHO/UNICEF Meeting on Infant and Young Child Feeding, Geneva
- 1981 – Adoption of the International Code of Marketing of Breast-Milk Substitutes
- 1989 – Protecting, promoting and supporting breastfeeding. The special role of maternity services. A Joint WHO/UNICEF Statement.
 - Convention on the Rights of the Child
- 1990 – Innocenti Declaration
 - World Summit for Children

Transparency 3.4

Key dates in the history of breastfeeding and BFHI

- 1991 – Launching of Baby-friendly Hospital Initiative
- 2000 – WHO Expert Consultation on HIV and Infant Feeding
- 2001 – WHO Consultation on the optimal duration of exclusive breastfeeding
- 2002 – Endorsement of the Global Strategy for Infant and Young Child Feeding by the WHA
- 2005 – Innocenti Declaration 2005
- 2007 – Revision of BFHI documents

Transparency 3.5

The International code of marketing of breast-milk substitutes:

Summary and role of Baby-friendly hospitals

Transparency 3.6

Aim

To contribute to the provision of safe and adequate nutrition for infants by:

- the protection and promotion of breastfeeding, and
- ensuring the proper use of breast-milk substitutes, when these are necessary, on basis of adequate information and through appropriate marketing and distribution.

Transparency 3.7

Scope

Marketing, practices related, quality and availability, and information concerning the use of:

- breast-milk substitutes, including infant formula
- other milk products, foods and beverages, including bottle-fed complementary foods, when intended for use as a partial or total replacement of breast milk
- feeding bottles and teats

Transparency 3.8

Summary of the main points of the International Code

- No advertising of breast-milk substitutes and other products to the public
- No donations of breast-milk substitutes and supplies to maternity hospitals
- No free samples to mothers
- No promotion in the health services
- No company personnel to advise mothers
- No gifts or personal samples to health workers

Transparency 3.9

Summary of the main points of the International Code

- No use of space, equipment or education materials sponsored or produced by companies when teaching mothers about infant feeding.
- No pictures of infants, or other pictures idealizing artificial feeding on the labels of the products.
- Information to health workers should be scientific and factual.
- Information on artificial feeding, including that on labels, should explain the benefits of breastfeeding and the costs and dangers associated with artificial feeding.
- Unsuitable products, such as sweetened condensed milk, should not be promoted for babies.

Transparency 3.10

The role of administrators and staff in upholding the International Code

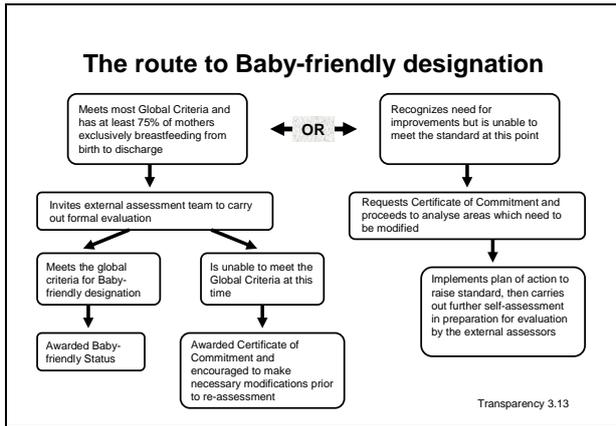
- Free or low-cost supplies of breast-milk substitutes should not be accepted in health care facilities.
- Breast-milk substitutes should be purchased by the health care facility in the same way as other foods and medicines, and for at least wholesale price.
- Promotional material for infant foods or drinks other than breast milk should not be permitted in the facility.
- Pregnant women should not receive materials that promote artificial feeding.
- Feeding with breast-milk substitutes should be demonstrated by health workers only, and only to pregnant women, mothers, or family members who need to use them.

Transparency 3.11

The role of administrators and staff in upholding the International Code

- Breast-milk substitutes in the health facility should be kept out of the sight of pregnant women and mothers.
- The health facility should not allow sample gift packs with breast-milk substitutes or related supplies that interfere with breastfeeding to be distributed to pregnant women or mothers.
- Financial or material inducements to promote products within the scope of the Code should not be accepted by health workers or their families.
- Manufacturers and distributors of products within the scope of the Code should disclose to the institution any contributions made to health workers such as fellowships, study tours, research grants, conferences, or the like. Similar disclosures should be made by the recipient.

Transparency 3.12



Differences between monitoring and reassessment

Monitoring	Reassessment
<ul style="list-style-type: none"> Measures progress on the “10 steps” Identifies areas needing improvement and helps in planning actions Can be organized by the hospital or by the national BFHI coordination group 	<ul style="list-style-type: none"> Evaluates whether the hospital meets the Global Criteria for the “10 steps” Same, but also used to decide if hospital should remain designated “Baby-friendly” Is usually organized by the national BFHI coordination group

Transparency 3.14

Differences between monitoring and reassessment

Monitoring	Reassessment
<ul style="list-style-type: none"> Can be performed by monitors “internal” to the hospital or from outside Quite inexpensive if performed “internally” Can be done frequently 	<ul style="list-style-type: none"> Must be performed by “external” assessors Somewhat more costly, as requires “external” assessors Usually scheduled less frequently

Transparency 3.15

- ### The role of the hospital administrator in BFHI
- Become familiar with the BFHI process
 - Decide where responsibility lies within the hospital structure. This can be a coordinating committee, working group, multidisciplinary team, etc.
 - Establish the process within the hospital of working with the identified responsible body
 - Work with key hospital staff to fill in the self-appraisal tool using the Global Criteria and interpret results
- Transparency 3.16

- ### The role of the hospital administrator in BFHI
- Support staff in decisions taken to achieve “Baby-friendliness”
 - Facilitate any BFHI-related training that may be needed
 - Collaborate with national BFHI coordination group and ask for an external assessment team when the hospital is ready for assessment
 - Encourage staff to sustain adherence to the “10 steps”, arranging for refresher training and periodic monitoring and reassessment
- Transparency 3.17

- ### Global Strategy on Infant and Young Child Feeding (IYCF): Aim
- To improve – through optimal feeding – the nutritional status, growth and development, health, and thus the survival of infants and young children.
- Transparency 3.18

Operational targets in the strategy

- Develop, implement, monitor, and evaluate a comprehensive policy on IYCF;
- Ensure that the health and other relevant sectors protect, promote and support exclusive breastfeeding for six months and continued breastfeeding up to two years of age or beyond, while providing women access to the support they require;
- Promote timely, adequate, safe, and appropriate complementary feeding with continued breastfeeding;
- Provide guidance on feeding infants and young children in exceptionally difficult circumstances;
- Consider what new legislation or other suitable measures may be required, as part of a comprehensive policy on IYCF, to give effect to the principles and aim of the International Code of Marketing and to subsequent relevant Health Assembly resolutions.

Transparency 3.19

Further strengthening of BFHI

The Global Strategy urges that hospital routines and procedures *remain* fully supportive of the successful initiation and establishment of breastfeeding through the:

- implementation of the Baby-friendly Hospital Initiative
- monitoring and reassessing already designated facilities; and
- expanding the Initiative to include clinics, health center, and paediatric hospitals

Transparency 3.20

It also urges that support be given for feeding infants and young children in exceptionally difficult circumstances,

- with one aspect of this being to adapt the BFHI by taking account of HIV/AIDS,
- and by ensuring that those responsible for emergency preparedness are well trained to support appropriate feeding practices consistent with the Initiative's universal principles.

Transparency 3.21

Breastfeeding: an issue on the world's agenda

Joint WHO/UNICEF Meeting on Infant and Young Child Feeding

The Joint WHO/UNICEF Meeting on Infant and Young Child Feeding took place at WHO Geneva from 9 to 12 October 1979. It was held as part of the two organizations' on going programmes on the promotion of breastfeeding and improvement of infant and young child nutrition.

The participants included representatives of governments, the United Nations system and technical agencies, non governmental organizations active in the area, the infant food industry and scientists working in the field. A total of some 150 participants were present.

The meeting was conducted in plenary and five working groups. There was one background document prepared by WHO and UNICEF (FHE/ICF/79.3). The themes of the working groups were:

- encouraging and supporting breastfeeding;
- promotion and support of appropriate weaning practices;
- information, education, communication, and training;
- health and social status of women in relation to infant and young child feeding;
- appropriate marketing and distribution of breast-milk substitutes.

International Code of Marketing of Breast-milk Substitutes

Efforts to promote breastfeeding and to overcome problems that might discourage it are a part of the overall nutrition and child health programmes of the World Health Organization (WHO) and UNICEF, and are a key element of primary health care as a means of achieving health for all by the year 2000. As early as 1974, the 27th World Health Assembly noted the general decline in breastfeeding in many parts of the world. The Assembly found this decline to be related to the promotion of manufactured breast-milk substitutes, and urged "member countries to review sales promotion activities on baby foods and to introduce appropriate remedial measures, including advertisement codes and legislation where necessary".

The issue was taken up again by the 31st World Health Assembly, which recommended, in May 1978, "regulating inappropriate sales promotion of infant foods that can be used to replace breast milk". Years of discussion and debate resulted in the drafting and adoption, on 21 May 1981, of the International Code of Marketing of Breast-milk Substitutes.

The Code seeks mainly to "contribute to the provision of safe and adequate nutrition for infants by protecting and promoting breastfeeding and by ensuring that breast-milk substitutes not be marketed or distributed in ways that may interfere with breastfeeding". But it also recognizes, in its preamble, the interconnectedness of breastfeeding and infant nutrition and that malnutrition is linked to "wider problems of lack of education, poverty, and social injustice". The Code points out that the health of infants and young children cannot be isolated from the health and nutrition of women, their socio-economic status and their roles as mothers. In taking this broad view of breastfeeding, the Code helped set the stage for breastfeeding's inclusion in a series of other social rights documents.

Convention of the Rights of the Child

Adopted by the General Assembly of the United Nations on 20 November 1989, the Convention on the Rights of the Child recalls the basic principles of the United Nations and the provisions of relevant human rights treaties and proclamations, and makes children the focus of these. In seeking to ensure the health of children, it makes it a condition that all segments of society, particularly parents, should have access to education about, and be supported in, the use of breastfeeding. In calling for universal ratification of the Convention by 1995, former UNICEF Executive Director James P. Grant cited breastfeeding as part of the “revolution for children”, noting that “the scientific rediscovery of the miracle of mother’s milk means that more than a million children’s lives a year could be saved by effective breastfeeding”.

Protecting, Promoting and Supporting Breastfeeding: The Special Role of Maternity Services. A Joint WHO/UNICEF Statement

The joint WHO/UNICEF statement has been prepared to increase awareness of the critical role that health services play in promoting breastfeeding, and to describe what should be done to provide mothers with appropriate information and support. It is intended for use, after adaptation to suit local circumstances, by policy-makers and managers as well as by clinicians, midwives, and nursing personnel.

Focusing on the brief period of prenatal, delivery, and perinatal care provided in maternity wards and clinics, the statement encourages those concerned with the provision of maternity services to review policies and practices that affect breastfeeding. It outlines practical steps that they can take to promote and facilitate the initiation and establishment of breastfeeding by mothers in their care.

Innocenti Declaration

Born of the policy-makers’ meeting on “Breastfeeding in the 1990s: a Global Initiative”, jointly sponsored by WHO and UNICEF in August 1990, the Innocenti Declaration on the Protection, Promotion and Support of Breastfeeding spells out clearly the benefits of breastfeeding. It calls for policies and the attainment of a “breastfeeding culture” enabling women to breastfeed their children exclusively for the first four to six months, and then up to two years of age and beyond. The Declaration asks that national authorities integrate breastfeeding programmes into their overall health and development policies.

Its four targets include the appointment of a national breastfeeding coordinator and establishment of a multisectoral national breastfeeding committee, ensuring that every facility providing maternity services fully practices all “Ten Steps” set out in the Joint WHO/UNICEF Statement, taking action to give effect to the principles and aim of all Articles of the International Code of Marketing of Breast-Milk Substitutes and subsequent World Health Assembly resolutions, and enacting imaginative legislation protecting the breastfeeding rights of working women and establishing means for its enforcement.

World Summit for Children

The World Summit for Children was convened in New York on 30 September 1990. 71 heads of state and 58 other observer delegations met for two days to talk about children. The Summit adopted the World Declaration on the Survival, Protection, and Development of Children and related Plan of Action containing specific 27 time-bound goals for children and development in the 1990s, including a cluster of food and nutrition targets. It stated that: “For the young child and the pregnant woman, provision of adequate food during pregnancy and lactation; promotion, protection and support of breastfeeding and complementary feeding practices, including frequent feeding; growth monitoring with appropriate follow-up actions; and nutritional surveillance are the most essential needs.” National plans of action were to report on how the Summit goals were to be met all over the world. The World Summit and the World Declaration and its related Plan of Action reaffirmed the importance of achieving optimal infant and young child feeding practices, laying the foundation for future initiatives to promote, protect and support these practices.

Launching of the “Baby-friendly Hospital Initiative”

The Forty-fifth World Health Assembly (4-14 May 1992) in its resolution 45.34 welcomes the leadership of the Executive Heads of WHO and UNICEF in organizing the “Baby-friendly” hospital initiative, with its simultaneous focus on the role of health services in protecting, promoting and supporting breastfeeding, and on the use of breastfeeding as a means of strengthening the contribution of health services to safe motherhood, child survival, and primary health care in general, and endorses this initiative as a most promising means of increasing the prevalence and duration of breastfeeding.

World Declaration on Nutrition

Signatories to the World Declaration on Nutrition, adopted in December 1992 at the International Conference on Nutrition, pledge, in article 19, “to reduce substantially within this decade social and other impediments to optimal breastfeeding”. The Plan of Action for Nutrition, adopted at the same Conference, endorses breastfeeding under sections on preventing and managing infectious diseases and preventing and controlling specific micronutrient deficiencies. It also calls for the promotion of breastfeeding by asking governments and the international community to provide maximum support for women to breastfeed, whether they are formally or informally working, and under a variety of other conditions.

WHO Expert Consultation on HIV and Infant Feeding

WHO’s Department of Reproductive Health and Research, in collaboration with the HIV/STI Initiative and the Department of Child and Adolescent Health and development, convened a Technical Consultation on new data on the prevention of MTCT and their policy implications. The objective was to review recent scientific data and update current recommendations on the provision of ARVs and infant feeding counselling. The Technical Consultation focused on these two components, although it

was recognized that many other components are important for a comprehensive package for MTCT-prevention.

The conclusions and recommendations of the meeting related to infant feeding addressed (1) risks of breastfeeding and replacement feeding, (2) cessation of breastfeeding, (3) infant feeding counselling, (4) breast health, and (5) maternal health.

WHO Consultation on the optimal duration of exclusive breastfeeding

WHO convened in 28-30 March 2001 an expert consultation on the optimal duration of exclusive breastfeeding. The objectives to the consultation were:

- To review the scientific evidence on the optimal duration of exclusive breastfeeding.
- To formulate recommendations for practice on the optimal duration of exclusive breastfeeding.
- To formulate recommendations for research needs in this area.

The report of the Expert Consultation summarizes the objectives of the consultation as well as the findings, recommendations for practice, and research. The agenda of the consultation and list of participants in the consultation is included.

WHO Global Strategy for Infant and Young Child Feeding

Over the past decades, the evidence of biological requirements for appropriate nutrition, recommended feeding practices and factors impeding appropriate feeding has grown steadily. Moreover, much has been learned about interventions that are effective in promoting improved feeding. For example, recent studies in Bangladesh, Brazil and Mexico have demonstrated the impact of counselling, in communities and health services, to improve feeding practices, food intake, and growth.

The Global Strategy for Infant and Young Child Feeding aims to revitalize efforts to promote, protect, and support appropriate infant and young child feeding. It builds upon past initiatives, in particular the Innocenti Declaration and the Baby-friendly Hospital Initiative, and addresses the needs of all children including those living in difficult circumstances, such as infants of mothers living with HIV, low-birth-weight infants, and infants in emergency situations.

The strategy specifies not only responsibilities of governments, but also of international organisations, non-governmental organisations, and other concerned parties. It engages all relevant stakeholders and provides a framework for accelerated action, linking relevant intervention areas and using resources available in a variety of sectors.

Innocenti Declaration 2005

The event, “Celebrating Innocenti 1990-2005: Achievements, Challenge and Future Imperatives” was held on 22 November 2005, in Florence, Italy, to celebrate the 15 years since the original “Innocenti Declaration”. It was jointly organized by the Regional Authority of Tuscany and

the UNICEF Innocenti Research Centre with a wide partnership, including the Italian National Committee for UNICEF, UN organizations, as well as non-governmental organizations like the World Alliance for Breastfeeding Action, the International Baby Food Action Network among others and an international expert panel.

The meeting highlighted the achievements of the last 15 years and issued the “Innocenti Declaration 2005 on Infant and Young Child Feeding”. Statements in the Declaration related to BFHI include that:

- All governments revitalize the Baby-friendly Hospital Initiative (BFHI), maintaining the Global Criteria as the minimum requirement for all facilities, expanding the Initiative’s application to include maternity, neonatal and child health services and community-based support for lactating women and caregivers of young children.
- Multilateral and bilateral organizations and international financial institutions identify and budget for sufficient financial resources and expertise to support governments in formulating, implementing, monitoring and evaluating their policies and programmes on optimal infant and young child feeding, including revitalizing the BFHI.

Handout 3.3

The International Code of Marketing of Breast-milk Substitutes Summary of main points¹

- No advertising of breast-milk substitutes and other products to the public.
- No donations of breast-milk substitutes and supplies to maternity hospitals.
- No free samples to mothers.
- No promotion in the health services.
- No company personnel to advise mothers.
- No gifts or personal samples to health workers.
- No use of space, equipment or educational materials sponsored or produced by companies when teaching mothers about infant feeding.
- No pictures of infants or other pictures idealizing artificial feeding on the labels of the products.
- Information to health workers should be scientific and factual.
- Information on artificial feeding, including labels, should explain the benefits of exclusive breastfeeding and the costs and dangers associated with artificial feeding.
- Unsuitable products, such as sweetened condensed milk, should not be promoted for babies.

¹Adapted from UNICEF UK Baby-friendly Initiative, Course in Lactation Management and Breastfeeding Promotion, Module 5 by A. Radford.

Handout 3.4

BABY-FRIENDLY HOSPITAL INITIATIVE

Revised, Updated and Expanded
for Integrated Care

SECTION 1 BACKGROUND AND IMPLEMENTATION



2009

Original BFHI guidelines developed 1992



SECTION 1.2

HOSPITAL LEVEL IMPLEMENTATION

Breastfeeding rates

The Baby-friendly Hospital Initiative (BFHI) seeks to provide mothers and babies with a good start for breastfeeding, increasing the likelihood that babies will be breastfed exclusively for the first six months and then given appropriate complementary foods while breastfeeding continues for two years or beyond.

For purposes of assessing a maternity facility, the number of women breastfeeding exclusively from birth to discharge may serve as an approximate indicator of whether protection, promotion, and support for breastfeeding are adequate in that facility. The maternity facility's annual statistics should indicate that at least 75% of the mothers who delivered in the past year are either exclusively breastfeeding or exclusively feeding their babies human milk from birth to discharge or, if not, this is because of acceptable medical reasons (in settings where HIV status is known, if mothers have made fully informed decisions to replacement feed, these can be considered "acceptable medical reasons", and thus counted towards the 75% exclusive breastfeeding goal). If fewer than 75% of women who deliver in a facility are breastfeeding exclusively from birth to discharge, the managers and staff may wish to study the results from the *Self Appraisal*, consider the *Global Criteria* carefully, and work, through the Triple A process of assessment, analysis, and action, to increase their exclusive breastfeeding rates. Once the 75% exclusive breastfeeding goal has been achieved, an external assessment visit should be arranged.

The BFHI cannot guarantee that women who start out breastfeeding exclusively will continue to do so for the recommended 6 months. However, research studies have shown that delay in initiation of breastfeeding and early supplemental feeding in hospital are associated with less exclusive breastfeeding thereafter. By establishing a pattern of exclusive breastfeeding during the maternity stay, hospitals are taking an essential step towards longer durations of exclusive breastfeeding after discharge.

If hospital staff believes that antenatal care provided elsewhere contributes to rates of less than 75% breastfeeding after the birth, or that community practices need to be more supportive of breastfeeding, they may consider how to work with the antenatal caregivers to improve antenatal education on breastfeeding and with breastfeeding advocates to improve community practices (see Section 1.5 for a discussion of strategies for fostering Baby-friendly Communities).

Supplies of breast-milk substitutes

Research has provided evidence that clearly shows that breast-milk substitute marketing practices influence health workers' and mothers' behaviours related to infant feeding. Marketing practices prohibited by *The International Code of Marketing of Breast-milk Substitutes* (the *Code*) have been shown to be harmful to infants, increasing the likelihood that they will be given formula and other items under the scope of *The Code* and decreasing optimal feeding practices. The 1991 UNICEF Executive Board called for the ending of free and low-cost supplies of formula to all hospitals and maternity wards by the end of 1992. Compliance with *The Code* is required for health facilities to achieve Baby-friendly status.

Questions have been added to the *Self-Appraisal Tool* that will help the national BFHI coordination groups and maternity facilities determine how well their maternity services are

complying with *The Code* and subsequent WHA resolutions and what actions are needed to achieve full compliance.

Support for non-breastfeeding mothers

This revised version of the assessment includes specific questions related to the training staff has received on providing support for “non-breastfeeding mothers” and what actual support these mothers have received. The inclusion of these questions does NOT mean that the BFHI is promoting formula feeding but, rather, that the Initiative wants to help insure that ALL mothers, regardless of feeding method, get the feeding support they need.

Mother-friendly care

New *Global Criteria* and questions have been added to insure that practices are in place for mother-friendly labour and delivery. These practices are important, in their own right, for the physical and psychological health of the mothers themselves, and also have been shown to enhance infants’ start in life, including breastfeeding. Many countries have explored options for including mother-friendly criteria within the Initiative, in some cases re-termining their national initiatives as “mother and baby friendly”. Other countries have adopted full “mother-friendly” initiatives. New self-appraisal and assessment questions on this topic offer a way for countries that have not done so already to add a component focused on the key “mother-friendly” criteria needed for an optimal “continuum of care” for both mother and child from the antenatal to postpartum period¹. These criteria should be required only after health facilities have trained their staff on policies and practices related to mother-friendly care.

HIV and infant feeding

The increasing prevalence of HIV among women of childbearing age in many countries has made it important to give guidance on how to offer appropriate information and support for women related to HIV within the BFHI. Thus, as mentioned earlier, components on HIV and infant feeding have been added to the *20-hour Course* and to the *Global Criteria* and assessment tools.

The course material aims to raise the awareness of participants as to why BFHI continues to be important in areas of high HIV prevalence and ways to assist mothers who are HIV-positive as part of regular care in the health facility. This 20-hour course does not train participants to counsel women who are HIV-positive on infant feeding decisions. Another course and counselling aids are available from WHO for that specialized training and counselling.

It is recommended that the BFHI national authorities and coordination groups in each country work with other relevant national decision-makers to determine whether the HIV components of the assessment will be required and whether this requirement will be for all facilities or only those meeting specified criteria. The decision should be based on the prevalence of HIV among pregnant women and mothers and, therefore, the need for information and support on this issue. If this information is not available, surveys may be necessary to determine what percentages of pregnant women and mothers using the antenatal and delivery services in maternity facilities are HIV positive. It is suggested that if a maternity facility has a prevalence of more than 20% HIV positive clients, and/or has a PMTCT² programme, this component of the assessment should be required. If prevalence is over 10%, the use of this component is strongly advised. National decision-makers in countries with high HIV

1. See the website for the Coalition for Improving Maternity Services (CIMS) <http://www.motherfriendly.org/MFCI/> for a description of *The Mother-Friendly Childbirth Initiative*.

2 Prevention of mother-to-child-transmission (of HIV/AIDS).

prevalence may decide to include additional HIV-related criteria and questions, depending on their needs.

The *Global Criteria*, *Self-Appraisal Tool* and *Hospital External Assessment Tool* all have HIV-related items added in such a way that they can be included or not, depending on the need. The HIV and Infant Feeding criteria are listed separately in the *Global Criteria*. The questions related to HIV in both the *Self-Appraisal* and the various interviews in the *Assessment Tool* are either presented in separate sections or at the end of the respective interviews. There is a separate Summary Sheet in the *Assessment Tool* to display the HIV-related results.

A handout that provides guidance for “Applying the Ten Steps in facilities with high HIV prevalence” is attached as Annex 1 of Section 1.2.

The Baby-friendly Hospital designation process

The BFHI is initiated at national level, with the BFHI national authority and coordination group, UNICEF, WHO, breastfeeding, nutrition and other health groups, and others interested parties as catalysts. The *Global Criteria* and *Self-Appraisal Tool* are available to all who are interested in accessing it on the UNICEF website. UNICEF and WHO will encourage the national authorities and BFHI coordination groups to access it and encourage health facilities to join or continue to participate in the Initiative. For details on country level implementation, please read Section 1.1 of this document.

At the facility level the assessment and designation process includes a number of steps, with facilities following differing paths, depending on the outcomes at various stages of the process. Once a facility has used the *Self-Appraisal Tool* to conduct a “self assessment” of whether it meets baby-friendly standards and has studied the *Global Criteria* to determine whether an external assessment is likely to give the same results, it will decide whether or not it is ready for external assessment.

If the facility determines that it is ready for external assessment in some countries the next step would be an optional or required pre-assessment visit during which an outside consultant explores the readiness of the hospital for a full assessment, using the *Self-Appraisal Tool* and *Global Criteria*. This could be done through an on site visit or by means of an extensive telephone interview/survey, if travel costs are prohibitive. This can be a quite useful intermediate step, as many hospitals overrate their compliance with the *Global Criteria* and this type of visit, followed by working on any further improvements needed, can save a lot of time, money, and anguish both for the hospital and the national BFHI coordination group.

If a facility has used the *Self-Appraisal Tool*, studied the *Global Criteria*, and received feedback during a pre-assessment visit or telephone interview, if scheduled, and determined that it does not yet meet the BFHI standards and recognizes its need for improvement, it should analyse its deficiencies and develop plans to address them. This may include scheduling the *20-hour Course* (presented in Section 3 of these BFHI materials) for its maternity staff, if this training has not been given or was conducted very long ago.

The facility may also request a *Certificate of Commitment* while it is working to become Baby-friendly, if the BFHI coordination group supplies this for facilities at this stage of the process. When it is ready, the facility should then request an external assessment, following the process described in the paragraph above.

The next step, as mentioned above, would be for a facility to request or invite an external assessment. The BFHI coordination group may review the *Self Appraisal* results, any supporting documents that it requires, and the results from a pre-assessment visit or telephone

interview, if one has been made, to help determine if the facility is ready. The external assessment will determine whether the facility meets the *Global Criteria for a Baby-friendly Hospital*. If so, the BFHI coordination group should award the facility the Global BFH Award and Plaque for a specified period.

If the facility, on the other hand, does not meet the *Global Criteria*, it would be awarded a *Certificate of Commitment* to becoming Baby-friendly and would be encouraged or supported to further analyse problem areas and take whatever actions are needed to comply, then inviting another assessment. Whether this second assessment would be a full one, or only partial, focusing on those criteria on which the facility did not originally comply, would depend on the decision made by the assessors and BFHI coordination group at the time of the original assessment.

If the national BFHI coordination group finds that hospitals that have been assessed as failing at times do not agree with the conclusions reached by the assessors, it might consider setting up an appeal process, when necessary, with a review of results by panels of assessors not involved in the original assessments.

Reassessments should be scheduled for baby-friendly hospitals, after the specified period for the Award. If the facility passes the reassessment, it should be given a renewal. If not, it needs to work to address any identified problems and then apply again for reassessment.

SECTION 1.3

THE GLOBAL CRITERIA FOR THE BFHI

Criteria for the 10 Steps and other components

The Global Criteria for the Baby-friendly Hospital Initiative serve as the standard for measuring adherence to each of the Ten Steps for Successful Breastfeeding and the International Code of Marketing of Breast-milk Substitutes. The criteria listed below for each of the Ten Steps and the Code are the minimum global criteria for baby-friendly designation. Additional criteria are provided for "Mother-friendly care" and "HIV and Infant Feeding". It is recommended that the criteria for "Mother-friendly care" be implemented gradually, after maternity staff has received necessary training on this topic. Relevant decision-makers in each country should decide whether the criteria on HIV and infant feeding should be required, depending on the prevalence of HIV among women using the maternity facilities.

The BFHI Self-Appraisal Tool, presented in Section 4 of this series, gives maternity facilities a tool for making a preliminary assessment of whether they are fully implementing the Ten Steps, adhering to the International Code of Marketing, and meeting criteria related to mother-friendly care and HIV and infant feeding. The Global Criteria actually describe how "baby-friendliness" will be judged during the external assessment, and thus can be very useful for maternity staff to study as they work to get ready for assessment. The Global Criteria are listed both here and after the respective sections of the Self Appraisal Tool, for easy reference during self-appraisal.

It is important that the hospital consider adding the collection of statistics on infant feeding and implementation of the Ten Steps into its maternity record-keeping system, if it has not done so already. It is best if this data collection process be integrated into whatever information gathering system is already in place. If the hospital needs guidance on how to gather this data and possible forms to use, responsible staff can refer to the sample data-gathering tools available in Section 4.2: Guidelines and Tools for Monitoring BFHI.

STEP 1. Have a written breastfeeding policy that is routinely communicated to all health care staff.

Global Criteria - Step One

The health facility has a written breastfeeding or infant feeding policy that addresses all 10 Steps and protects breastfeeding by adhering to the International Code of Marketing of Breast-milk Substitutes. It also requires that HIV-positive mothers receive counselling on infant feeding and guidance on selecting options likely to be suitable for their situations. The policy should include guidance for how each of the “Ten Steps” and other components should be implemented (see Section 4.1, Annex 1 for suggestions).

The policy is available so that all staff members who take care of mothers and babies can refer to it. Summaries of the policy covering, at minimum, the Ten Steps, the Code and subsequent WHA Resolutions, and support for HIV-positive mothers, are visibly posted in all areas of the health care facility which serve pregnant women, mothers, infants, and/or children. These areas include the labour and delivery area, antenatal care in-patient wards and clinic/consultation rooms, post partum wards and rooms, all infant care areas, including well baby observation areas (if there are any), and any special care baby units. The summaries are displayed in the language(s) and written with wording most commonly understood by mothers and staff.

STEP 2. Train all health care staff in skills necessary to implement the policy.

Global Criteria - Step Two

The head of maternity services reports that all health care staff members who have any contact with pregnant women, mothers, and/or babies, have received orientation on the breastfeeding/infant feeding policy. The orientation that is provided is sufficient.

A copy of the curricula or course session outlines for training in breastfeeding promotion and support for various types of staff is available for review, and a training schedule for new employees is available.

Documentation of training indicates that 80% or more of the clinical staff members who have contact with mothers and/or infants and have been on the staff 6 months or more have received training at the hospital, prior to arrival, or through well-supervised self-study or on-line courses that covers all 10 Steps, the Code and subsequent WHA resolutions, and mother-friendly care. It is likely that at least 20 hours of targeted training will be needed to develop the knowledge and skills necessary to adequately support mothers. At least three hours of supervised clinical experience are required.

Documentation of training also indicates that non-clinical staff members have received training that is adequate, given their roles, to provide them with the skills and knowledge needed to support mothers in successfully feeding their infants.

Training on how to provide support for non-breastfeeding mothers is also provided to staff. A copy of the course session outlines for training on supporting non-breastfeeding mothers is also available for review. The training covers key topics such as:

- the risks and benefits of various feeding options;
- helping the mother choose what is acceptable, feasible, affordable, sustainable and safe (AFASS) in her circumstances;
- the safe and hygienic preparation, feeding and storage of breast-milk substitutes;
- how to teach the preparation of various feeding options, and

Global Criteria - Step Two

(Continued from previous page)

- how to minimize the likelihood that breastfeeding mothers will be influenced to use formula.

The type and percentage of staff receiving this training is adequate, given the facility's needs.

Out of the randomly selected clinical staff members*:

- At least 80% confirm that they have received the described training or, if they have been working in the maternity services less than 6 months, have, at minimum, received orientation on the policy and their roles in implementing it.
- At least 80% are able to answer 4 out of 5 questions on breastfeeding support and promotion correctly.
- At least 80% can describe two issues that should be discussed with a pregnant woman if she indicates that she is considering giving her baby something other than breast milk.

Out of the randomly selected non-clinical staff members**:

- At least 70% confirm that they have received orientation and/or training concerning the promotion and support of breastfeeding since they started working at the facility.
- At least 70% are able to describe at least one reason why breastfeeding is important.
- At least 70% are able to mention one possible practice in maternity services that would support breastfeeding.
- At least 70% are able to mention at least one thing they can do to support women so they can feed their babies well.

* *These include staff members providing clinical care for pregnant women, mothers and their babies.*

** *These include staff members providing non-clinical care for pregnant women, mother and their babies or having contact with them in some aspect of their work.*

STEP 3. Inform all pregnant women about the benefits and management of breastfeeding.

Global Criteria - Step Three

If the hospital has an affiliated antenatal clinic or an in-patient antenatal ward:

A written description of the minimum content of the breastfeeding information and any printed materials provided to all pregnant women is available.

The antenatal discussion covers the importance of breastfeeding, the importance of immediate and sustained skin-to-skin contact, early initiation of breastfeeding, rooming-in on a 24 hour basis, feeding on cue or baby-led feeding, frequent feeding to help assure enough milk, good positioning and attachment, exclusive breastfeeding for the first 6 months, the risks of giving formula or other breast-milk substitutes, and the fact that breastfeeding continues to be important after 6 months when other foods are given.

Out of the randomly selected pregnant women in their third trimester who have come for at least two antenatal visits:

- At least 70% confirm that a staff member has talked with them individually or offered a group talk that includes information on breastfeeding.
- At least 70% are able to adequately describe what was discussed about two of the following topics: importance of skin-to-skin contact, rooming-in, and risks of supplements while breastfeeding in the first 6 months.

STEP 4. Help mothers initiate breastfeeding within a half-hour of birth.

This Step is now interpreted as:

Place babies in skin-to-skin contact with their mothers immediately following birth for at least an hour. Encourage mothers to recognize when their babies are ready to breastfeed and offer help if needed.

Global Criteria - Step Four

Out of the randomly selected mothers with vaginal births or caesarean sections without general anaesthesia in the maternity wards:

- At least 80% confirm that their babies were placed in skin-to-skin contact with them immediately or within five minutes after birth and that this contact continued without separation for an hour or more, unless there were medically justifiable reasons.

(Note: It is preferable that babies be left even longer than an hour, if feasible, as they may take longer than 60 minutes to breastfeed).

- At least 80% also confirm that they were encouraged to look for signs for when their babies were ready to breastfeed during this first period of contact and offered help, if needed.

(Note: The baby should not be forced to breastfeed but, rather, supported to do so when ready. If desired, the staff can assist the mother with placing her baby so it can move to her breast and latch when ready).

If any of the randomly selected mothers have had caesarean deliveries with general anaesthesia, at least 50% should report that their babies were placed in skin-to-skin contact with them as soon as the mothers were responsive and alert, with the same procedures followed.

At least 80% of the randomly selected mothers with babies in special care report that they have had a chance to hold their babies skin-to-skin or, if not, the staff could provide justifiable reasons why they could not.

Observations of vaginal deliveries, if necessary to confirm adherence to Step 4, show that in at least 75% of the cases babies are placed with their mothers and held skin-to-skin within five minutes after birth for at least 60 minutes without separation, and that the mothers are shown how to recognize the signs that their babies are ready to breastfeed and offered help, or there are justified reasons for not following these procedures.

STEP 5. Show mothers how to breastfeed and how to maintain lactation, even if they should be separated from their infants.

Global Criteria - Step Five

The head of maternity services reports that mothers who have never breastfed or who have previously encountered problems with breastfeeding receive special attention and support both in the antenatal and postpartum periods.

Observations of staff demonstrating how to safely prepare and feed breast-milk substitutes confirm that in 75% of the cases, the demonstrations were accurate and complete, and the mothers were asked to give “return demonstrations”

Out of the randomly selected clinical staff members:

- At least 80% report that they teach mothers how to position and attach their babies for breastfeeding and are able to describe or demonstrate correct techniques for both or, if not, can describe to whom they refer mothers on their shifts for this advice.
- At least 80% report that they teach mothers how to hand express and can describe or demonstrate an acceptable technique for this, or, if not, can describe to whom they refer mothers on their shifts for this advice.
- At least 80% can describe how non-breastfeeding mothers can be assisted to safely prepare their feeds, or can describe to whom they refer mothers on their shifts for this advice.

Out of the randomly selected mothers (including caesarean):

- At least 80% of those who are breastfeeding report that someone on the staff offered further assistance with breastfeeding within six hours of birth.
- At least 80% of those who are breastfeeding report that someone on the staff offered them help with positioning and attaching their babies for breastfeeding.
- At least 80% of those who are breastfeeding are able to demonstrate or describe correct positioning of their babies for breastfeeding.
- At least 80% of those who are breastfeeding are able to describe what signs would indicate that their babies are attached and suckling well.
- At least 80% of those who are breastfeeding report that they were shown how to express their milk by hand or given written information and told where they could get help if needed.
- At least 80% of the mothers who have decided not to breastfeed report that they have been offered help in preparing and giving their babies feeds, can describe the advice they were given, and have been asked to prepare feeds themselves, after being shown how.

Out of the randomly selected mothers with babies in special care:

- At least 80% of those who are breastfeeding or intending to do so report that they have been offered help to start their breast milk coming and to keep up the supply within 6 hours of their babies' births.
- At least 80% of those breastfeeding or intending to do so report that they have been shown how to express their breast milk by hand.
- At least 80% of those breastfeeding or intending to do so can adequately describe and demonstrate how they were shown to express their breast milk by hand.
- At least 80% of those breastfeeding or intending to do so report that they have been told they need to breastfeed or express their milk 6 times or more every 24 hours to keep up their supply.

STEP 6. Give newborn infants no food or drink other than breast milk, unless medically indicated.

Global Criteria - Step Six

Hospital data indicate that at least 75% of the babies delivered in the last year have been exclusively breastfed or exclusively fed expressed breast milk from birth to discharge or, if not, that there were documented medical reasons.

Review of all clinical protocols or standards related to breastfeeding and infant feeding used by the maternity services indicates that they are in line with BFHI standards and current evidence-based guidelines.

No materials that recommend feeding breast milk substitutes, scheduled feeds or other inappropriate practices are distributed to mothers.

The hospital has an adequate facility/space and the necessary equipment for giving demonstrations of how to prepare formula and other feeding options away from breastfeeding mothers.

Observations in the postpartum wards/rooms and any well baby observation areas show that at least 80% of the babies are being fed only breast milk or there are acceptable medical reasons for receiving something else.

At least 80% of the randomly selected mothers report that their babies had received only breast milk or expressed or banked human milk or, if they had received anything else, it was for acceptable medical reasons, described by the staff.

At least 80 % of the randomly selected mothers who have decided not to breastfeed report that the staff discussed with them the various feeding options and helped them to decide what was suitable in their situations.

At least 80% of the randomly selected mothers with babies in special care who have decided not to breastfeed report that staff has talked with them about risks and benefits of various feeding options.

STEP 7. Practice rooming-in - allow mothers and infants to remain together – 24 hours a day.

Global Criteria - Step Seven

Observations in the postpartum wards and any well-baby observation areas and discussions with mothers and staff confirm that at least 80% of the mothers and babies are together or, if not, have justifiable reasons for being separated.

At least 80% of the randomly selected mothers report that their babies have been in the same room with them without separation or, if not, there were justifiable reasons.

STEP 8. Encourage breastfeeding on demand.**Global Criteria - Step Eight**

Out of the randomly selected breastfeeding mothers:

- At least 80% report that they have been told how to recognize when their babies are hungry and can describe at least two feeding cues.
- At least 80% report that they have been advised to feed their babies as often and for as long as the babies want or something similar.

STEP 9. Give no artificial teats or pacifiers (also called dummies or soothers) to breastfeeding infants.**Global Criteria - Step Nine**

Observations in the postpartum wards/rooms and any well baby observation areas indicate that at least 80% of the breastfeeding babies observed are not using bottles or teats or, if they are, their mothers have been informed of the risks.

Out of the randomly selected breastfeeding mothers:

- At least 80% report that, as far as they know, their infants have not been fed using bottles with artificial teats (nipples).
- At least 80% report that, as far as they know, their infants have not sucked on pacifiers.

STEP 10. Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic.**Global Criteria - Step Ten**

The head/director of maternity services reports that:

- Mothers are given information on where they can get support if they need help with feeding their babies after returning home, and the head/director can also mention at least one source of information.
- The facility fosters the establishment of and/or coordinates with mother support groups and other community services that provide breastfeeding/infant feeding support to mothers, and can describe at least one way this is done.
- The staff encourages mothers and their babies to be seen soon after discharge (preferably 2-4 days after birth and again the second week) at the facility or in the community by a skilled breastfeeding support person who can assess feeding and give any support needed and can describe an appropriate referral system and adequate timing for the visits.

A review of documents indicates that printed information is distributed to mothers before discharge, if appropriate, on how and where mothers can find help on feeding their infants after returning home and includes information on at least one type of help available.

Out of the randomly selected mothers at least 80% report that they have been given information on how to get help from the facility or how to contact support groups, peer counsellors or other community health services if they have questions about feeding their babies after return home and can describe at least one type of help that is available.

Compliance with the International Code of Marketing of Breast-milk Substitutes

Global Criteria – Code compliance

The head/director of maternity services reports that:

- No employees of manufacturers or distributors of breast-milk substitutes, bottles, teats or pacifiers have any direct or indirect contact with pregnant women or mothers.
- The hospital does not receive free gifts, non-scientific literature, materials or equipment, money, or support for in-service education or events from manufacturers or distributors of breast-milk substitutes, bottles, teats or pacifiers.
- No pregnant women, mothers or their families are given marketing materials or samples or gift packs by the facility that include breast-milk substitutes, bottles/teats, pacifiers, other infant feeding equipment or coupons.

A review of the breastfeeding or infant feeding policy indicates that it uphold the Code and subsequent WHA resolutions by prohibiting:

- the display of posters or other materials provided by manufacturers or distributors of breast-milk substitutes, bottles, teats and dummies or any other materials that promote the use of these products;
- any direct or indirect contact between employees of these manufacturers or distributors and pregnant women or mothers in the facility;
- distribution of samples or gift packs with breast-milk substitutes, bottles or teats or of marketing materials for these products to pregnant women or mothers or members of their families;
- acceptance of free gifts (including food), literature, materials or equipment, money or support for in-service education or events from these manufacturers or distributors by the hospital;
- demonstrations of preparation of infant formula for anyone that does not need them, and
- acceptance of free or low cost breast-milk substitutes or supplies.

A review of records and receipts indicates that any breast-milk substitutes, including special formulas and other supplies, are purchased by the health care facility for the wholesale price or more.

Observations in the antenatal and maternity services and other areas where nutritionists and dieticians work indicate that no materials that promote breast-milk substitutes, bottles, teats or dummies, or other designated products as per national laws, are displayed or distributed to mothers, pregnant women, or staff.

Observations indicate that the hospital keeps infant formula cans and pre-prepared bottles of formula out of view unless in use.

At least 80% of the randomly selected clinical staff members can give two reasons why it is important not to give free samples from formula companies to mothers.

Mother-friendly care**Global Criteria – Mother-friendly care**

Note. These criteria should be required only after health facilities have trained their staff on policies and practices related to mother-friendly care.

A review of the hospital policies indicates that they require mother-friendly labour and birthing practices and procedures including:

- Encouraging women to have companions of their choice to provide continuous physical and/or emotional support during labour and birth, as desired.
- Allowing women to drink and eat light foods during labour, as desired.
- Encouraging women to consider the use of non-drug methods of pain relief unless analgesic or anaesthetic drugs are necessary because of complications, respecting the personal preferences of the women.
- Encouraging women to walk and move about during labour, if desired, and assume positions of their choice while giving birth, unless a restriction is specifically required for a complication and the reason is explained to the mother.
- Care that does not involve invasive procedures such as rupture of the membranes, episiotomies, acceleration or induction of labour, instrumental deliveries, or caesarean sections unless specifically required for a complication and the reason is explained to the mother.

Out of the randomly selected clinical staff members:

- At least 80% are able to describe at least two recommended practices and procedures that can help a mother be more comfortable and in control during labour and birth
- At least 80% are able to list at least three labour or birth procedures that should not be used routinely, but only if required due to complications.
- At least 80% are able to describe at least two labour and birthing practices and procedures that make it more likely that breastfeeding will get off to a good start.

Out of the randomly selected pregnant women:

- At least 70% report that the staff has told them women can have companions of their choice with them throughout labour and birth and at least one reason it could be helpful.
- At least 70% report that they were told at least one thing by the staff about ways to deal with pain and be more comfortable during labour, and what is better for mothers, babies and breastfeeding.

HIV and infant feeding (optional)

Note: The national BFHI coordination group and/or other appropriate national decision-makers will determine whether or not maternity services should be assessed on whether they provide support related to HIV and infant feeding.

Global Criteria – HIV and infant feeding

The head/director of maternity services reports that:

- The hospital has policies and procedures that seem adequate concerning providing or referring pregnant women for testing and counselling for HIV, counselling women concerning PMTCT of HIV, providing individual, private counselling for pregnant women and mothers who are HIV positive on infant feeding options, and insuring confidentiality.
- Mothers who are HIV positive or concerned that they are at risk are referred to community support services for HIV testing and infant feeding counselling, if they exist.

A review of the infant feeding policy indicates that it requires that HIV-positive mothers receive counselling, including information about the risks and benefits of various infant feeding options and specific guidance in selecting the options for their situations, supporting them in their choices.

A review of the curriculum on HIV and infant feeding and training records indicates that training is provided for appropriate staff and is sufficient, given the percentage of HIV positive women and the staff needed to provide support for pregnant women and mothers related to HIV and infant feeding. The training covers basic facts on:

- the risks of HIV transmission during pregnancy, labour and delivery and breastfeeding and its prevention.
- the importance of testing and counselling for HIV.
- local availability of feeding options.
- the dangers of mixed feeding for HIV transmission.
- facilities/provision for counselling HIV positive women on advantages and disadvantages of different feeding options; assisting them in exclusive breastfeeding or formula feeding (note: may involve referrals to infant feeding counsellors).
- how to assist HIV positive mothers who have decided to breastfeed; including how to transition to replacement feeds at the appropriate time.
- how to minimize the likelihood that a mother whose status is unknown or HIV negative will be influenced to replacement feed.

A review of the antenatal information indicates that it covers the important topics on this issue. (these include the routes by which HIV-infected women can pass the infection to their infants, the approximate proportion of infants that will (and will not) be infected by breastfeeding; the importance of counselling and testing for HIV and where to get it; and the importance of HIV positive women making informed infant feeding choices and where they can get the needed counselling).

A review of documents indicates that printed material is available, if appropriate, on how to implement various feeding options and is distributed to or discussed with HIV positive mothers before discharge. It includes information on how to exclusively replacement feed, how to exclusively breastfeed, how to stop breastfeeding when appropriate, and the dangers of mixed feeding.

Continued on next page

Global Criteria – HIV and infant feeding

(continued from previous page)

Out of the randomly selected clinical staff members:

- At least 80% can describe at least one measure that can be taken to maintain confidentiality and privacy of HIV positive pregnant women and mothers.
- At least 80% are able to mention at least two policies or procedures that help prevent transmission of HIV from an HIV positive mother to her infant during feeding within the first six months.
- At least 80% are able to describe two issues that should be discussed when counselling an HIV positive mother who is deciding how to feed her baby.

Out of the randomly selected pregnant women who are in their third trimester and have had at least two antenatal visits or are in the antenatal in-patient unit:

- At least 70% report that a staff member has talked with them or given a talk about HIV/AIDS and pregnancy.
- At least 70% report that the staff has told them that a woman who is HIV-positive can pass the HIV infection to her baby.
- At least 70% can describe at least one thing the staff told them about why testing and counselling for HIV is important for pregnant women.
- At least 70% can describe at least one thing the staff told them about what women who do not know their HIV status should consider when deciding how to feed their babies.

Handout 3.5

BABY-FRIENDLY HOSPITAL INITIATIVE

Revised, Updated and Expanded
for Integrated Care

SECTION 4

HOSPITAL SELF-APPRAISAL AND MONITORING



2009

Original BFHI guidelines developed 1992



4.1. The Hospital Self-Appraisal Tool

Using the hospital self-appraisal tool to assess policies and practices

Any hospital or health facility with maternity services that is interested in becoming Baby-friendly should - as a first step - appraise its current practices with regard to the *Ten Steps to Successful Breastfeeding*. This *Self-Appraisal Tool* has been developed for use by hospitals, maternity facilities, and other health facilities to evaluate how their current practices measure up to the *Ten Steps*, and how they practice other recommendations of the 1989 WHO/UNICEF Joint Statement titled *Protecting, Promoting and Supporting Breastfeeding: The Special Role of Maternity Services*. It also assists facilities in determining how well they comply with the *International Code of Marketing of Breast-milk Substitutes* and subsequent relevant World Health Assembly resolution, whether they provide mother-friendly care, and how well they support HIV-positive women and their infants.

In many cases, it is useful if the hospital decision-makers and policy-maker attend an orientation to the goals and objectives of the Baby-friendly Hospital Initiative (BFHI), before the self appraisal. An orientation session can be developed, using Session 3: “The Baby-friendly Hospital Initiative”, in *Section 2: Strengthening and sustaining the Baby-friendly Hospital Initiative: A course for decision-makers* and/or Session 15 “Making your hospital baby-friendly” in *Section 3: Breastfeeding promotion and support in a Baby-friendly Hospital: A course for maternity staff*, along with a review of the *Self-appraisal tool* and *Global Criteria for BFHI* discussed in the following pages.

The *Self-appraisal tool* that follows will permit the director and heads of relevant units in a hospital or other health facility giving maternity care to make an initial appraisal or review of its practices in support of breastfeeding. Completion of this initial self-appraisal checklist is the first stage of the process, but does not in itself qualify the hospital for designation as Baby-friendly.

The *Global Criteria*, which guide the external assessment of whether the hospital qualifies as Baby-friendly, should also be reviewed by staff when reflecting upon the effectiveness of their breastfeeding programme. For ease of reference, the *Global Criteria* for each of the Steps, for the Code, mother-friendly care and HIV and infant feeding are reproduced with the respective sections in the *Self-appraisal tool*. The *Self-appraisal tool* also includes four Annexes:

Annex 1, a checklist to assist in appraising the hospital’s breastfeeding or infant feeding policy;

Annex 2, a list of the main points in the *International Code of Marketing* and the role of administrator and staff in upholding it;

Annex 3, a set of recommendations for HIV and infant feeding, and

Annex 4, acceptable medical reasons for use of breast-milk substitutes.

Nationally determined criteria and local experience may cause national and institutional authorities responsible for BFHI to consider the addition of other relevant queries to this global self appraisal tool. Whatever practices are seen by a facility to discourage breastfeeding may be considered during the process of self-appraisal.

If it does not do so already, it is important that the hospital consider adding the collection of statistics on feeding and implementation of the Ten Steps into its maternity record-keeping system, preferably integrated into whatever information gathering system is already in place. If the hospital needs guidance on how to gather this data and possible forms to use, responsible staff can refer to the sample data-gathering tools available in this document in *Section 4.2: Guidelines and tools for monitoring BFHI*.

Analysing the Self-Appraisal Results

Under ideal circumstances, most of the questions in this tool will be answered as “yes”. Numerous negative answers will suggest divergence from the recommendations of the *WHO/UNICEF Joint Statement* and its *Ten Steps to successful breastfeeding*. In addition to answering the questions in the *Self appraisal*, the hospital could consider doing some informal testing of staff and mothers, using the *Global Criteria* listed for the various steps as a guide, to determine if they meet the required standards.

When a facility can answer most of the questions with “yes”, it may then wish to take further steps towards being designated as a Baby-friendly Hospital. In some countries, a pre-assessment visit is the next step, with a local consultant visiting the health facility and working with managers and staff to make sure the facility is ready for assessment.

Then a visit by an external assessment team is arranged, in consultation with the national BFHI coordination group. The external assessors will use the *Hospital external assessment tool* to determine if the hospital meets the criteria for “Baby-friendly” designation.

A hospital with many “no” answers on the *Self-appraisal tool* or where exclusive breastfeeding or breast-milk feeding from birth to discharge is not yet the norm for at least 75%³ of newborns delivered in the maternity facility may want to develop an action plan. The aim is to eliminate practices that hinder initiation of exclusive breastfeeding and to expand those that enhance it.

Action

Results of the self-appraisal should be shared with the national BFHI coordination group. If improvements in knowledge and practices are needed before arranging for an external assessment, training may be arranged for the facility staff, facilitated by senior professionals who have attended a national or international training-of-trainers course in lactation management and/or have received national or international certification as lactation consultants.

In many settings, it has been found valuable to develop various cadres of specialists who can provide help with breastfeeding, both in health care facilities and at the community level. Through community-based health workers (village health workers, traditional birth attendants, etc.) and mother support groups, mothers can be reached with education and support in their home settings, a vital service wherever exclusive and sustained breastfeeding have become uncommon.

It is useful if a “breastfeeding support” or BFHI committee or team is organized at the health facility at the time of the self-appraisal, if this has not been done earlier. This committee or team can be charged with coordination of all activities regarding the implementation and monitoring of BFHI, including monitoring compliance with the *Code of Marketing*. The committee can serve as leader and coordinator for all further activities, including arranging for training, if needed, further self-appraisal, external assessment, self-monitoring, and reassessment. Members should include professionals of various disciplines (for example, physicians such as neonatologists, paediatricians, obstetricians, nurses, midwives, nutritionists, social workers, etc.) with some members in key management or leadership positions.

The facility can consult with the relevant local authority and the UNICEF and WHO country offices, which may be able to provide more information on policies and training, which can contribute to increasing the Baby-friendliness of health facilities.

³ As mentioned elsewhere, if mothers are not breastfeeding for justified medical reasons, including by mothers who are HIV-positive, they can be counted as part of the 75%.

Preparing for the external assessment

Before seeking assessment and designation as Baby-friendly hospitals are encouraged to develop:

- a written breastfeeding/infant feeding policy covering all *Ten Steps to successful breastfeeding* and compliance with the *Code*, as well as HIV and infant feeding, if included in the criteria,
- a written policy addressing mother-friendly care, if included in the criteria,
- a written curriculum for training given to hospital staff caring for mothers and babies on breastfeeding management, feeding of the non-breastfeeding infant, and mother-friendly care, and
- an outline of the content covered in antenatal health education on these topics.

If HIV and infant feeding criteria are being covered in the assessment, documents related to staff training and antenatal education on this topic should also be developed.

Also needed for the assessment are:

- proof of purchase of infant formula and various related supplies, and
- a list of the staff members who care for mothers and/or babies and the numbers of hours of training they have received on required topics.

The external assessment teams may request that these documents be assembled and sent to the team leader before the assessment.

*The Self Appraisal Questionnaire***Hospital data sheet****General information on hospital and senior staff:**

Hospital name and address: _____

Name and title of hospital director or administrator: _____

Telephone or extension: _____ E-mail address: _____

The hospital is: *[tick all that apply]*

<input type="checkbox"/> a maternity hospital	<input type="checkbox"/> a government hospital
<input type="checkbox"/> a general hospital	<input type="checkbox"/> a privately run hospital
<input type="checkbox"/> a teaching hospital	<input type="checkbox"/> other (specify): _____
<input type="checkbox"/> a tertiary hospital	_____

Total number of hospital beds: _____ Total number of hospital employees: _____

Information on antenatal services:Hospital has antenatal services (either on or off site): Yes No

(if "No", skip all but the last question in this section.)

Name and title of the director of antenatal services/clinic: _____

Telephone or extension: _____ E-mail address: _____

What percentage of mothers delivering at the hospital attends the hospital's antenatal clinic? ____%

Does the hospital hold antenatal clinics at other sites outside the hospital? Yes No*[if "Yes"]* Please describe when and where they are held: _____Are there beds designated for high-risk pregnancy cases? Yes No *[if "Yes":]*

How many? _____

What percentage of women arrives for delivery without antenatal care? _____% Don't know**Information on labour and delivery services:**

Name and title of the director of labour and delivery services: _____

Telephone or extension: _____ E-mail address: _____

Information on maternity and related services:

Name and title of the director of maternity services: _____

Telephone or extension: _____ E-mail address: _____

Number of postpartum maternity beds: _____

Average daily number of mothers with full term babies in the postpartum unit(s): _____

Does the facility have unit(s) for infants needing special care (LBW, premature, ill, etc.)?

 Yes No*[if "Yes"]* Name of first unit: _____ Average daily census: _____

Name of director(s) of this unit: _____

Name of additional unit: _____ Average daily census: _____

Name of director(s) of this unit: _____

Are there areas in the maternity wards designated as well baby observation areas? Yes No*[if "Yes"]* Average daily census of each area: _____

Name of head/director(s) of these areas: _____

Staff responsible for breastfeeding/infant feeding

The following staff has direct responsibility for assisting women with breastfeeding (BF), feeding breast-milk substitutes (BMS), or providing counselling on HIV and infant feeding):

[tick all that apply]

	BF	BMS	HIV		BF	BMS	HIV
Nurses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Paediatricians	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Midwives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Obstetricians	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SCBU/NICU nurses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Infant feeding counsellors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dieticians	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Lay/peer counsellors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nutritionists	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Other staff (specify):			
Lactation consultants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> General
physicians	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

[use information for completing I.C. 10, 13 and 17]

Are there breastfeeding and/or HIV and infant feeding committee(s) in the hospital? Yes No

[if "Yes"] Please describe: _____

Is there a BFHI coordinator at the hospital? Yes No (if "Yes", name:) _____

Statistics on births:

Total births in the last year: _____ of which:

____% were by C-section without general anaesthesia.

____% were by C-section with general anaesthesia.

____% infants were admitted to the SCBU/NICU or similar units.

Statistics on infant feeding:

Total number of babies discharged from the hospital last year: _____ of which:

____% were exclusively breastfed (or fed human milk) from birth to discharge.

____% received at least one feed other than breast milk (formula, water or other fluids) in the hospital because of documented medical reason. (if a mother knew she was HIV positive and made an informed decision to replacement feed, this can be considered a medical reason).

____% received at least one feed other than breast milk without any documented medical reason.

[Note: the total percentages listed above should equal 100%]

The hospital data above indicates that at least 75% of the babies delivered in the past year were exclusively breastfed or fed human milk from birth to discharge, or, if they received any feeds other than human milk this was because of documented medical reasons:

[Note: add the percentages in categories one and two to calculate this percentage]

Yes No

6.1

Statistics on HIV/AIDS:

Percentage of pregnant women who received testing and counselling for HIV: _____%

Percentage of mothers who were known to be HIV-positive at the time of babies' births: _____%

Data sources:

Please describe sources for the above data: _____

STEP 1. Have a written breastfeeding policy that is routinely communicated to all health care staff.

	YES	NO
1.1 Does the health facility have a written breastfeeding/infant feeding policy that addresses all 10 Steps to Successful Breastfeeding in maternity services and support for HIV-positive mothers?	<input type="checkbox"/>	<input type="checkbox"/>
1.2 Does the policy protect breastfeeding by prohibiting all promotion of breast-milk substitutes, feeding bottles, and teats?	<input type="checkbox"/>	<input type="checkbox"/>
1.3 Does the policy prohibit distribution of gift packs with commercial samples and supplies or promotional materials for these products to pregnant women and mothers?	<input type="checkbox"/>	<input type="checkbox"/>
1.4 Is the breastfeeding/infant feeding policy available so all staff who take care of mothers and babies can refer to it?	<input type="checkbox"/>	<input type="checkbox"/>
1.5 Is a summary of the breastfeeding/infant feeding policy, including issues related to the 10 Steps, The International Code of Marketing of Breast-milk Substitutes and subsequent WHA resolutions, and support for HIV-positive mothers posted or displayed in all areas of the health facility which serve mothers, infants, and/or children?	<input type="checkbox"/>	<input type="checkbox"/>
1.6 Is the summary of the policy posted in language(s) and written with wording most commonly understood by mothers and staff?	<input type="checkbox"/>	<input type="checkbox"/>
1.7 Is there a mechanism for evaluating the effectiveness of the policy?	<input type="checkbox"/>	<input type="checkbox"/>
1.8 Are all policies or protocols related to breastfeeding and infant feeding in line with current evidence-based standards?	<input type="checkbox"/>	<input type="checkbox"/>

STEP 2. Train all health care staff in skills necessary to implement the policy.

	YES	NO
2.1 Are all staff members caring for pregnant women, mothers, and infants oriented to the breastfeeding/infant feeding policy of the hospital when they start work?	<input type="checkbox"/>	<input type="checkbox"/>
2.2 Are staff members who care for pregnant women, mothers and babies both aware of the importance of breastfeeding and acquainted with the facility's policy and services to protect, promote, and support breastfeeding?	<input type="checkbox"/>	<input type="checkbox"/>
2.3 Do staff members caring for pregnant women, mothers and infants (or all staff members, if they are often rotated into positions with these responsibilities) receive training on breastfeeding promotion and support within six months of commencing work, unless they have received sufficient training elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>
2.4 Does the training cover all Ten Steps to Successful Breastfeeding and The International Code of Marketing of Breast-milk Substitutes?	<input type="checkbox"/>	<input type="checkbox"/>
2.5 Is training for clinical staff at least 20 hours in total, including a minimum of 3 hours of supervised clinical experience?	<input type="checkbox"/>	<input type="checkbox"/>
2.6 Is training for non-clinical staff sufficient, given their roles, to provide them with the skills and knowledge needed to support mothers in successfully feeding their infants?	<input type="checkbox"/>	<input type="checkbox"/>
2.6 Is training also provided either for all or designated staff caring for women and infants on feeding infants who are not breastfed and supporting mothers who have made this choice?	<input type="checkbox"/>	<input type="checkbox"/>
2.7 Are clinical staff members who care for pregnant women, mothers, and infants able to answer simple questions on breastfeeding promotion and support and care for non-breastfeeding mothers?	<input type="checkbox"/>	<input type="checkbox"/>
2.8 Are non-clinical staff such as care attendants, social workers, and clerical, housekeeping and catering staff able to answer simple questions about breastfeeding and how to provide support for mothers on feeding their babies?	<input type="checkbox"/>	<input type="checkbox"/>
2.9 Has the healthcare facility arranged for specialized training in lactation management of specific staff members?	<input type="checkbox"/>	<input type="checkbox"/>

STEP 3. Inform all pregnant women about the benefits and management of breastfeeding.

	YES	NO
3.1 Does the hospital include an antenatal clinic or satellite antenatal clinics or in-patient antenatal wards?	<input type="checkbox"/>	<input type="checkbox"/>
3.2 If yes, are the pregnant women who receive antenatal services informed about the importance and management of breastfeeding?	<input type="checkbox"/>	<input type="checkbox"/>
3.3 Do antenatal records indicate whether breastfeeding has been discussed with pregnant women?	<input type="checkbox"/>	<input type="checkbox"/>
3.4 Does antenatal education, including both that provided orally and in written form, cover key topics related to the importance and management of breastfeeding?	<input type="checkbox"/>	<input type="checkbox"/>
3.5. Are pregnant women protected from oral or written promotion of and group instruction for artificial feeding?	<input type="checkbox"/>	<input type="checkbox"/>
3.6. Are the pregnant women who receive antenatal services able to describe the risks of giving supplements while breastfeeding in the first six months?	<input type="checkbox"/>	<input type="checkbox"/>
3.7 Are the pregnant women who receive antenatal services able to describe the importance of early skin-to-skin contact between mothers and babies and rooming-in?	<input type="checkbox"/>	<input type="checkbox"/>
3.8 Is a mother's antenatal record available at the time of delivery?	<input type="checkbox"/>	<input type="checkbox"/>

STEP 4. Help mothers initiate breastfeeding within a half-hour of birth.

This Step is now interpreted as:

Place babies in skin-to-skin contact with their mothers immediately following birth for at least an hour. Encourage mothers to recognize when their babies are ready to breastfeed and offer help if needed.

	YES	NO
4.1 Are babies who have been delivered vaginally or by caesarean section <u>without</u> general anaesthesia placed in skin-to-skin contact with their mothers immediately after birth and their mothers encouraged to continue this contact for an hour or more?	<input type="checkbox"/>	<input type="checkbox"/>
4.2 Are babies who have been delivered by caesarean section <u>with</u> general anaesthesia placed in skin-to-skin contact with their mothers as soon as the mothers are responsive and alert, and the same procedures followed?	<input type="checkbox"/>	<input type="checkbox"/>
4.3 Are all mothers helped, during this time, to recognize the signs that their babies are ready to breastfeed and offered help, if needed?	<input type="checkbox"/>	<input type="checkbox"/>
4.4 Are the mothers with babies in special care encouraged to hold their babies, with skin-to-skin contact, unless there is a justifiable reason not to do so?	<input type="checkbox"/>	<input type="checkbox"/>

STEP 5. Show mothers how to breastfeed and how to maintain lactation, even if they should be separated from their infants.

	YES	NO
5.1 Does staff offer all breastfeeding mothers further assistance with breastfeeding their babies within six hours of delivery?	<input type="checkbox"/>	<input type="checkbox"/>
5.2 Can staff describe the types of information and demonstrate the skills they provide both to mothers who are breastfeeding and those who are not, to assist them in successfully feeding their babies?	<input type="checkbox"/>	<input type="checkbox"/>
5.3 Are staff members or counsellors who have specialized training in breastfeeding and lactation management available full-time to advise mothers during their stay in healthcare facilities and in preparation for discharge?	<input type="checkbox"/>	<input type="checkbox"/>
5.4 Does the staff offer advice on other feeding options and breast care to mothers with babies in special care who have decided not to breastfeed?	<input type="checkbox"/>	<input type="checkbox"/>
5.5 Are breastfeeding mothers able to demonstrate how to correctly position and attach their babies for breastfeeding?	<input type="checkbox"/>	<input type="checkbox"/>
5.6 Are breastfeeding mothers shown how to hand express their milk or given information on expression and advised of where they can get help, should they need it?	<input type="checkbox"/>	<input type="checkbox"/>
5.7 Do mothers who have never breastfed or who have previously encountered problems with breastfeeding receive special attention and support from the staff of the healthcare facility, both in the antenatal and postpartum periods?	<input type="checkbox"/>	<input type="checkbox"/>
5.8 Are mothers who have decided not to breastfeed shown individually how to prepare and give their babies feeds and asked to prepare feeds themselves, after being shown how?	<input type="checkbox"/>	<input type="checkbox"/>
5.9 Are mothers with babies in special care who are planning to breastfeed helped within 6 hours of birth to establish and maintain lactation by frequent expression of milk and told how often they should do this?	<input type="checkbox"/>	<input type="checkbox"/>

STEP 6. Give newborn infants no food or drink other than breast milk, unless medically indicated.

	YES	NO
6.1 Does hospital data indicate that at least 75% of the full-term babies discharged in the last year have been exclusively breastfed (or exclusively fed expressed breast milk) from birth to discharge or, if not, that there were acceptable medical reasons?	<input type="checkbox"/>	<input type="checkbox"/>
6.2 Are babies breastfed, receiving no food or drink other than breast milk, unless there were acceptable medical reasons or fully informed choices?	<input type="checkbox"/>	<input type="checkbox"/>
6.3 Does the facility take care not to display or distribute any materials that recommend feeding breast-milk substitutes, scheduled feeds, or other inappropriate practices?	<input type="checkbox"/>	<input type="checkbox"/>
6.4 Do mothers who have decided not to breastfeed report that the staff discussed with them the various feeding options, and helped them to decide what was suitable in their situations?	<input type="checkbox"/>	<input type="checkbox"/>
6.5 Does the facility have adequate space and the necessary equipment and supplies for giving demonstrations of how to prepare formula and other feeding options away from breastfeeding mothers?	<input type="checkbox"/>	<input type="checkbox"/>
6.6 Are all clinical protocols or standards related to breastfeeding and infant feeding in line with BFHI standards and evidence-based guidelines?	<input type="checkbox"/>	<input type="checkbox"/>

STEP 7. Practice rooming-in - allow mothers and infants to remain together – 24 hours a day.

	YES	NO
7.1 Do the mother and baby stay together and/or start rooming-in immediately after birth?	<input type="checkbox"/>	<input type="checkbox"/>
7.2 Do mothers who have had Caesarean sections or other procedures with general anaesthesia stay together with their babies and/or start rooming in as soon as they are able to respond to their babies' needs?	<input type="checkbox"/>	<input type="checkbox"/>
7.3 Do mothers and infants remain together (rooming-in or bedding-in) 24 hours a day, unless separation is fully justified?	<input type="checkbox"/>	<input type="checkbox"/>

STEP 8. Encourage breastfeeding on demand.

	YES	NO
8.1 Are breastfeeding mothers taught how to recognize the cues that indicate when their babies are hungry?	<input type="checkbox"/>	<input type="checkbox"/>
8.2 Are breastfeeding mothers encouraged to feed their babies as often and for as long as the babies want?	<input type="checkbox"/>	<input type="checkbox"/>
8.3 Are breastfeeding mothers advised that if their breasts become overfull they should also try to breastfeed?	<input type="checkbox"/>	<input type="checkbox"/>

STEP 9. Give no artificial teats or pacifiers (also called dummies or soothers) to breastfeeding infants.

	YES	NO
9.1 Are breastfeeding babies being cared for without any bottle feeds?	<input type="checkbox"/>	<input type="checkbox"/>
9.2 Have mothers been given information by the staff about the risks associated with feeding milk or other liquids with bottles and teats?	<input type="checkbox"/>	<input type="checkbox"/>
9.3 Are breastfeeding babies being cared for without using pacifiers?	<input type="checkbox"/>	<input type="checkbox"/>

STEP 10. Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic.

	YES	NO
10.1 Do staff discuss plans with mothers who are close to discharge for how they will feed their babies after return home?	<input type="checkbox"/>	<input type="checkbox"/>
10.2 Does the hospital have a system of follow-up support for mothers after they are discharged, such as early postnatal or lactation clinic check-ups, home visits, telephone calls?	<input type="checkbox"/>	<input type="checkbox"/>
10.3 Does the facility foster the establishment of and/or coordinate with mother support groups and other community services that provide support to mothers on feeding their babies?	<input type="checkbox"/>	<input type="checkbox"/>
10.4 Are mothers referred for help with feeding to the facility's system of follow-up support and to mother support groups, peer counsellors, and other community health services such as primary health care or MCH centres, if these are available?	<input type="checkbox"/>	<input type="checkbox"/>
10.5 Is printed material made available to mothers before discharge, if appropriate and feasible, on where to get follow-up support?	<input type="checkbox"/>	<input type="checkbox"/>
10.6 Are mothers encouraged to see a health care worker or skilled breastfeeding support person in the community soon after discharge (preferably 2-4 days after birth and again the second week) who can assess how they are doing in feeding their babies and give any support needed?	<input type="checkbox"/>	<input type="checkbox"/>
10.7 Does the facility allow breastfeeding/infant feeding counselling by trained mother-support group counsellors in its maternity services?	<input type="checkbox"/>	<input type="checkbox"/>

Compliance with the International Code of Marketing of Breast-milk Substitutes

	YES	NO
Code.1 Does the healthcare facility refuse free or low-cost supplies of breast-milk substitutes, purchasing them for the wholesale price or more?	<input type="checkbox"/>	<input type="checkbox"/>
Code.2 Is all promotion for breast-milk substitutes, bottles, teats, or pacifiers absent from the facility, with no materials displayed or distributed to pregnant women or mothers?	<input type="checkbox"/>	<input type="checkbox"/>
Code.3 Are employees of manufacturers or distributors of breast-milk substitutes, bottles, teats, or pacifiers prohibited from any contact with pregnant women or mothers?	<input type="checkbox"/>	<input type="checkbox"/>
Code.4 Does the hospital refuse free gifts, non-scientific literature, materials or equipment, money or support for in-service education or events from manufacturers or distributors of products within the scope of the Code?	<input type="checkbox"/>	<input type="checkbox"/>
Code.5 Does the hospital keep infant formula cans and pre-prepared bottles of formula out of view unless in use?	<input type="checkbox"/>	<input type="checkbox"/>
Code.6 Does the hospital refrain from giving pregnant women, mothers and their families any marketing materials, samples or gift packs that include breast-milk substitutes, bottles/teats, pacifiers or other equipment or coupons?	<input type="checkbox"/>	<input type="checkbox"/>
Code.7 Do staff members understand why it is important not to give any free samples or promotional materials from formula companies to mothers?	<input type="checkbox"/>	<input type="checkbox"/>

Mother-friendly care

Note: These criteria should be required only after health facilities have trained their staff on policies and practices related to mother-friendly care (see Section 5.1 “Assessors Guide”, p. 5, for discussion).

	YES	NO
MF.1 Do hospital policies require mother-friendly labour and birthing practices and procedures, including:		
Encouraging women to have companions of their choice to provide constant or continuous physical and/or emotional support during labour and birth, if desired?	<input type="checkbox"/>	<input type="checkbox"/>
Allowing women to drink and eat light foods during labour, if desired?	<input type="checkbox"/>	<input type="checkbox"/>
Encouraging women to consider the use of non-drug methods of pain relief unless analgesic or anaesthetic drugs are necessary because of complications, respecting the personal preferences of the women?	<input type="checkbox"/>	<input type="checkbox"/>
Encouraging women to walk and move about during labour, if desired, and assume positions of their choice while giving birth, unless a restriction is specifically required for a complication and the reason is explained to the mother?	<input type="checkbox"/>	<input type="checkbox"/>
Care that avoids invasive procedures such as rupture of the membranes, episiotomies, acceleration or induction of labour, instrumental deliveries, caesarean sections unless specifically required for a complication and the reason is explained to the mother?	<input type="checkbox"/>	<input type="checkbox"/>
MF.2 Has the staff received orientation or training on mother-friendly labour and birthing policies and procedures such as those described above?	<input type="checkbox"/>	<input type="checkbox"/>
MF.3 Are women informed during antenatal care (if provided by the facility) that women may have companions of their choice during labour and birth to provide continuous physical and/or emotional support, if they desire?	<input type="checkbox"/>	<input type="checkbox"/>
MF.4 Once they are in labour, are their companions made welcome and encouraged to provide the support the mothers want?	<input type="checkbox"/>	<input type="checkbox"/>
MF.5 Are women given advice <u>during antenatal care</u> (if provided by the facility) about ways to use non-drug comfort measures to deal with pain during labour and what is better for mothers and babies?	<input type="checkbox"/>	<input type="checkbox"/>
MF.6 Are women told that it is better for mothers and babies if medications can be avoided or minimized, unless specifically required for a complication?	<input type="checkbox"/>	<input type="checkbox"/>
MF.7 Are women informed <u>during antenatal care</u> (if provided by the facility) that they can move around during labour and assume positions of their choice while giving birth, unless a restriction is specifically required due to a complication?	<input type="checkbox"/>	<input type="checkbox"/>
MF.8 Are women encouraged, in practice, to walk and move around during labour, if desired, and assume whatever positions they want while giving birth, unless a restriction is specifically required due to a complication?	<input type="checkbox"/>	<input type="checkbox"/>

HIV and infant feeding (optional)

Note: The national BFHI coordination group and/or other appropriate national decision-makers will determine whether or not maternity services should be assessed on whether they provide support related to HIV and infant feeding. See BFHI Section 1.2 for suggested guidelines for making this decision.

	YES	NO
HIV.1 Does the breastfeeding/infant feeding policy require support for HIV positive women to assist them in making informed choices about feeding their infants?	<input type="checkbox"/>	<input type="checkbox"/>
HIV.2 Are pregnant women told about the ways a woman who is HIV positive can pass the HIV infection to her baby, including during breastfeeding?	<input type="checkbox"/>	<input type="checkbox"/>
HIV.3 Are pregnant women informed about the importance of testing and counselling for HIV?	<input type="checkbox"/>	<input type="checkbox"/>
HIV.4 Does staff receive training on: <ul style="list-style-type: none"> ▪ the risks of HIV transmission during pregnancy, labour and delivery and breastfeeding and its prevention, ▪ the importance of testing and counselling for HIV, and ▪ how to provide support to women who are HIV- positive to make fully informed feeding choices and implement them safely? 	<input type="checkbox"/>	<input type="checkbox"/>
HIV.5 Does the staff take care to maintain confidentiality and privacy of pregnant women and mothers who are HIV-positive?	<input type="checkbox"/>	<input type="checkbox"/>
HIV.6 Are printed materials available that are free from marketing content on how to implement various feeding options and distributed to mothers, depending on their feeding choices, before discharge?	<input type="checkbox"/>	<input type="checkbox"/>
HIV.7 Are mothers who are HIV-positive or concerned that they are at risk informed about and/or referred to community support services for HIV testing and infant feeding counselling?	<input type="checkbox"/>	<input type="checkbox"/>

Handout 3.6

WHO/UNICEF breastfeeding and young child feeding courses

Title	WHO/UNICEF Strengthening and sustaining the Baby-friendly Hospital Initiative: A course for decision- makers	WHO/UNICEF Breastfeeding promotion and support in a Baby-friendly Hospital: a 20-hour course for maternity staff	WHO/UNICEF Breastfeeding counselling: a training course	WHO Complementary feeding counselling: A training course	WHO Infant and young child feeding counselling: an integrated course
Length	8 -12 hours	20 hours	40 hours	21 hours	5 days (plus 1 day for follow-up)
Clinical Practice	None	4 ½ hours	4x2 hours	2x2 hours	8 hours (4 sessions)
Aim	To raise awareness and provide practical guidance on administrative actions needed to become Baby-friendly	To change maternity care to be "Baby-friendly"	To develop clinical and counselling skills in breastfeeding	To provide knowledge and skills for counselling on appropriate complementary feeding practices	To provide knowledge and skills for counselling on breastfeeding, HIV and infant feeding and complementary feeding
Target Group	Health facility directors and administrators	All staff of a maternity facility	Key health workers in all parts of the health system	Health workers that care for and counsel caregivers of young children	Health workers that care for and counsel caregivers of infants and young children
Trainers	Training skills and experience needed	Training skills and experience needed	Preparation of trainers and detailed training instructions included	Training skills and experience needed	Training skills and experience needed
Materials	Course guide - Session plans – Handouts – Slides – Transparencies – Reference materials	Session plans and PowerPoint slides	Director's Guide -Trainer's Guide - Participants' Manual - Transparencies and flipchart – Slides -Forms and check lists – Video – Reference materials	Director's Guide Trainer's Guide Participants' Manual Transparencies	Director's Guide Trainer's Guide Participant's Manual Guidelines for follow-up Slides
Website	http://www.unicef.org/nutrition/index_24850.html?q=printme	http://www.unicef.org/nutrition/index_24850.html?q=printme	http://www.who.int/child-adolescent-health/publications/NUTRITION/BFC.htm	For information contact NHD/WHO Geneva	http://www.who.int/nutrition/ycf_intergrated_course/en/index.html

Handout 3.7



The Baby-friendly Hospital Initiative Guidelines and tools for monitoring and reassessment

A need for monitoring and reassessment tools

With the steady increase of hospitals worldwide that have been designated “Baby-friendly”, health authorities in many countries have expressed a need for monitoring and reassessment tools that will help them build on progress achieved through the Baby-friendly Hospital Initiative (BFHI).

Guidelines and tools available from WHO and UNICEF

The revised BFHI package, *The Baby-friendly Hospital Initiative, Revised, Updated and Expanded for Integrated Care*, includes guidelines and tools for both monitoring and reassessing baby-friendly hospitals. The monitoring guidelines and tools can be used either by the national BFHI coordination group to monitor designated hospitals or by the hospitals themselves, as part of their own self-monitoring or quality assurance programmes. The reassessment guidelines and tool are designed to be used as part of an external reassessment and re-designation process, and thus are only available to UNICEF and WHO offices, national BFHI authorities, and their assessment teams. The implementation of a systematic monitoring and reassessment process is important for insuring the Initiative’s long-term credibility and sustainability.

The documents and their contents

BFHI Section 4: Hospital Self-Appraisal and Monitoring

4.2: Guidelines and Tools for Monitoring Baby-friendly Hospitals

- Guide to developing a national process for BFHI monitoring
- Annex 1: Infant feeding record and report
- Annex 2: Staff training record and report
- Annex 3: BFHI monitoring tool
- Annex 4: The BFHI reassessment tool and its possible use for monitoring.

BFHI Section 5: External Assessment and Reassessment

5.3: Guidelines and Tool for External Reassessment

- Guide to developing a national process for BFHI reassessment
- Annex 1: BFHI reassessment tool.

BFHI Section 4 is available for downloading at the UNICEF/WHO website,.

BFHI Section 5 has been posted on the UNICEF “intranet” and can be accessed by UNICEF regional and country offices and provided to national BFHI coordinator groups and assessors.

Session 4:

The scientific basis for the “Ten steps to successful breastfeeding”

Objective

At the conclusion of this session, participants will be able to:

Describe the scientific basis for the “Ten steps to successful breastfeeding”.

Duration

Total: 90 minutes

Teaching methods

Lecture and discussion

Preparation for session

Review the WHO document, “*Evidence for the ten steps to successful breast-feeding*”. Geneva, World Health Organization, 1998.

http://www.who.int/nutrition/publications/infantfeeding/evidence_ten_step_eng.pdf

http://whqlibdoc.who.int/publications/2004/9241591544_eng.pdf

Review all handouts and research summaries which follow the Session 4 outline. (be sure to have the most up-to-date statement from the Joint United Nations Programme on HIV/AIDS (UNAIDS) on HIV and infant feeding).

Review video “Delivery, Self Attachment” (time: 6 minutes). See the *Course Guide* for information on how to order the video.

Review all PowerPoint slides and/or transparencies and choose *for each step* about three slides or transparencies most appropriate for your audience. If desired, you may change the order of the slide/transparency presentation. Review the generic photo slides and use them and/or your own slides, to illustrate points as needed.

Review locally available breastfeeding training courses and list them on an overhead or flipchart. If available, display poster of the Ten Steps where the speaker can easily refer to it.

Training materials

Summaries

Summaries of research studies

Handouts

Protecting, Promoting and Supporting Breast-feeding, The Special Role of Maternity Services, A Joint WHO/UNICEF Statement (booklet, same as Session 3)

- 4.1 Presentation for Session 4
- 4.2 National policy on infant and young child feeding (for health institutions), Sultanate of Oman
- 4.3 The Baby and Mother Friendly Hospital Programme, Ministry of Health, Mexico
- 4.4 UNICEF UK Baby Friendly Initiative: Sample combined maternity/community services policy on breastfeeding
- 4.5 Acceptable medical reasons for use of breast-milk substitutes

Slides/Transparencies

4.1.1-4.11.7 and photo slides 4.a-4.z

The website featuring this Course contains links to the slides and transparencies for this session in two Microsoft PowerPoint files. The photo slides are included in the “slides” file in the order in which they are listed in the Session Plan. When possible, trainers should substitute appropriate photos taken locally or in situations that are similar to local conditions.

The slides (in colour) can be used with a laptop computer and LCD projector, if available. Alternatively, the transparencies (in black and white) can be printed out and copied on acetates and projected with an overhead projector. The transparencies are also reproduced as the first handout for this session, with 6 transparencies to a page.

Other training materials

Flipchart
Video
Poster with the Ten Steps

References

Albernaz E, Giugliani ERJ, Victora CG. Supporting breastfeeding: a successful experience. *J Hum Lact*, 1998, 14(4):283-285.

Breastfeeding and the use of water and teas. Division of Child Health and Development, Update, No. 9. Geneva, World Health Organization, reissued November 1997.

Cattaneo A, Buzzetti R. Effect on rates of breast feeding of training for the Baby Friendly Hospital Initiative. *BMJ*, 2001, 323:1358-1362.

Coutsoudis A, Kubendran P, Kuhn L, Spooner, E, Tsai W, Coovadia, HM. South African Vitamin A Study Group. Method of feeding and transmission of HIV-1 from mothers to children by 15 months of age: prospective cohort study from Durban, South Africa. *AIDS*, 2001 Feb 16: 15(3):379-387.

Christensson K, Siles C, Moreno L, et al. Temperature, metabolic adaptation and crying in healthy full-term newborns cared for skin-to-skin or in a cot. *Acta Paediatr*, 1992, 81:481-493.

DeCarvalho M, Klaus MH, Merkatz RB. Frequency of breast-feeding and serum bilirubin concentration. *Am J Dis Child*, 1982, 136:737-738.

DeCock KM, Fowler MG, Mercier E et al. Prevention of mother-to-child HIV transmission in resource poor countries. *JAMA*, 2000, 238 (9):175-82.

DeChateau P, Wiberg B. Long term effect on mother-infant behavior of extra contact during the first hour postpartum. *Acta Paediatr*, 1977, 66:145-151.

Evidence for the ten steps to successful breastfeeding. Geneva, World Health Organization, 1998.
http://www.who.int/nutrition/publications/infantfeeding/evidence_ten_step_eng.pdf
http://whqlibdoc.who.int/publications/2004/9241591544_eng.pdf

Guidelines concerning the main health and socioeconomic circumstances in which infants have to be fed on breast-milk substitutes. In: *Thirty-Ninth World Health Assembly* [A39/8 Add.1-10 April 1986], pp. 122-135, Geneva, World Health Organization, 1992.

Guise, J-M, Palda V, Westhoff C, Chan BKS, Helfand M, Lieu T. The effectiveness of primary care-based interventions to promote breastfeeding: Systematic evidence review and meta-analysis for the US preventive services task force. *Annals of Family Medicine*, 2003, 1(2):70-78.

Haider R et al. Breast-feeding counselling in a diarrhoeal disease hospital. *Bulletin of the World Health Organization*, 1996, 74(2):173-179.

Haider R, Kabir I, Huttly S and Ashworth A. A training peer counselors to promote and support exclusive breastfeeding in Bangladesh. *J Hum Lact*, 2002, 18:7-12.

HIV transmission through breastfeeding: A review of available evidence -Update 2007. Geneva, World Health Organization, 2007.
http://whqlibdoc.who.int/publications/2008/9789241596596_eng.pdf

Jayathilaka AC. *A study in breastfeeding and the effectiveness of an intervention in a district of Sri Lanka*. [DM thesis]. Sri Lanka, University of Colombo, 1999.

Jelliffe DB, Jelliffe EFP. The role of the support group in promoting breastfeeding in developing countries. *J Trop Pediatr*, 1983, 29:244.

Kramer MS, Chalmers B, Hodnett E et al. Promotion of Breastfeeding Intervention Trial (PROBIT) A randomized trial in the Republic of Belarus. *JAMA*, 2001, 285:413-420.

Lu M, Lange L, Slusser W et al. Provider encouragement of breast-feeding: evidence from a national survey. *Obstetrics and Gynecology*, 2001, 97:290-295.

Martens PJ. Does Breastfeeding education affect nursing staff beliefs, exclusive breastfeeding rates, and Baby-Friendly Hospital Initiative compliance? The experiences of a small, rural Canadian hospital. *J Hum Lact*, 2000, 16:309-318.

Merten S et al. Do Baby-Friendly Hospitals Influence Breastfeeding Duration on a National Level? *Pediatrics*, 2005, 116: e702 – e708.

Morrow A, Guerrereo ML, Shultis J et al. Efficacy of home-based peer counselling to promote exclusive breastfeeding: a randomized controlled trial. *Lancet*, 1999, 353:1226-1231.

- Nielsen B, Hedegaard M, Thilsted S, Joseph A, Liliestrand J. Does antenatal care influence postpartum health behaviour? Evidence from a community based cross-sectional study in rural Tamil Nadu, South India. *British Journal of Obstetrics and Gynaecology*, 1998, 105: 697-703.
- Nylander G, Lindemann R, Helsing E, Bendvold E. Unsupplemented breastfeeding in the maternity ward. *Acta Obstet Gynecol Scand*, 1991, 70: 205-209.
- Philipp BL, Merewood A, Miller LW et al. Baby Friendly Hospital Initiative improves breastfeeding initiation rates in a US hospital setting. *Pediatrics*, 2001, 108:677-681.
- Pipes PL. *Nutrition in Infancy and Childhood*. Boston, Massachusetts, Times Mirror/Mosby, 1989.
- Powers NG, Naylor AJ, Wester RA. Hospital policies: crucial to breastfeeding success. *Seminars in Perinatology*, 1994, 18(6): 517-524.
- Righard L, Alade MO. Effect of delivery room routines on success of first breast-feed. *Lancet*, 1990, 336: 1105-1107.
- Righard L, Alade MO. Sucking technique and its effect on success of breastfeeding. *Birth*, 1992, 19(4):185-189.
- Saadeh RJ, Akre J. Ten steps to successful breast-feeding: a summary of the rationale and scientific evidence. *Birth*, 1996, 23(3):154-160.
- Saadeh RJ, ed. *Breast-Feeding: The Technical Basis and Recommendations for Action*. Geneva, World Health Organization, 1993.
- Savage-King FS. *Helping Mothers to Breastfeed*, Revised Edition. Nairobi, Kenya, African Medical Research Foundation, 1992.
- Soetjiningsih, Suraatmaja S. The advantages of rooming-in. *Pediatrica Indonesia*, 1986, 26:229-235.
- WHO/UNICEF/UNFPA/UNAIDS/World Bank/UNHCR/EFP/FAO/IAEA. *HIV and infant feeding: Framework for priority action*. Geneva, World Health Organization, 2003.
http://www.who.int/nutrition/publications/hiv_infantfeed_framework_en.pdf
- Victora C, Behague D, Barros F et al. Pacifier use and short breastfeeding duration: cause, consequence, or coincidence? *Pediatrics*, 1997, 99:445-453.
- WHO Technical Consultation on Infant and Young Child Feeding, Themes, Discussion and Recommendations, WHO, Geneva, 13-17 March, 2000. Geneva, World Health Organization, 2000 (WHO/NHD/00.8, WHO/FCH/CAH/00.22).
- WHO/UNICEF/UNFPA/UNAIDS. *HIV and infant feeding: A guide for health-care managers and supervisors* (revised). Geneva, World Health Organization, 2003.
http://www.who.int/nutrition/publications/HIV_IF_guide_for_healthcare.pdf

WHO/UNICEF/UNFPA/UNAIDS. *HIV and infant feeding: guidelines for decision-makers* (revised). Geneva, World Health Organization, 2003.

http://www.who.int/nutrition/publications/HIV_IF_decision_maker.pdf

WHO/UNICEF/UNAIDS/UNFPA, *HIV and Infant Feeding Update. Based on the Technical Consultation held on behalf of the IATT on Prevention of HIV Infection in Pregnant Women, Mothers and their Infants*. Geneva 25-27 October 2006. Geneva, World Health Organization, 2007.

<http://www.who.int/nutrition/publications/hiv aids/9789241595964/en/index.html>

Woolridge M. The “anatomy” of infant sucking. *Midwifery*, 1986, 2:164-171.

Worthington-Roberts B, Williams SR. *Nutrition in Pregnancy and Lactation*, 5th Edition. St. Louis, MO, Mosby, 1993.

Yamauchi Y, Yamanouchi I. Breast-feeding frequency during the first 24 hours after birth in full-term neonates. *Pediatrics*, 1990, 86 (2):171-175.

Yamauchi Y, Yamanouchi I. The relationship between rooming-in/not rooming-in and breast-feeding variables. *Acta Paediatr Scand*, 1990, 79:1017-1022.

Outline

Content	Trainer's Notes
	<p>This session will review selected studies to illustrate the physiological and sociological basis for the Ten Steps. All steps are interrelated. The first 2 steps provide the foundation for implementing the remaining eight. Refer participants to the handout (booklet), “Promoting, Protecting, and Supporting Breast-feeding”.</p> <p>Invite participants to comment or ask questions during the presentation. Write down problems, barriers or solutions that come up during the presentation so they can be addressed in Session 5. Try to allow some discussion during this presentation but postpone major discussions until Session 5 due to time constraints.</p> <p>Mention that a mini-version of the presentation is reproduced in Handout 4.1 and included in the participants' folder.</p>
<p>1. Step 1: Have a written breastfeeding policy that is routinely communicated to all health-care staff.</p>	<p><i>Slides</i></p> <p>4.1.1 Step 1.</p> <p>4.1.2 Why have a policy?</p> <p>4.a Mention the “Joint Statement” and fact that it serves as the background document for BFHI and the “Ten Steps”.</p> <p>4.1.3 What should it cover?</p> <p>4.1.4 How should it be presented? Policy examples (refer to handouts of choice, 4.2-4.4) (may use your own policy examples. Policies need to be adapted to your own settings and should be based on the Ten Steps).</p> <p>4.b Show photo of health professionals consulting a written policy during on-the-job training (optional).</p> <p>4.1.5 Graph: rates of exclusive breast-milk feeds improved while in the birth hospital after implementing the Baby-friendly Hospital Initiative (<i>Philipp et al., see summary</i>).</p>
<p>2. Step 2: Train all health-care staff in the skills necessary to implement this policy.</p>	<p><i>Slides</i></p> <p>4.2.1 Step 2.</p>

Content	Trainer's Notes
	<p>4.c Show photo of health professionals attending a classroom session (optional).</p> <p>4.d Show photo of women during a group discussion in training workshop (optional).</p> <p>4.2.2 Areas of knowledge to be included in staff education (may ask participants to answer before showing).</p> <p>4.2.3 Additional topics for training in the context of HIV.</p> <p>4.2.4 Hospital staff breastfeeding training had a significant effect on exclusive breastfeeding rate at discharge, which increased from 41% to 77% (<i>Cattaneo et al., see summary</i>).</p> <p>4.2.5 In several studies health professionals trained in breastfeeding counselling provided counselling and/or trained support groups to assist mothers in a variety of circumstances (prenatally, postnatally, after admission for diarrhoea). In each of the studies there was a significant increase in exclusive breastfeeding, when compared to the control group (<i>WHO/CAH, see summary</i>).</p> <p>4.2.6 Ask participants to give examples of health professionals - other than perinatal staff - who influence breastfeeding success. Consider other staff in the institution coming into contact with mothers such as cleaning staff, clerks, or other specialty groups.</p>
<p>3. Step 3: Inform all pregnant women about the benefits and management of breastfeeding.</p>	<p><i>Slides</i></p> <p>4.3.1 Step 3.</p> <p>4.3.2 Antenatal education content (can be adapted to reflect individual country needs).</p> <p>4.e-f Show photos of an antenatal group class and individual counselling (optional).</p> <p>4.3.3 Antenatal care can significantly impact breastfeeding practices related to colostrum feeding and early breastfeeding</p>

Content	Trainer's Notes
	<p>initiation within 2 hours of birth (<i>Nielsen et al., see summary</i>).</p> <p>4.3.4 Antenatal education can lead to significant increases in initiation rates (23%) and duration of short-term breastfeeding (up to 3 months) (39%), as shown by a meta-analysis of studies of education and support (<i>Guise et al., see summary</i>).</p>
<p>4. Step 4: Help mothers initiate breastfeeding within a half-hour of birth.</p>	<p><i>Slides</i></p> <p>4.4.1 Step 4.</p> <p>4.4.2 The revised BFHI Global Criteria interpret this step as “Place babies in skin-to-skin contact with their mothers immediately following birth for at least an hour. Encourage mothers to recognize when their babies are ready to breastfeed and offer help if needed.” Discuss reasons for this change, including research on the time it takes babies to start breastfeeding without assistance (see photos 4h-j and slide 4.4.8 below).</p> <p>4.4.3 Why encourage early initiation? The points in this list are illustrated in the following transparencies.</p> <p>4.4.4 How to encourage early initiation?</p> <p>4.g-j Show one or more photos illustrating early initiation. The first photo shows a nurse assisting a mother to position her baby just after delivery. The next three photos illustrate how the baby will find the mother’s nipple and begin to suck on his own, if time is allowed for this process.</p> <p>4.4.5 Graph: Study demonstrates how contact within the first hour after delivery increased duration of breastfeeding at 3 months (<i>DeChateau et al., see summary</i>).</p> <p>4.4.6 Graph: Study concluded that skin-to-skin care as compared to care in a bed during the unique period just following birth is associated with higher body and skin temperatures and more rapid metabolic adaptation. Maternal body is an efficient heat source for the baby (<i>Christensson et al., see summary</i>).</p>

Content	Trainer's Notes
	<p>4.4.7 Table: This summary of when immune factors are produced in the infant demonstrates the importance of colostrum and mature milk's role in compensating for the relative absence of immunity in the infant (<i>Worthington-Roberts</i>).</p> <p>4.4.8 Graph: Study concluded that in order to promote successful suckling patterns naked infants should be left undisturbed on their mothers' abdomens until the first suckling is accomplished and the infants' efforts to take the breast actively should be promoted (<i>Righard et al., see summary</i>).</p> <p>Show "Delivery, Self Attachment" video if available, as an alternative to photo slides g, h, and i. Note the infant's suckling pattern when there is no interference with the mother and newborn.</p>
<p>5. Step 5: Show mothers how to breastfeed and how to maintain lactation even if they are separated from their infants.</p>	<p><i>Slides</i></p> <p>4.5.1 Step 5.</p> <p>4.5.2 Quote (<i>Woolridge</i>).</p> <p>4.k-1 Show photos of staff showing mothers how to breastfeed (optional).</p> <p>4.5.3 Graph: Study demonstrates that if at hospital discharge a mother is breastfeeding her infant with good technique, or if 5-10 minutes of instruction time is spent correcting faulty technique, the duration of breastfeeding is almost doubled compared to mothers discharged with uncorrected faulty breastfeeding technique (<i>Righard et al., see summary</i>).</p> <p>4.5.4 Graph: Breastfeeding initiation occurred among 75% of women who were encouraged to breastfeed compared to only 43% who were not encouraged to breastfeed by a health professional (<i>Lu et al., see summary</i>).</p> <p>4.5.5 Graph: breastfeeding duration rates were significantly higher among mothers whose babies roomed in postpartum and whose mothers received breastfeeding guidance during the hospital stay compared to mothers whose babies did not room in and did not receive any breastfeeding guidance</p>

Content	Trainer's Notes
	<p>while in the hospital (<i>Perez-Escamilla et al., see summary</i>).</p> <p>4.5.6 Supply and demand.</p> <p>4.m Show photo of milk expression.</p>
<p>6. Step 6: Give newborn infants no food or drink other than breast milk unless medically indicated.</p>	<p><i>Slides</i></p> <p>4.6.1 Step 6.</p> <p>4.n Show photo of breast-milk substitute and water bottles, <u>not</u> to be given unless medically indicated (<i>optional</i>).</p> <p>4.o Show photo of nurse giving baby a bottle (<u>not</u> appropriate unless medically indicated) (<i>optional</i>).</p> <p>4.6.2 Graph: This study suggests a correlation between a more “physiologic” start of breastfeeding and the overall duration of the lactation period (<i>Nylander et al., see summary</i>).</p> <p>4.6.3 To address the concern that colostrum alone is “not enough”, this graphic illustrates that newborn and infant stomach capacities are perfectly matched to the amount of colostrum (about 200 ml/24 hours at day two) and mature milk (about 800-900 ml/24 hours at 1 year).</p> <p>4.6.4 Impact of routine formula supplementation.</p> <p>4.6.5 This study shows that early introduction of a bottle is inversely associated with breastfeeding duration (<i>Perez-Escamilla et al., see summary</i>).</p> <p>4.6.6 The data in this table shows there is no need for water supplementation for infants exclusively breastfed no matter what temperature and humidity, as reflected in normal urine osmolarity.</p> <p>4.6.7 There are rare exceptions during which infants may require other fluids or food in addition to, or in place of, breast milk.</p> <p>4.6.8 - Acceptable medical reasons for use 4.6.10 of breast-milk substitutes (distribute Handout 4.5). If questions arise concerning HIV and breastfeeding refer</p>

Content	Trainer's Notes
	<p>participants to Handout 4.6 (HIV): Infant and young child feeding in the context of HIV, available in the “HIV” version of this session.</p>
<p>7. Step 7: Practice rooming-in—allow mothers and infants to stay together—24 hours a day.</p>	<p><i>Slides</i></p> <p>4.7.1 Step 7.</p> <p>4.7.2 Definition (describe bedding-in if relevant. “Bedding-in” is when infant and mother stay in the same bed).</p> <p>4.p-q Show one or more photos of rooming-in and bedding-in.</p> <p>4.7.3 Why institute rooming-in? (points discussed in slides to follow).</p> <p>4.7.4 Graph: Positive impact of rooming-in policy on prevention of infectious disease when infants rooming-in were compared to newborns not rooming-in with their mothers (<i>Soetjningsih et al., see summary</i>).</p> <p>4.7.5 Graph: Positive effect of infants rooming-in with their mothers on frequency of breastfeeding in the first 6 days of life compared to infants not rooming-in (<i>Yamauchi et al., see summary</i>).</p>
<p>8. Step 8: Encourage breastfeeding on demand.</p>	<p><i>Slides</i></p> <p>4.8.1 Step 8.</p> <p>4.8.2 Definition of “on-demand”.</p> <p>4.8.3 Why feed on demand?</p> <p>4.r-s Show one or more photos of feeding on demand.</p> <p>4.8.4 Table: Study demonstrates the positive impact of on-demand, frequent breastfeeding (number of times during the first 24 hours) on bilirubin levels of 6 day-old full-term healthy infants (<i>Yamauchi et al., see summary</i>).</p> <p>4.8.5 This data shows that the greater the frequency of feeds, the lower the level of serum bilirubin (<i>DeCarvalho et al., see</i></p>

Content	Trainer's Notes
	<i>summary</i>).
<p>9. Step 9: Give no artificial teats or pacifiers (also called dummies and soothers) to breastfeeding infants.</p>	<p><i>Slides</i></p> <p>4.9.1 Step 9.</p> <p>4.t Show photo of various nipples/teats – should <u>not</u> be used (optional).</p> <p>4.u Show photo of various pacifiers/dummies/soothers – should <u>not</u> be used (optional).</p> <p>4.9.2 Alternatives to artificial teats or pacifiers.</p> <p>4.9.3 Illustration of cup feeding. It is recommended to use an ordinary small 50-100 ml glass or polypropylene plastic “cup”. The rim of the “cup” should be smooth and not sharp and the “cup” should be boiled or sterilised.</p> <p>4.v Show photo of cup feeding (optional).</p> <p>4.9.4 Early weaning was associated with daily pacifier use even when confounding factors were accounted for (<i>Victora et al., see summary</i>).</p>
<p>10. Step 10: Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from hospital or clinic.</p>	<p><i>Slides</i></p> <p>4.10.1 Step 10.</p> <p>4.10.2 Quote.</p> <p>4.10.3 Examples of support.</p> <p>4.10.4 Summary of types of breastfeeding support. A “doula” is a woman caregiver of another woman who provides support during the perinatal period.</p> <p>4.w-z Show photos illustrating various types of mother support (home visiting by nurse, mother support groups, and mothers dancing in a community breastfeeding meeting).</p> <p>4.10.5 Trained peer counsellors positively effected the duration of exclusive breastfeeding (<i>Haider et al., see summary</i>).</p> <p>4.10.6 Home visits improved exclusive breastfeeding at 2 weeks and 3 months (<i>Morrow et al., see summary</i>).</p>

Content	Trainer's Notes
<p>11. Effects of combined steps.</p>	<p>In addition, it is highly effective to combine the steps since by applying all steps or some in combination the hospital and the administration obtain better results. This is illustrated in many of the previous studies presented above. To further elaborate on this point the following series of slides are presented.</p> <p>4.11.1 In a randomised trial in Belarus 17,000 mother-infant pairs, with mothers intending to breastfeed, were followed for 12 months. In 15 control hospitals and associated polyclinics that provide care following discharge, staff members were asked to continue their usual practices. In 16 experimental hospitals and associated polyclinics staff received baby-friendly training and support (<i>Kramer et al., see summary</i>).</p> <p>4.11.2 Differences following intervention between control and intervention hospitals.</p> <p>4.11.3 Effect of baby-friendly changes on exclusive breastfeeding at 3 and 6 months.</p> <p>4.11.4 Impact of baby-friendly changes on selected health conditions.</p> <p>4.11.5 In a study in Switzerland, data was analysed for 2861 infants aged 0–11 months in 145 health facilities. Breastfeeding data was compared with both the progress towards baby-friendly status of each hospital and the degree to which designated hospitals were successfully maintaining the Baby-friendly standards (<i>Merten et al., see summary</i>).</p> <p>4.11.6 The proportion of babies exclusively breastfed for 5 months for those born in Baby-friendly hospitals compared to those born elsewhere.</p> <p>4.11.7 The median duration of exclusive breastfeeding for babies born in baby-friendly hospitals if the hospital showed good compliance with the 10 steps, and if it did not. This result illustrates the importance of maintaining Baby-friendly standards.</p>

Content	Trainer's Notes
12. Conclusion.	Acknowledge differences in opinion, perceived barriers, and innovative solutions relating to this subject matter. These areas of interest will be covered in the remaining sessions.

Summaries of research studies presented during Session 4

Slide: Study:

- 4.1.5 Philipp BL, Merewood A, Miller LW et al. Baby-friendly Hospital Initiative improves breastfeeding initiation rates in a US hospital setting. *Pediatrics*, 2001, 108:677-681.
- 4.2.4 Cattaneo A, Buzzetti R. Effect on rates of breast feeding of training for the Baby Friendly Hospital Initiative. *BMJ*, 2001, 323:1358-1362.
- 4.2.5 Albernaz E, Giugliani ERJ, Victora CG. Supporting breastfeeding: a successful experience. *Journal of Human Lactation*, 1998, 14(4):283-285.
- Haider R et al Breast-feeding counselling in a diarrhoeal disease hospital. *Bulletin of the World Health Organization*, 1996, 74(2):173-179.
- 4.3.3 Nielsen B, Hedegaard M, Thilsted S, Joseph A and Liliestrand J. Does antenatal care influence postpartum health behaviour? Evidence from a community based cross-sectional study in rural Tamil Nadu, South India. *British Journal of Obstetrics and Gynaecology*, 1998, 105: 697-703.
- 4.3.4 Guise, J-M, Palda V, Westhoff C, Chan BKS, Helfand M, and Lieu T. The effectiveness of primary care-based interventions to promote breastfeeding: Systematic evidence review and meta-analysis for the US preventive services task force. *Annals of Family Medicine*, 2003, 1(2):70-78.
- 4.4.4 DeChateau P and Wiberg B. Long term effect on mother-infant behavior of extra contact during the first hour postpartum. *Acta Paediatr*, 1977, 66:145-151.
- 4.4.5 Christensson K, Siles C, Moreno L, Belaustequi A, De La Fuente P, Lagercrantz H, Puyol P, and Winberg J. Temperature, metabolic adaptation and crying in health full-term newborns cared for skin-to-skin or in a cot. *Acta Paediatr*, 1992, 81:488-93.
- 4.4.7 Righard L and Alade MO. Effect of delivery room routines on success of first breastfeed. *Lancet*, 1990, 336:1105-1107.
- 4.5.3 Righard L & Alade O. Sucking technique and its effect on success of breastfeeding. *Birth*, 1992, 19(4):185-189.
- 4.5.4 Lu M, Lange L, Slusser W et al. Provider encouragement of breast-feeding: Evidence from a national survey. *Obstetrics and Gynecology*, 2001, 97:290-295.
- 4.5.5 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 Hum Dev*, 1992, 31(1):25-40.
- 4.6.2 Nylander G, Lindemann R, Helsing E, Bendvold E Unsupplemented breastfeeding in the maternity ward. *Acta Obstet Gynecol Scand*, 1991, 70:205-209.

- 4.6.5 Perez-Escamilla, Sergura-Millan S, Pollitt E, Dewey KG. Determinants of lactation performance across time in an urban population from Mexico. *Soc Sci Med*, 1993, 37(8): 1069-1078.
- 4.7.4 Soetjiningsih and Suraatmaja S. The advantages of rooming-in. *Pediatrica Indonesia*, 1986, 26:229-235.
- 4.7.5 Yamauchi Y and Yamanouchi I. The relationship between rooming-in/not rooming-in and breast-feeding variables. *Acta Paediatr Scan*, 1990, 1017-1022.
- 4.8.4 Yamauchi Y and Yamanouchi I. Breast-feeding frequency during the first 24 hours after birth in full-term neonates. *Pediatrics*, 1990, 86(2):171-175.
- 4.8.5 De Carvalho M, Klaus MH, Merkatz RB. Frequency of breast-feeding and serum bilirubin concentration. *Am J Dis Child*, 1982, Aug, 136(8):737-738.
- 4.9.4 Victora C, Behague D, Barros F et al. Pacifier use and short breastfeeding duration: cause, consequence, or coincidence? *Pediatrics*, 1997, 99:445-453.
- 4.10.5 Haider R, Kabir I, Huttly S and Ashworth. Training peer counselors to promote and support exclusive breastfeeding in Bangladesh. *J Hum Lact*, 2002, 18:7-12.
- 4.10.6 Morrow A, Guerrereo ML, Shultis J, et al. Efficacy of home-based peer counselling to promote exclusive breastfeeding: a randomised controlled trial. *Lancet*, 1999, 353:1226-1231.
- 4.11.1-4 Kramer MS, Chalmers B, Hodnett ED et al. Promotion of Breastfeeding Intervention Trial (PROBIT): a randomized trial in the Republic of Belarus. *JAMA*, 2001, Jan 24-31; 285(4):413-420.
- 4.11.5-7 Merten S et al. Do Baby-Friendly Hospitals Influence Breastfeeding Duration on a National Level. *Pediatrics*, 2005, 116: e702 – e708.

**Baby Friendly Hospital Initiative improves breastfeeding initiation rates
in a US hospital setting
Refers to Slide 4.1.5**

Reference: Philipp BL, Merewood A, Miller LW et al. Baby Friendly Hospital Initiative improves breastfeeding initiation rates in a US hospital setting. *Pediatrics*,2001, 108:677-681.

Method: Two hundred complete medical records, randomly selected by a computer, were reviewed from each of 3 years: 1995, 1998, and 1999. Infants were excluded if there was missing data or for medical reasons. All infant feedings during the hospital postpartum stay were tallied, and each infant was categorized into 1 of 4 groups: exclusive breast milk, mostly breast milk, mostly formula, and exclusive formula.

Findings: Maternal and infant demographics for all 3 years were comparable.

The breastfeeding initiation rate increased during and after Baby-Friendly Policies were in place at Boston Medical Centre, an inner-city teaching hospital that provides care primarily to poor, minority, and immigrant families.

	Before	During	After	
Breastfeeding initiation	58.0%	77.5%	86.5%	p<.001
Exclusive breastfeeding initiation	5.5%	28.5%	33.5%	p<.001

Conclusion: Full implementation of the Ten Steps to Successful Breastfeeding leading to Baby-Friendly designation is an effective strategy to increase breastfeeding initiation rates in the US hospital setting.

**Effect on rates of breast feeding
of training for the Baby Friendly Hospital Initiative
Refers to Slide 4.2.4**

Reference: Cattaneo A, Buzzetti R. Effect on rates of breast feeding of training for the Baby Friendly Hospital Initiative. *BMJ*, 2001, 323:1358-1362.

Method: Controlled, non-randomised study among 8 hospitals in Italy.* Data was collected measuring knowledge of 571 health workers and breastfeeding rates at discharge, 3, and 6 months of 2669 mother and baby pairs before and after breastfeeding training in group 1 and 2 hospitals. The training was based on the UNICEF 18 hour course that also included 2 hours from the WHO 40 hour counselling course. Training covered 54% of obstetricians, 72% of paediatricians, 84% of midwives, and 68% of nurses.

Findings:	Before	After	
Hospital compliance with the 10 steps (mean)	2.4	7.7	
Knowledge scores of health professionals			
Group 1	41%	72%	
Group 2	53%	75%	
Exclusive BF at discharge			
Group 1	41%	77%	p<0.05
Group 2	23%	73%	p<0.05
Full BF at 3 months			
Group 1	37%	50%	p<0.05
Group 2	40%	59%	p<0.05
Any BF at 6 months			
Group 1	43%	62%	p<0.05
Group 2	41%	64%	p<0.05

Four factors were significantly associated with exclusive breast feeding at discharge: First breast feed within one hour; rooming in; not using a pacifier; and instructions on expressing breast milk.

Conclusion: Breastfeeding training health professionals for 18 hours that includes practical sessions and counselling skills is effective in changing hospital practice, knowledge of health workers, and breastfeeding rates.

*Hospitals were grouped into two different groups according to geography with the following characteristics:

Group 1: 3 general and 1 teaching hospitals in Southern Italy.

Group 2: 3 general and 1 teaching hospitals in Northern and Central Italy.

	#Births in 1998	# Maternity beds	%C-section rate	%LBW
Group 1	2957	30-80	31-44	7-15
Group 2	374	16-40	7-15	3-9

Breastfeeding counselling increases exclusive breastfeeding

Refers to Slide 4.2.5

Reference: Albernaz E, Giugliani ERJ, Victora CG. Supporting breastfeeding: a successful experience. *Journal of human lactation*, 1998, 14(4):283-285.

Method: This paper relates the success of a study that helped enhance breastfeeding by means of a support group in Southern Brazil. The International Metacentre Growth Reference Study was designed to help WHO develop new growth charts to measure nutritional status of populations and to evaluate individual growth. Southern Brazil was one of the sites selected for the study, and an ongoing data collection for the longitudinal component of the study (based on children aged 0-24 months) began in July 1997. The new growth reference will be based on the growth of children with the following characteristics: gestational age at birth between 37 and 42 full weeks, single birth, lack of significant perinatal morbidity, absence of maternal smoking, no economic constraints on growth, and being breastfed for at least 1 full year and given no other foods during the first 4-6 months. Since few mothers in Brazil follow this recommendation, a lactation support group was trained to help mothers breastfeed their babies.

Findings: It was found that the breastfeeding support group really made a difference, at least with regard to the duration of breastfeeding. Mothers who had support breastfed longer and waited longer to introduce other foods into their children's diet compared to those who had no support. The factors that contributed to increased breastfeeding duration are enumerated.

Conclusion: Supporting mothers in breastfeeding is beneficial to both mothers and children and can lead to a better quality of life.

Reference: Haider R et al. Breast-feeding counselling in a diarrhoeal disease hospital. *Bulletin of the World Health Organization*, 1996,74(2):173-179.

Method: Lactation counsellors were trained to advise mothers of partially breastfed infants who were admitted to hospital because of diarrhoea, so that they could start exclusive breastfeeding during their hospital stay. Infants (n = 250) up to 12 weeks of age were randomised to intervention and control groups. Mothers in the intervention group were individually advised by the counsellors while mothers in the control group received only routine group health education. During follow-up at home by the counsellors a week later, only the mothers in the intervention group were counselled. All the mothers were evaluated for infant feeding practices at home two weeks after discharge.

When infants afflicted with diarrhoea were brought to the Hospital of the International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR, B) in Dhaka, Bangladesh, 125 mother-infant pairs received at least three lactation counselling sessions on the benefits of exclusive breast feeding. Researchers compared data on these 125 pairs with data on 125 other mother-infant pairs who were also at ICDDR,B due to diarrhoea but did not receive any counselling. Infants in the intervention group had a shorter hospital stay than those in the control group (4.3 vs. 3 days; p .001). The controls left before diarrhoea ended, while cases were discharged after diarrhoea ended.

Findings: At discharge, mothers in the intervention group were more likely than controls to be predominantly breastfeeding (breast milk plus oral rehydration solution [ORS]) (30% vs. 19%) as well as exclusively breastfeeding (60% vs. 6%) (p .001). Two weeks after discharge, when ORS was stopped, mothers in the intervention group were more likely to be exclusively breast feeding than those in the control group (75% vs. 8%), while those in the control group were more likely to bottle feed than cases (49% vs. 12%) (p .001). Infants in the control group were more likely to have another episode of diarrhoea within 2 weeks than those in the intervention group (15 vs. 4; p = .05; odds ratio = 2.92).

Conclusions: These findings indicate that individual lactation counselling had a strong influence on mothers to begin exclusive breastfeeding during hospitalisation and to continue to do so at home. Thus, staff at maternal and child health facilities should integrate lactation counselling into their program to improve infant feeding practices.

**Does antenatal care influence postpartum health behaviour?
Evidence from a community based cross-sectional study
in rural Tamil Nadu, South India.
Refers to Slide 4.3.3**

Reference: Nielsen B, Hedegaard M, Thilsted S, Joseph A and Liliestrand J. Does antenatal care influence postpartum health behaviour? Evidence from a community based cross-sectional study in rural Tamil Nadu, South India. *British Journal of Obstetrics and Gynaecology*, 1998, 105: 697-703.

Methods: Community-based, cross-sectional questionnaire study of 30 randomly selected areas served by health sub centres in rural India. 1321 women who delivered in the 6 months before the questionnaire-based interview were asked a series of questions.

Findings:

Information about breastfeeding in the prenatal period was associated with feeding colostrum and early initiation of breastfeeding:

	No colostrum	Colostrum*	Adj OR (95%)
Informed about breastfeeding:			
No information	57% (n=487)	43% (n=363)	1.00
Information given*	42% (n=180)	58% (n=250)	1.86 (1.47-2.36)
	BF after 2 h	BF before 2h	Adj OR (95%)
Informed about breastfeeding			
No information	82% (n=684)	18% (n=148)	1.00
Information given	73% (n=313)	27% (n=116)	1.81

*this was not defined in the report.

*Colostrum feeding was also associated with number of prenatal visits and women who initiated antenatal care in the first trimester.

Conclusion: Information about breastfeeding given prenatally and number and timing of prenatal care can impact breastfeeding practice positively.

**The effectiveness of primary care-based interventions
to promote breastfeeding:
Systematic evidence review and meta-analysis
Refers to Slide 4.3.4**

Reference: Guise, J-M, Palda V, Westhoff C, Chan BKS, Helfand M, and Lieu T. The effectiveness of primary care-based interventions to promote breastfeeding: Systematic evidence review and meta-analysis for the US preventive services task force. *Annals of Family Medicine*, 2003 1(2):70-78.

Purpose: We wanted to systematically review whether primary care-based interventions improve initiation and duration of breastfeeding.

Methods: Studies were found by searching MEDLINE (1966–2001), HealthSTAR, the Cochrane Database of Systematic Reviews, the National Health Service Centre for Reviews and Dissemination Databases, and bibliographies of identified trials and review articles. Studies were included if they originated in the primary care setting and were conducted in a developed country, written in English, and contained a concurrent control group.

Results: Thirty randomized and nonrandomized controlled trials and 5 systematic reviews of breastfeeding counselling were included. Educational programs had the greatest effect of any single intervention on both initiation (difference 0.23; 95% confidence interval [CI], 0.12–0.34) and short-term duration (difference 0.39; 95% CI, 0.27–0.50). Support programs conducted by telephone, in person, or both increased short-term (difference 0.11; 95% CI, 0.03–0.19) and long-term duration (difference 0.08; 95% CI, 0.02–0.16). In contrast, written materials such as pamphlets did not significantly increase breastfeeding. Data were insufficient to determine whether the combination of education with support was more effective than education alone.

Conclusions: Educational programs were the most effective single intervention. One woman would breastfeed for up to 3 months for every 3 to 5 women attending breastfeeding educational programs. Future research and policy should focus on translating these findings into more widespread practice in diverse primary care settings.

Impact of infant early contact with mother on breastfeeding duration
Refers to Slide 4.4.5

Reference: DeChateau P and Wiberg B. Long term effect on mother-infant behavior of extra contact during the first hour postpartum. *Acta Paediatr*, 1977, 66:145-151.

Method: A prospective study in Sweden where a study of primiparous mothers randomly assigned and with comparable background data were assigned to two different groups.

The mothers in the study group had 15-20 minutes suckling and skin-to-skin contact (extra contact) with newborn infants in first hour after delivery.

The mothers in the control group had no extra contact.

Study looked at mother-infant behaviour at 36 hours and 3 months postpartum. Only one mother from each group was lost to follow-up for the three-month interview with the mother and observation of infant-mother interaction.

Findings: Among other findings at three months postpartum 58% of the study group (n=21) vs. 26% (n=19) of control group were breastfeeding infant-mother pairs.

In addition at 3 months mothers in the extra contact group spent more time kissing and looking in face at their infants and their infants smiled more and cried less frequently when compared to the control groups.

Conclusion: Extra infant-mother contact in the first hour of life can influence the duration of breastfeeding.

**Temperatures after birth in infants
kept either skin-to-skin with mother or in cot
Refers to Slide 4.4.6**

Reference: Christensson K, Siles C, Moreno L, Belaustequi A, De La Fuente P, Lagercrantz H, Puyol P, and Winberg J. Temperature, metabolic adaptation and crying in health full-term newborns cared for skin-to-skin or in a cot. *Acta Paediatr*, 1992, 81: 488-93.

Method: 50 healthy full-term newborns with no history of complications prenatally or at delivery were randomly placed into one of two study groups: infant placed skin-to-skin to mother or placed in a cot next to mother. The following steps were taken with each infant in both groups:

1. Infants were wrapped in cotton cloth and placed on mother's abdomen in prone position.
2. Umbilical cord cut 30-45 seconds after birth.
3. Nurse dried infant, suctioned mouth and pharynx, weighed infant and swaddled head in cotton cloth.
4. Electronic thermometer placed with insulating tape in axillary, interscapular, and outside thigh positions.
5. 8-11 minutes after birth infant placed in prone position either skin-to-skin with the mother or in cot all were tucked in by two thick terry cloth towels. Temperature of rooms 26°C.
6. The infants were observed for the first 90 minutes after birth measuring axillary, interscapular, and outside left thigh skin temperatures every 15 minutes for 90 minutes after delivery.
7. At 90 minutes after delivery heart rate, respiratory rate, skin colour, blood gas, and blood glucose were measured.
8. In 18 babies of each group, recorded every 15 minutes whether or not infant was crying.

Findings: There were significant differences between the groups especially towards the end of the observation period (90 minutes). The skin-to-skin group was always warmer. In both groups, the mean axillar temperatures were significantly higher than the mean thigh temperatures ($p < 0.001$). All infants in both groups increased in temperature at similar rates after birth until they were placed skin to skin or in the cot. It was an average of four to seven minutes after being placed in the two different groups that differences in skin temperature were measured and significant differences already noted. Skin colour and heart rate were not significantly different. Whether the infants were fed in this study was not mentioned.

More cot babies were crying at all observation events between 15 and 90 minutes after birth. In all, 41 crying episodes were registered among the cot babies compared to 4 among skin-to-skin babies.

Conclusion: Skin to skin care as compared to care in a bed during the unique period just following birth is associated with higher body and skin temperatures and more rapid metabolic adaptation. Maternal body is an efficient heat source for the baby.

Recommendations: The mother is an important heat source for the newborn and promotion of body to body mother baby contact during the first 1-2 hours after delivery may benefit mother and baby from a physiological point of view especially in countries where the incidence of neonatal hypothermia has been reported high.

Effect of delivery room practices on early breastfeeding
Refers to Slide 4.4.8

Reference: Righard L and Alade MO. Effect of delivery room routines on success of first breastfeed. *Lancet*, 1990, 336: 1105-1107.

Method: 72 infants who delivered normally were randomly assigned to the separation (n=34) or the contact (n=38) group. The infants in the separation group were placed on their mother's abdomen immediately after birth but removed after 20 minutes for measuring and dressing (took about 20 minutes); then they were returned to their mother. The infants in the contact group were placed on their mother's abdomen naked and were uninterrupted for at least one hour after birth or until after the first breastfeed took place. Both groups of infants were observed for a total of two hours following birth.

Findings: Infants in the contact group started to make crawling movements towards the breast about 20 minutes after birth, first with arm and leg movements and then with mouthing and sucking movements. By 50 minutes after birth most of the infants were sucking at the breast. At two hours after delivery 24/38 infants in the contact group were sucking correctly at the breast versus 7/34 infants in the separation group. Sucking correctly was defined as mouth opened widely, tongue under areola, and milk expressed with deep sucks. 40/72 of the infants had been exposed to Pethidine; of those 25/40 did not suck well.

Recommendations: Naked infants should be left undisturbed on the mother's abdomen until the first breastfeeding is accomplished and the infant's efforts to take the breast actively should be promoted.

Note: May show the video at this time that illustrates the infant's innate tendency to crawl.

Effect of proper attachment on duration of breastfeeding

Refers to Slide 4.5.3

Reference: Righard L and Alade O. Sucking technique and its effect on success of breastfeeding. *Birth*, 1992, 19 (4): 185-189.

Method: A prospective study in a University Hospital in Sweden enrolled 82 exclusively breastfeeding mothers who had delivered term infants with 5 min. Apgar scores of 9 or 10 and were free of any apparent neonatal disease. Breastfeeding technique was assessed on the fourth to sixth day postpartum at time of discharge. The mother-infant pairs were randomly assigned to two groups once poor sucking technique (faulty technique was defined as superficial nipple sucking) was identified:

Group 1- incorrect breastfeeding technique remained uncorrected.

Group 2- mothers with incorrect breastfeeding technique were given a brief (5-10 minute) instruction on correct technique.

Controls- mother-infant pairs with correct technique (defined as the infant having a wide-open mouth, with the tongue under the areola, and expressing milk from the breast by slow, deep sucks) consecutively selected as controls.

All groups matched for maternal age, marital status, parity, education, and coffee drinking and smoking habits. Follow-up took place by telephone at two, three, and four months after delivery; questions asked related to infant feeding practices.

Findings: All the mothers were followed up in the study. No solid foods were given to the infants at the time of follow-up period. No mothers had returned to work at time of follow-up period (maternity leave is 12 months in Sweden).

All mothers were breastfeeding exclusively at discharge from the hospital. A changeover from the breast to the bottle within the first month was 10 times more common in the poor technique group uncorrected than in those with corrected technique or initial good technique (36 % versus 3.5%, $p < 0.001$); note the corrected and the initial good technique group results are combined since their findings in each group were similar in this study. At the two-, three-, and four-month follow-ups, the uncorrected sucking technique group breastfed significantly less than the infants in the other two groups (refer to slide 4.5.3 for more details). The reasons given for cessation of breastfeeding were insufficient milk or introduction of a bottle (21), colicky infant (4), maternal illness (3), engorgement (1), and previous cosmetic breast surgery (1).

During the four-month period 88 percent of the uncorrected sucking technique group reported breastfeeding problems compared with 48 % ($P < 0.01$) of the corrected group and 57 % of the controls ($P < 0.5$). The most common breastfeeding problems were insufficient milk or introduction of a bottle, child restless between feeds, uncertainty in parents or introduction of an evening bottle, breast problems such as sore nipples or engorgement, illness in mother or child, breast pumped milk given by bottle, child restless while feeding and insufficient weight gain.

Breastfeeding problems were more commonly reported by mothers using pacifiers regularly (>2 hours/day) than those using them only occasionally or not at all (83% versus 53%, $P < 0.05$).

Conclusion: The study showed it was possible to identify and correct a faulty sucking technique in the maternity ward, and thereby improve the women's chances of achieving successful breastfeeding.

Checks of sucking technique and correction of faulty technique by an experienced midwife or nurse should be routine in maternity units. Also shown were that excessive use of pacifiers and the early introduction of occasional bottle-feeding should be avoided.

**Provider encouragement of breastfeeding:
Evidence from a national survey
Refers to Slide 4.5.4**

Reference: Lu M, Lange L, Slusser W et al. Provider encouragement of breastfeeding: Evidence from a national survey. *Obstetrics and Gynecology*, 2001, 97:290-295.

Methods: A US nationally representative sample of 2017 parents with children younger than 3 years was surveyed by telephone. The responses of 1229 women interviewed were included in the analysis. Respondents were asked to recall whether their physicians or nurses had encouraged or discouraged them from breastfeeding in the hospital.

Findings: 74.6% of women who were encouraged initiated breastfeeding compared to only 43.2% of those who were not encouraged $p < 0.001$.

Women who were encouraged to breastfeed by a health professional in the hospital were more than 4 times more likely to initiate breastfeeding as women who did not receive encouragement. The influence of provider encouragement was significant across all strata of the sample.

Conclusion: Provider encouragement in the hospital significantly increased breastfeeding initiation among American women of all social and ethnic backgrounds.

**Effect of the maternity ward system on the lactation success
of low-income urban Mexican women.**

Refers to slide 4.5.5

Reference: 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 Hum Dev.*, 1992, 31 (1): 25-40.

Method: Comparison between the lactation performance of 165 health mothers who planned to breastfeed and gave birth by vaginal delivery without complications to health infant in either a nursery (58) or a rooming-in hospital (107) where formula supplementation was not allowed. In the rooming in hospital, women were randomly assigned to a group that received breastfeeding guidance during the hospital stay or to a control group. Interviews of women were conducted at 8, 70 and 135 days post-partum. Groups were similar in socio-economic, demographic, anthropometric, previous breastfeeding experience, and prenatal care variables.

Findings: Adjusting for confounding factors, breastfeeding guidance had a positive impact on breastfeeding duration among primiparous women who delivered in the rooming-in hospital. This was true for short-term and long-term breastfeeding when compared to mothers who delivered in the nursery hospital where there was no breastfeeding guidance given in hospital. Primiparous women in the rooming-in group who received no breastfeed guidance had a positive impact on breastfeeding duration in the short term, but not in the long term when compared to the women who delivered in the hospital with the nursery.

Recommendations: Rooming-in and breastfeeding guidance during the postpartum period can impact breastfeeding duration in the short term and long term. Rooming-in alone is not sufficient to impact duration rates.

Long-term effects of a change in maternity ward feeding routines
Refers to Slide 4.6.2

Reference: Nylander G, Lindemann R, Helsing E, Bendvold E. Unsupplemented breastfeeding in the maternity ward. *Acta Obstet Gynecol Scand*, 1991, 70:205-209.

Method: Prospective study in Norway enrolled 407 consecutive mother-infant pairs, normal full-term infants weighing 2500-4500 g. Once 204 infants were enrolled who started life with routine supplementary feedings of sugar solution and almost all having received formula for 1 meal before hospital discharge, a change in the hospital's routines was introduced so infants first nursed within 30 minutes after delivery with on demand breastfeeding encouraged thereafter (>5/24 hours), and no routine supplementation took place. At 1 year a follow-up questionnaire with feeding-related questions was sent to the head nurse of the local health care centres where the babies' health records were kept.

Findings:

Control group (before changed routines): all received supplemental glucose water and were formula-fed at least once (N=204).

Intervention group (after change): early, frequent, unsupplemented breastfeeds (N=203).

Control group lost less birth weight (4.6% by day 3 with minimum weight vs. 6.4% for intervention group with minimum weight on day 2.6).

Intervention group took a greater volume of breast milk and correspondingly less formula and sugar solution. They regained birth weight sooner than control group.

Follow-up at 1 year was for 62% in intervention group and 52% in control group with most of those lost to follow-up because of moving or nurse lacking time to locate records. The subjects followed up matched for parity and infant's birth weight. Weight curves for both groups were similar.

Mothers in intervention group breastfed significantly longer than did the control-group mothers.

	Control	Intervention
Mean duration exclusive breastfeeding p<0.001	3.5 months (±2.1)	4.5 months (±1.8)
Duration of breastfeeding p<0.01	6.9 months (±3.3)	8.0 months (±2.4)
Any breastfeeding at 6 months	66%	87%

Conclusion: Study demonstrates that healthy, full-term infants usually have no need for supplements to their mother's milk provided that they have had a satisfactory start with early and frequent feeds at breast. The changes in policy increased the overall length of the exclusive breastfeeding period.

**Determinants of lactation performance across time
in an urban population from Mexico**
Refers to Slide 4.6.5

Reference: Perez-Escamilla, Sergura-Millan S, Pollitt E, Dewey KG. Determinants of lactation performance across time in an urban population from Mexico. *Soc Sci Med*, 1993, 37(8): 1069-1078.

Method:

Determinants of breastfeeding and full breastfeeding were measured among 165 healthy mothers in Mexico who planned to breastfeed and vaginally delivered healthy term infants. Deliveries were either in a hospital with a nursery or rooming-in policy where formula supplementation was not allowed. Breastfeeding was recorded at 1 week, 2 months, and 4 months through questionnaires.

Findings:

	<u>Rooming-in hospital</u>	<u>Hospital with the nursery</u>
<u>Milk came in:</u>	Earlier	Later

Rooming-in mothers reported that their milk came in earlier. Milk arrival was later when a bottle was introduced in the first week. Breastfeeding was positively associated with early milk arrival and inversely associated with early introduction of supplementary bottles, maternal employment, maternal body mass index, and infant age.

**Clinical data: morbidity of newborn babies at Sanglah Hospital
before and after rooming-in
Refers to Slide 4.7.4**

Reference: Soetjningsih and Suraatmaja S. The advantages of rooming-in. *Pediatrica Indonesia*, 1986, 26:229-235.

Method: Prospective study in Bali, Indonesia, over one year in which this study examined morbidity, mortality, amount of milk formula and IV fluid consumed, and length of hospital stay in the maternity ward and newborn nursery for the 6 months when infants and babies were separated and compared it to the 6 months after instituting a rooming-in policy.

Findings: Infant profiles for the 2 periods were similar.

	Before rooming-in	After rooming-in
Total Live Births	1862	1965
Low birth-weight	241	232
Normal full-terms	1621	1733

After rooming-in was instituted for only the first 6 months:

Diarrhoeal diseases, otitis media, neonatal sepsis, and meningitis decreased in low-birth-weight and normal full-term infants (see slide 4.7.5 for details).

Mortality due to infection decreased (41 or 2.21% vs. 16 or 0.81%); whereas deaths due to other causes did not greatly change during this period (58 or 3.13 % versus 51 or 2.59%).

Need for milk formula decreased from 105.6 tins to 25.6 tins per month (400 g tin of powdered milk formula).

Need for IV fluid dropped from 135.8 bottles to 74.1 bottles per month (500 cc/bottle).

Number of days in the hospital was reduced from 4.2 to 1.8 days.

Conclusion:

There were advantages for the mother, infant, and the hospital when the rooming-in policy was introduced:

Mothers: less crowding secondary to shorter hospital stays.

Infants: decreased mortality and morbidity.

Hospital: savings in milk, fuel, personnel to prepare milk and watch after infants, less IV fluids, less antibiotics.

Effects of rooming-in on frequency of breastfeeding per 24 hours
Refers to Slide 4.7.5

Reference: Yamauchi Y and Yamanouchi I. The relationship between rooming-in/not rooming-in and breastfeeding variables. *Acta Paediatr Scand*, 1990, 1017-1022.

Methods: N=100 healthy, full-term breastfed newborns were selected in each of two study periods, one during non-rooming-in and the second during rooming-in. **Non-rooming-in infants** (N=112) were kept in the newborn nursery from birth, and mothers brought them to their room according to a predetermined schedule of breastfeeding for 2 hours every three or four hours. They were then taken back to the well-baby nursery. **Rooming-in infants** (N=92) stayed in their mother's rooms immediately after delivery. Mothers were encouraged to nurse their babies whenever they suspected they were hungry and were told not to limit the frequency or length of nursing. Data regarding the frequency of breastfeeding was obtained from the charts of the mother and infant.

Findings: The frequency of breastfeeding per 24 hours was significantly higher in rooming-in than non-rooming-in infants from day 2 to day 7 ($p < 0.01$).

Conclusions: This study demonstrated that rooming-in infants had significantly higher breastfeeding frequencies than non-rooming-in infants during the first week of life.

The authors conclude that some of the neonatal feeding problems related to breastfeeding such as the need for human milk supplements or poor weight recovery could be eliminated by education of mothers and nurses and by changes in hospital policies and practices regarding breastfeeding.

**Breastfeeding frequency during the first 24 hours after birth
and incidence of hyperbilirubinemia on day 6****Refers to Slides 4.8.4**

Reference: Yamauchi Y and Yamanouchi I. Breast-feeding frequency during the first 24 hours after birth in full-term neonates. *Pediatrics*, 1990, 86(2):171-175.

Method: Study in Japan looked at the relation between the frequency of breastfeeding and intake, weight loss, meconium passage, and bilirubin levels. N=140 healthy, full-term, breastfed neonates born vaginally without complications.

All neonates remained in their mothers' rooms from the time of delivery. Mothers were encouraged to nurse their babies whenever they suspected they were hungry and were told not to limit the frequency or length of nursing. Mother recorded in detail the frequency and duration of each breastfeeding for the first 2 postpartum days. Transcutaneous bilirubin (TcB) levels were measured using the Minolta-Airshields jaundice meter. Measurements were obtained on day 6 from the forehead, chest, and sternum, and the mean value from these three sites was used instead of serum total bilirubin measurements. The accuracy and reliability of TcB measurements have been documented. The correlation coefficient was .930 and the 95% confidence limits were ± 2.68 mg/dL.

For analysis of the data, the neonates were separated into two groups according to whether their frequency of feedings during the first 24 hours of life was above or below seven feedings per 24 hours. This frequency was arbitrarily chosen because it fit with the traditional 3- to 4-hour breastfeeding schedules in their non-rooming-in nursery.

Findings: The incidence of significant hyperbilirubinemia (TcB > 23.5) (approximately equal to serum total bilirubin level of 15 mg/dL) decreased with increased frequency of breastfeedings during the first 24 hours after birth, as depicted in this graph.

In addition, the neonates fed seven or more times had significantly increased meconium passage, breast-milk intake, and weight gain compared with those fed less frequently.

Conclusions: There was a strong dose-response relationship between feeding frequency and a decreased incidence of hyperbilirubinemia.

Recommendations: Frequent suckling in the first days of life has numerous beneficial effects in the breastfed, full-term newborn.

Frequency of breastfeeding and serum bilirubin concentration
Refers to Slide 4.8.5

Reference: De Carvalho M, Klaus MH, Merkatz RB. Frequency of breast-feeding and serum bilirubin concentration. *Am J Dis Child*, 1982 Aug, 136(8):737-738.

Background: Recent studies suggest that the three- to four-hour feeding regimens followed in many maternity units for breastfeeding mothers may not be physiological and that human infants should be fed more frequently.

Methods: To determine the effects of frequency and length of breastfeeding in the first days after birth, we studied 55 mothers and their infants.

Findings: Infants who nursed on average more than eight times per 24 hours in the first three days of life had significantly lower serum bilirubin levels (65. v 9.3 mg/dL, P less than 01) than those who fed less than eight times per 24 hours.

Conclusions: The results of this investigation suggest that present breastfeeding policies that reduce or limit the number of feedings may interfere with the normal processes that eliminate bilirubin from the newborn infant.

**Pacifier use and short breastfeeding duration:
Cause, consequence or coincidence?
Refers to Slide 4.9.4**

Reference: Victora C, Behague D, Barros F et al. Pacifier use and short breastfeeding duration: cause, consequence, or coincidence. *Pediatrics*, 1997, 99:445-453.

Methods: A population-based cohort of 650 mothers and infants were visited shortly after delivery and at 1, 3, and 6 months. Mothers were interviewed regarding pacifier use, breastfeeding patterns, and socio-economic, environmental, and reproductive variables. Breastfeeding duration refers to the total duration of any breastfeeding.

Findings: Intense pacifier users at 1 month (children who used the pacifiers during most of the day and at least until falling asleep) were four times more likely to stop breastfeeding at 6 months of age than nonusers.

	Users	Nonusers	
At one month:			
Receiving daily breastfeeds (n=450)	10.6%	12.2%	p<.001
Receiving formula (n=450)	12.2%	37%	p=.001
Receiving teas (n=450)	49.4%	76.1%	p=.001
BF at 3 mo (n=447)	86.4%	58.7%	p<.001
BF at 6 mo (n=437)	65%	16.3%	p<.001

Conclusions: Pacifiers may be an effective weaning mechanism used by mothers who have explicit or implicit difficulties in breastfeeding. To be successful, breastfeeding promotion campaigns to reduce pacifier use need to also help women face the challenges of nursing and address their anxieties.

**Training peer counsellors to promote and support
exclusive breastfeeding in Bangladesh**
Refers to Slide 4.10.5

Reference: Haider R, Kabir I, Huttly S and Ashworth A. A training peer counselors to promote and support exclusive breastfeeding in Bangladesh. *J Hum Lact*, 2002, 18:7-12.

Method: A peer counselling intervention program was instituted in Dhaka, Bangladesh and exclusive breastfeeding rates at 5 months were compared in the intervention area and the control area. Peer counsellors lived in the neighbourhoods where they worked and they received classroom, practice, and supervised practice sessions. Peer counsellors visited mothers a minimum of twice in the last trimester of pregnancy and within 48 hours, 5th day, once during days 10-14, and then every 2 weeks until 5 months postpartum. A protocol for referring to breastfeeding supervisors and to study coordinator was developed.

Findings:

70% of mothers in the project area breastfed exclusively.

6% of mothers in the control area breastfed exclusively.

Conclusions: Community based peer counselling is useful and effective strategy in breastfeeding promotion. Providing the peer counsellors with on going supervision for support and linkages to health facilities for a doctor's treatment gave the peer counsellors confidence and credibility with the mothers.

**Efficacy of home-based peer counselling to promote exclusive breastfeeding:
a randomised controlled trial****Refers to Slide 4.10.6**

Reference: Morrow A, Guerrereo ML, Shultis J, Calva JJ, Lutter C, Bravo J, Ruiz-Palacios G, Morrow RC, Butterfoss FD. Efficacy of home-based peer counselling to promote exclusive breastfeeding: a randomised controlled trial. *Lancet*, 1999, 353:1226-1231.

Background: Exclusive breastfeeding is recommended worldwide but not commonly practised. We undertook a randomised controlled study of the efficacy of home-based peer counselling to increase the proportion of exclusive breastfeeding among mothers and infants residing in periurban Mexico City.

Methods: Two intervention groups with different counselling frequencies, six visits (44) and three visits (52), were compared with a control group (34) that had no intervention. From March, 1995, to September, 1996, 170 pregnant women were identified by census and invited to participate in the study. Home visits were made during pregnancy and early post partum by peer counsellors recruited from the same community and trained by La Leche League. Data were collected by independent interview. Exclusive breastfeeding was defined by WHO criteria.

Findings: 130 women participated in the study. Only 12 women refused participation. Study groups did not differ in baseline factors. At 3 months post partum, exclusive breastfeeding was practised by 67% of six-visit, 50% of three-visit, and 12% of control mothers (intervention groups vs. controls, $p < 0.001$; six-visit vs. three-visit, $p = 0.02$). Duration of breastfeeding was significantly ($p = 0.02$) longer in intervention groups than in controls, and fewer intervention than control infants had an episode of diarrhoea (12% vs. 26%, $p = 0.03$).

Interpretation: This is the first reported community-based randomised trial of breastfeeding promotion. Early and repeated contact with peer counsellors was associated with a significant increase in breastfeeding exclusivity and duration. The two-fold decrease in diarrhoea demonstrates the importance of breastfeeding promotion to infant health.

**Promotion of Breastfeeding Intervention Trial (PROBIT):
a randomized trial in the Republic of Belarus**
Refers to Slides 4.11.1-4

Reference: Kramer MS, Chalmers B, Hodnett ED, Sevkovskaya Z, Dzikovich I, Shapiro S, Collet JP, Vanilovich I, Mezen I, Ducruet T, Shishko G, Zubovich V, Mknuik D, Gluchanina E, Dombrovskiy V, Ustinovitch A, Kot T, Bogdanovich N, Ovchinikova L, Helsing E; PROBIT Study Group (Promotion of Breastfeeding Intervention Trial). Promotion of Breastfeeding Intervention Trial (PROBIT): a randomized trial in the Republic of Belarus. *JAMA*, 2001, Jan 24-31;285(4):413-20.

Context: Current evidence that breastfeeding is beneficial for infant and child health is based exclusively on observational studies. Potential sources of bias in such studies have led to doubts about the magnitude of these health benefits in industrialized countries.

Objective: To assess the effects of breastfeeding promotion on breastfeeding duration and exclusivity and gastrointestinal and respiratory infection and atopic eczema among infants. DESIGN: The Promotion of Breastfeeding Intervention Trial (PROBIT), a cluster-randomised trial conducted June 1996-December 1997 with a 1-year follow-up.

Setting: Thirty-one maternity hospitals and polyclinics in the Republic of Belarus.

Participants: A total of 17 046 mother-infant pairs consisting of full-term singleton infants weighing at least 2500 g and their healthy mothers who intended to breastfeed, 16491 (96.7%) of which completed the entire 12 months of follow-up.

Interventions: Sites were randomly assigned to receive an experimental intervention (n = 16) modelled on the Baby-friendly Hospital Initiative of the World Health Organization and United Nations Children's Fund, which emphasizes health care worker assistance with initiating and maintaining breastfeeding and lactation and postnatal breastfeeding support, or a control intervention (n = 15) of continuing usual infant feeding practices and policies.

Main outcome measures: Duration of any breastfeeding, prevalence of predominant and exclusive breastfeeding at 3 and 6 months of life and occurrence of 1 or more episodes of gastrointestinal tract infection, 2 or more episodes of respiratory tract infection, and atopic eczema during the first 12 months of life, compared between the intervention and control groups.

Results: Infants from the intervention sites were significantly more likely than control infants to be breastfed to any degree at 12 months (19.7% versus 11.4%; adjusted odds ratio [OR], 0.47; 95% confidence interval [CI], 0.32-0.69), were more likely to be exclusively breastfed at 3 months (43.3% versus 6.4%; $P < .001$) and at 6 months (7.9% versus 0.6%; $P = .01$), and had a significant reduction in the risk of 1 or more gastrointestinal tract infections (9.1% versus 13.2%; adjusted OR, 0.60; 95% CI, 0.40-0.91) and of atopic eczema (3.3% versus 6.3%; adjusted OR, 0.54; 95% CI, 0.31-0.95), but no significant reduction in respiratory tract infection (intervention group, 39.2%; control group, 39.4%; adjusted OR, 0.87; 95% CI, 0.59-1.28).

Conclusions: Our experimental intervention increased the duration and degree (exclusivity) of breastfeeding and decreased the risk of gastrointestinal tract infection and atopic eczema in the first year of life. These results provide a solid scientific underpinning for future interventions to promote breastfeeding.

The effects of the Baby-friendly Hospital Initiative on breastfeeding duration in Switzerland

Refers to Slide 4.11.5-7

Reference: Merten S et al. Do Baby-Friendly Hospitals Influence Breastfeeding Duration on a National Level. *Pediatrics*, 2005, 116:e702 – e708.

Objectives: This study examined the question of whether Baby-friendly hospital status and compliance with the 10 Steps influence breastfeeding duration on a national level in Switzerland.

Methods: Data was analysed for 2861 infants aged 0 to 11 months of age born in 145 different health facilities. Breastfeeding data was compared with both the progress towards Baby-friendly status of each hospital and the degree to which accredited hospitals were successfully maintaining the Baby-friendly standards.

Results: The proportion of babies exclusively breastfed for their first 5 months of life was 42% for those born in Baby-friendly hospitals, compared with 34% for infants born elsewhere. Median breastfeeding duration for infants born in Baby-friendly hospitals, compared with infants born in other hospitals, was longer if the hospital showed good compliance with the Ten Steps (35 weeks versus 29 weeks for any breastfeeding, 20 weeks versus 17 weeks for full breastfeeding, and 12 weeks versus 6 weeks for exclusive breastfeeding).

In 2003 the median duration of any breastfeeding across Switzerland was 31 weeks, compared with 22 weeks in 1994. The median duration of full breastfeeding was 17 weeks, compared with 15 weeks in 1994.

Conclusions: The authors conclude that the general increase in breastfeeding in Switzerland since 1994 can be interpreted in part as a consequence of the growing implementation of the Baby-friendly Hospital Initiative. Longer breastfeeding duration was also associated with 24 hours rooming-in, early initiation of breastfeeding, feeding on demand and avoiding dummy use.

Handout 4.1

**Presentation for Session 4:
The scientific basis for the
“Ten steps to successful breastfeeding”**

Ten steps to successful breastfeeding

Step 1. Have a written breastfeeding policy that is routinely communicated to all health care staff.

A JOINT WHO/UNICEF STATEMENT (1989)

Transparency 4.1.1

Breastfeeding policy

Why have a policy?

- Requires a course of action and provides guidance
- Helps establish consistent care for mothers and babies
- Provides a standard that can be evaluated

Transparency 4.1.2

Breastfeeding policy

What should it cover?

- At a minimum, it should include:
 - The 10 steps to successful breastfeeding
 - An institutional ban on acceptance of free or low cost supplies of breast-milk substitutes, bottles, and teats and its distribution to mothers
 - A framework for assisting HIV positive mothers to make informed infant feeding decisions that meet their individual circumstances and then support for this decision
- Other points can be added

Transparency 4.1.3

Breastfeeding policy

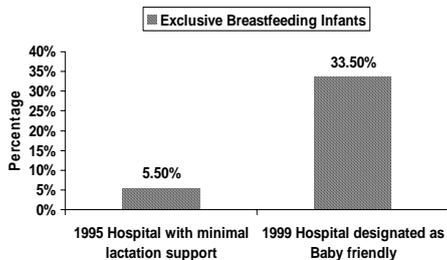
How should it be presented?

It should be:

- Written in the most common languages understood by patients and staff
- Available to all staff caring for mothers and babies
- Posted or displayed in areas where mothers and babies are cared for

Transparency 4.1.4

Step 1: Improved exclusive breast-milk feeds while in the birth hospital after implementing the Baby-friendly Hospital Initiative



Adapted from: Philipp BL, Merewood A, Miller LW et al. Baby-friendly Hospital Initiative improves breastfeeding initiation rates in a US hospital setting. *Pediatrics*, 2001, 108:677-681.

Transparency 4.1.5

Ten steps to successful breastfeeding

Step 2. Train all health-care staff in skills necessary to implement this policy.

A JOINT WHO/UNICEF STATEMENT (1989)

Transparency 4.2.1

Areas of knowledge

- Advantages of breastfeeding
- Risks of artificial feeding
- Mechanisms of lactation and suckling
- How to help mothers initiate and sustain breastfeeding
- How to assess a breastfeed
- How to resolve breastfeeding difficulties
- Hospital breastfeeding policies and practices
- Focus on changing negative attitudes which set up barriers

Transparency 4.2.2

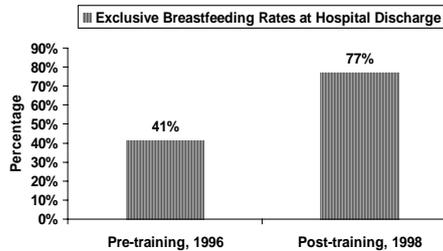
Additional topics for BFHI training in the context of HIV

Train all staff in:

- Basic facts on HIV and on Prevention of Mother-to-Child Transmission (PMTCT)
- Voluntary testing and counselling (VCT) for HIV
- Locally appropriate replacement feeding options
- How to counsel HIV + women on risks and benefits of various feeding options and how to make informed choices
- How to teach mothers to prepare and give feeds
- How to maintain privacy and confidentiality
- How to minimize the "spill over" effect (leading mothers who are HIV - or of unknown status to choose replacement feeding when breastfeeding has less risk)

Transparency 4.2.3

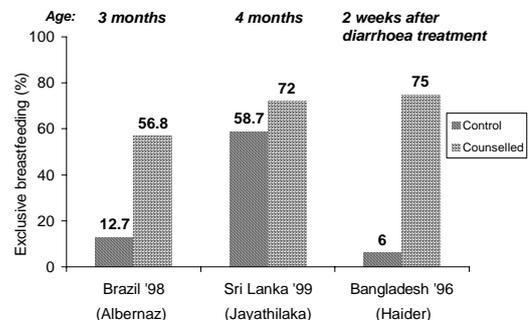
Step 2: Effect of breastfeeding training for hospital staff on exclusive breastfeeding rates at hospital discharge



Adapted from: Cattaneo A, Buzzetti R. Effect on rates of breast feeding of training for the Baby Friendly Hospital Initiative. *BMJ*, 2001, 323:1358-1362.

Transparency 4.2.4

Step 2: Breastfeeding counselling increases exclusive breastfeeding



All differences between intervention and control groups are significant at p<0.001. From: CAH/WHO based on studies by Albernaz, Jayathilaka and Haider.

Transparency 4.2.5

Which health professionals other than perinatal staff influence breastfeeding success?

Transparency 4.2.6

Ten steps to successful breastfeeding

Step 3. Inform all pregnant women about the benefits of breastfeeding.

A JOINT WHO/UNICEF STATEMENT (1989)

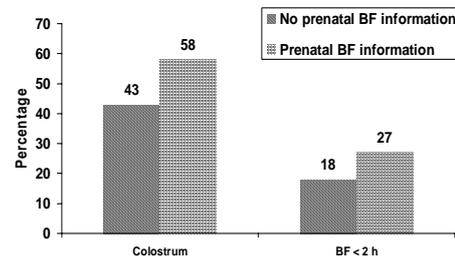
Transparency 4.3.1

Antenatal education should include:

- Benefits of breastfeeding
- Early initiation
- Importance of rooming-in (if new concept)
- Importance of feeding on demand
- Importance of exclusive breastfeeding
- How to assure enough breastmilk
- Risks of artificial feeding and use of bottles and pacifiers (soothers, teats, nipples, etc.)
- Basic facts on HIV
- Prevention of mother-to-child transmission of HIV (PMTCT)
- Voluntary testing and counselling (VCT) for HIV and infant feeding counselling for HIV+ women
- Antenatal education should not include group education on formula preparation

Transparency 4.3.2

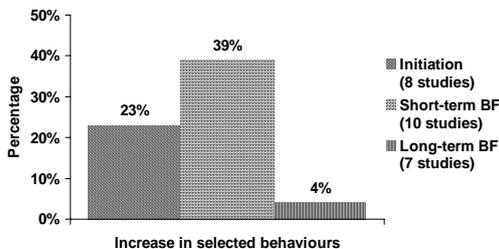
Step 3: The influence of antenatal care on infant feeding behaviour



Adapted from: Nielsen B, Hedegaard M, Thilsted S, Joseph A, Liljestrand J. Does antenatal care influence postpartum health behaviour? Evidence from a community based cross-sectional study in rural Tamil Nadu, South India. *British Journal of Obstetrics and Gynaecology*, 1998, 105:697-703.

Transparency 4.3.3

Step 3: Meta-analysis of studies of antenatal education and its effects on breastfeeding



Adapted from: Guise et al. The effectiveness of primary care-based interventions to promote breastfeeding: Systematic evidence review and meta-analysis... *Annals of Family Medicine*, 2003, 1(2):70-78.

Transparency 4.3.4

Ten steps to successful breastfeeding

Step 4. Help mothers initiate breastfeeding within a half-hour of birth.

A JOINT WHO/UNICEF STATEMENT (1989)

Transparency 4.4.1

New interpretation of Step 4 in the revised BFHI Global Criteria (2007):

“Place babies in skin-to-skin contact with their mothers immediately following birth for at least an hour. Encourage mothers to recognize when their babies are ready to breastfeed and offer help if needed.”

Transparency 4.4.2

Early initiation of breastfeeding for the normal newborn
Why?

- Increases duration of breastfeeding
- Allows skin-to-skin contact for warmth and colonization of baby with maternal organisms
- Provides colostrum as the baby’s first immunization
- Takes advantage of the first hour of alertness
- Babies learn to suckle more effectively
- Improved developmental outcomes

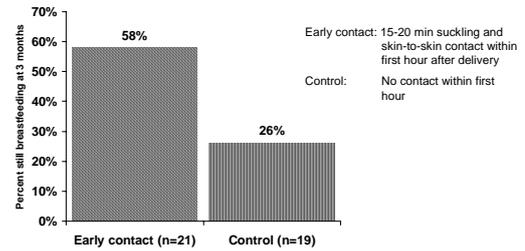
Transparency 4.4.3

Early initiation of breastfeeding for the normal newborn How?

- Keep mother and baby together
- Place baby on mother's chest
- Let baby start suckling when ready
- Do not hurry or interrupt the process
- Delay non-urgent medical routines for at least one hour

Transparency 4.4.4

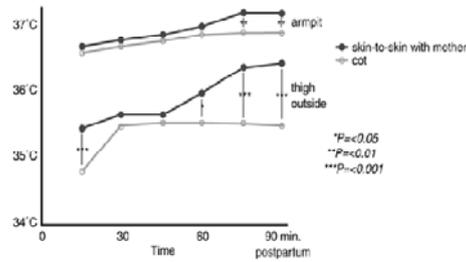
Impact on breastfeeding duration of early infant-mother contact



Adapted from: DeChateau P, Wiberg B. Long term effect on mother-infant behavior of extra contact during the first hour postpartum. *Acta Paediatr*, 1977, 66:145-151.

Transparency 4.4.5

Temperatures after birth in infants kept either skin-to-skin with mother or in cot



Adapted from: Christensson K et al. Temperature, metabolic adaptation and crying in healthy full-term newborns cared for skin-to-skin or in a cot. *Acta Paediatr*, 1992, 81:490.

Transparency 4.4.6

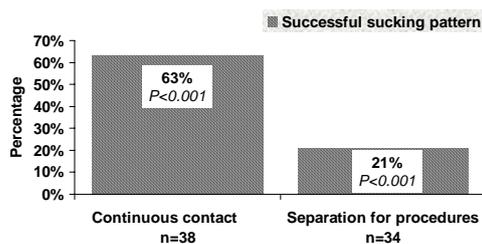
Protein composition of human colostrum and mature breast milk (per litre)

Constituent	Measure	Colostrum (1-5 days)	Mature Milk (>30 days)
Total protein	G	23	9-10.5
Casein	mg	1400	1870
α -Lactalbumin	mg	2180	1610
Lactoferrin	mg	3300	1670
IgA	mg	3640	1420

From: Worthington-Roberts B, Williams SR. *Nutrition in Pregnancy and Lactation*, 5th ed. St. Louis, MO, Times Mirror/Mosby College Publishing, p. 350, 1993.

Transparency 4.4.7

Effect of delivery room practices on early breastfeeding



Adapted from: Righard L, Alade O. Effect of delivery room routines on success of first breastfeed *Lancet*, 1990, 336:1105-1107.

Transparency 4.4.8

Ten steps to successful breastfeeding

Step 5. Show mothers how to breastfeed and how to maintain lactation, even if they should be separated from their infants.

A JOINT WHO/UNICEF STATEMENT (1989)

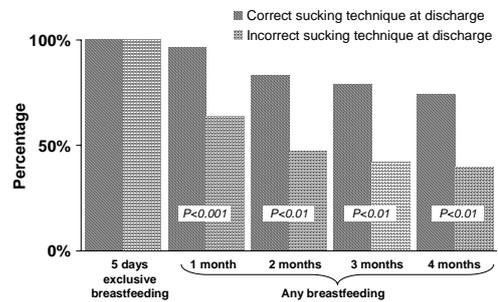
Transparency 4.5.1

“ *Contrary to popular belief, attaching the baby on the breast is not an ability with which a mother is [born...]; rather it is a learned skill which she must acquire by observation and experience.* **”**

From: Woolridge M. The "anatomy" of infant sucking. *Midwifery*, 1986, 2:164-171.

Transparency 4.5.2

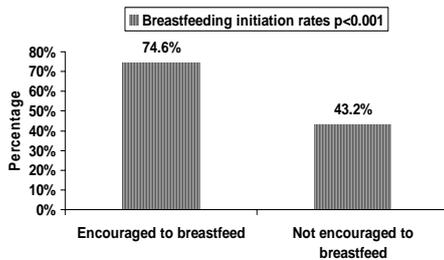
Effect of proper attachment on duration of breastfeeding



Adapted from: Righard L., Alade O. (1992) Sucking technique and its effect on success of breastfeeding. *Birth* 19(4):185-189.

Transparency 4.5.3

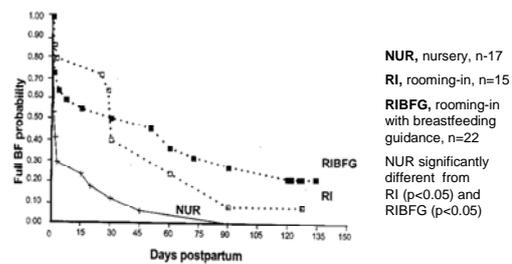
Step 5: Effect of health provider encouragement of breastfeeding in the hospital on breastfeeding initiation rates



Adapted from: Lu M, Lange L, Slusser W et al. Provider encouragement of breast-feeding: Evidence from a national survey. *Obstetrics and Gynecology*, 2001, 97:290-295.

Transparency 4.5.4

Effect of the maternity ward system on the lactation success of low-income urban Mexican women



From: 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 Hum Dev.*, 1992, 31 (1): 25-40.

Transparency 4.5.5

Supply and demand

- Milk removal stimulates milk production.
- The amount of breast milk removed at each feed determines the rate of milk production in the next few hours.
- Milk removal must be continued during separation to maintain supply.

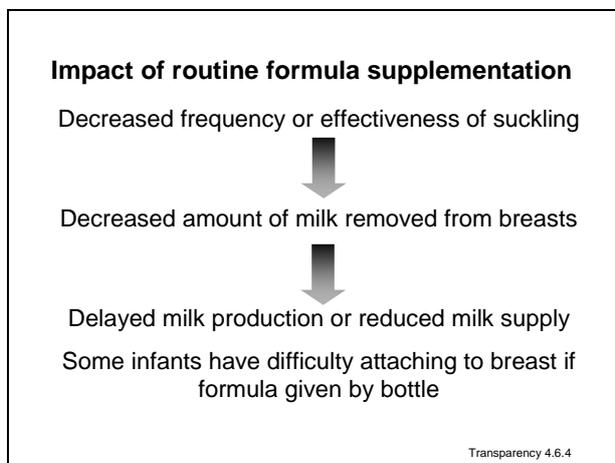
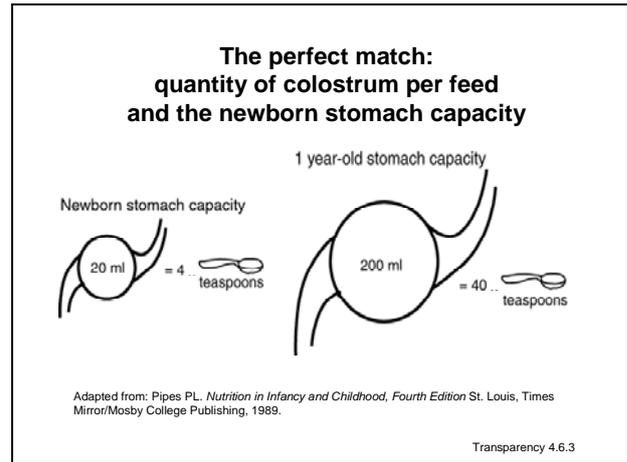
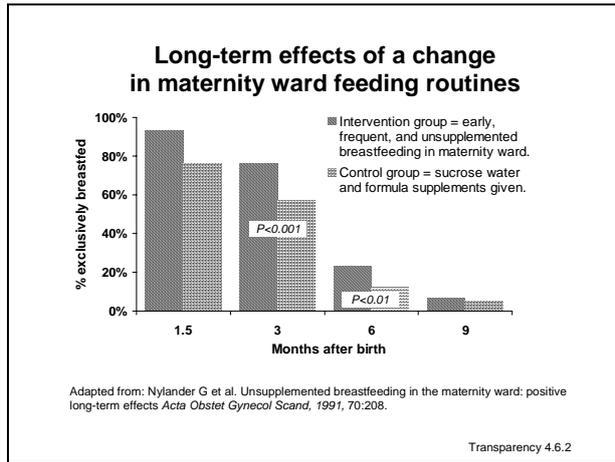
Transparency 4.5.6

Ten steps to successful breastfeeding

Step 6. Give newborn infants no food or drink other than breast milk unless medically indicated.

A JOINT WHO/UNICEF STATEMENT (1989)

Transparency 4.6.1



- ### Determinants of lactation performance across time in an urban population from Mexico
- Milk came in earlier in the hospital with rooming-in where formula was not allowed
 - Milk came in later in the hospital with nursery (p<0.05)
 - Breastfeeding was positively associated with early milk arrival and inversely associated with early introduction of supplementary bottles, maternal employment, maternal body mass index, and infant age.
- From: Perez-Escamilla et al. Determinants of lactation performance across time in an urban population from Mexico. *Soc Sci Med*, 1993, (8):1069-78.
- Transparency 4.6.5

Summary of studies on the water requirements of exclusively breastfed infants

Country	Temperature °C	Relative Humidity %	Urine osmolarity (mOsm/l)
Argentina	20-39	60-80	105-199
India	27-42	10-60	66-1234
Jamaica	24-28	62-90	103-468
Peru	24-30	45-96	30-544

Note: Normal range for urine osmolarity is from 50 to 1400 mOsm/kg.

From: *Breastfeeding and the use of water and teas*. Division of Child Health and Development Update No. 9, Geneva, World Health Organization, reissued, Nov. 1997.

Transparency 4.6.6

Medically indicated

There are rare exceptions during which the infant may require other fluids or food in addition to, or in place of, breast milk. The feeding programme of these babies should be determined by qualified health professionals on an individual basis.

Transparency 4.6.7

Acceptable medical reasons for use of breast-milk substitutes

Infant conditions:

Infants who should not receive breast milk or any other milk except specialized formula:

- Classic galactosemia: A special galactose-free formula is needed.
- Maple syrup urine disease: A special formula free of leucine, isoleucine and valine is needed.
- Phenylketonuria: A special phenylalanine free formula is required (some BF is possible, under careful monitoring).

Infants for whom breast milk remains the best feeding option but may need other food in addition to breast milk for a limited period:

- Very low birth weight infants (less than 1500g)
- Very preterm infants (less than 32 weeks gestational age)
- Newborn infants at risk of hypoglycaemia.

Transparency 4.6.8

Maternal conditions:

Mothers who may need to avoid BF permanently:

- HIV infection – if replacement feeding is AFASS.

Mothers who may need to avoid BF temporarily:

- Severe illness that prevents a mother from caring for her infant
- Herpes simplex virus type 1. (If lesions on breasts, avoid BF until active lesions have resolved.)
- Maternal medications – sedating psychotherapeutic drugs; radioactive iodine – 131 better avoided given that safer alternatives are available; excessive use of topical iodine; cytotoxic chemotherapy usually requires mother to stop BF permanently.

Transparency 4.6.9

Mothers who can continue breastfeeding:

- Breast abscess
- Hepatitis B – infants should get vaccine.
- Hepatitis C
- Mastitis – if painful, remove milk by expression
- TB – manage together following national guidelines
- Substance use: maternal use of nicotine, alcohol, ecstasy, amphetamines, cocaine and related stimulants have harmful effects on BF babies; alcohol, opioids, benzodiazepines and cannabis can cause sedation in mother and baby

Transparency 4.6.10

Ten steps to successful breastfeeding

Step 7. Practice rooming-in — allow mothers and infants to remain together — 24 hours a day.

A JOINT WHO/UNICEF STATEMENT (1989)

Transparency 4.7.1

Rooming-in

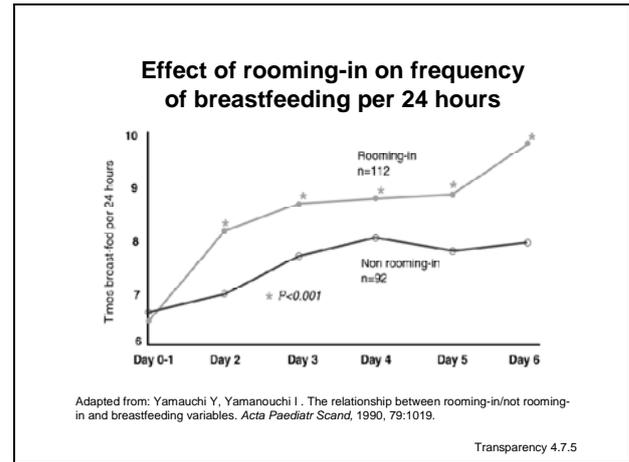
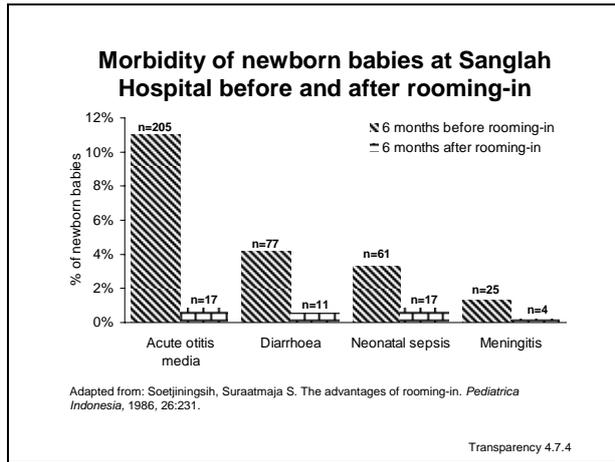
A hospital arrangement where a mother/baby pair stay in the same room day and night, allowing unlimited contact between mother and infant

Transparency 4.7.2

**Rooming-in
Why?**

- Reduces costs
- Requires minimal equipment
- Requires no additional personnel
- Reduces infection
- Helps establish and maintain breastfeeding
- Facilitates the bonding process

Transparency 4.7.3



Ten steps to successful breastfeeding

Step 8. Encourage breastfeeding on demand.

A JOINT WHO/UNICEF STATEMENT (1989)

Transparency 4.8.1

Breastfeeding on demand:

Breastfeeding whenever the baby or mother wants, with no restrictions on the length or frequency of feeds.

Transparency 4.8.2

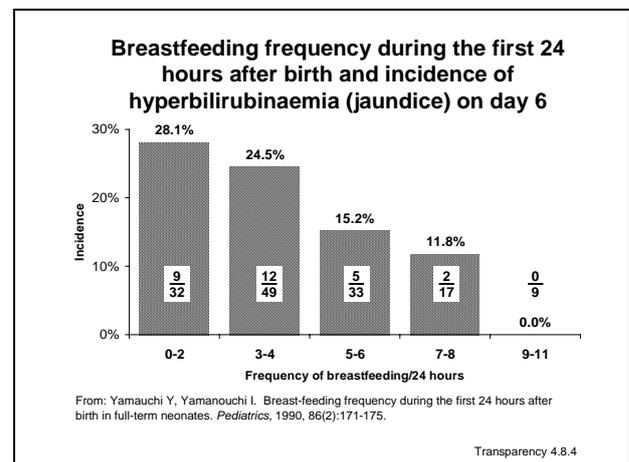
On demand, unrestricted breastfeeding

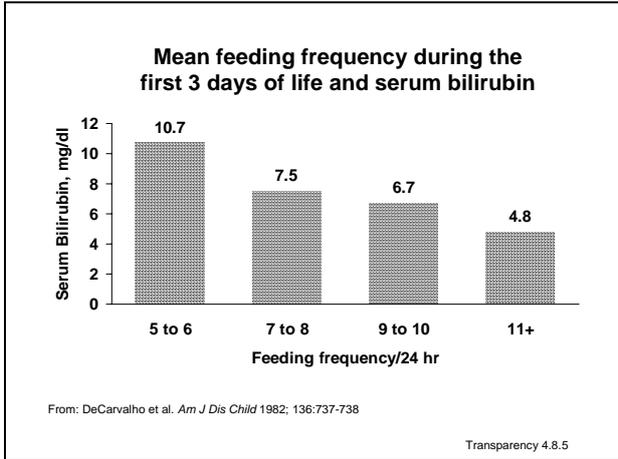
Why?

- Earlier passage of meconium
- Lower maximal weight loss
- Breast-milk flow established sooner
- Larger volume of milk intake on day 3
- Less incidence of jaundice

From: Yamauchi Y, Yamanouchi I. Breast-feeding frequency during the first 24 hours after birth in full-term neonates. *Pediatrics*, 1990, 86(2):171-175.

Transparency 4.8.3





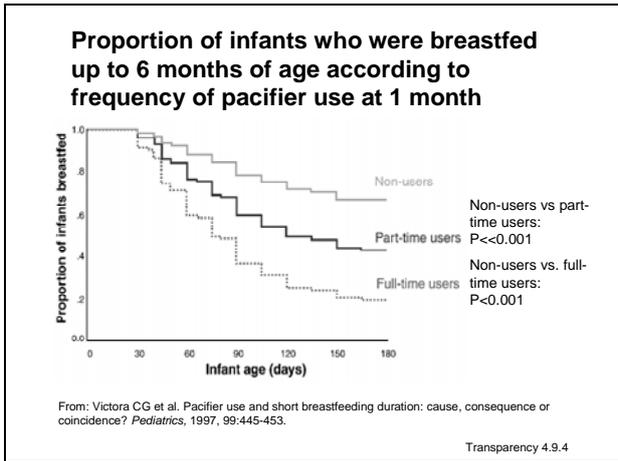
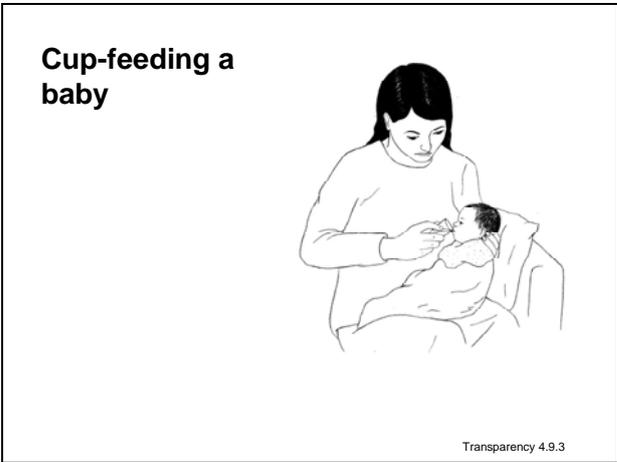
Ten steps to successful breastfeeding

Step 9. Give no artificial teats or pacifiers (also called dummies and soothers) to breastfeeding infants.

A JOINT WHO/UNICEF STATEMENT (1989)

Transparency 4.9.1

- ### Alternatives to artificial teats
- cup
 - spoon
 - dropper
 - Syringe
- Transparency 4.9.2



Ten steps to successful breastfeeding

Step 10. Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic.

A JOINT WHO/UNICEF STATEMENT (1989)

Transparency 4.10.1

“The key to best breastfeeding practices is continued day-to-day support for the breastfeeding mother within her home and community.”

From: Saadeh RJ, editor. *Breast-feeding: the Technical Basis and Recommendations for Action*. Geneva, World Health Organization, pp. 62-74, 1993.

Transparency 4.10.2

Support can include:

- Early postnatal or clinic checkup
- Home visits
- Telephone calls
- Community services
 - Outpatient breastfeeding clinics
 - Peer counselling programmes
- Mother support groups
 - Help set up new groups
 - Establish working relationships with those already in existence
- Family support system

Transparency 4.10.3

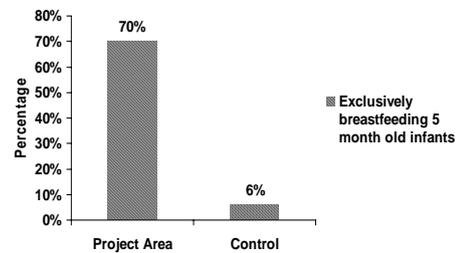
Types of breastfeeding mothers' support groups

- Traditional
 - extended family
 - culturally defined *doulas*
 - village women
- Modern, non-traditional
 - Self-initiated
 - by mothers
 - by concerned health professionals
 - Government planned through:
 - networks of national development groups, clubs, etc.
 - health services -- especially primary health care (PHC) and trained traditional birth attendants (TBAs)

From: Jelliffe DB, Jelliffe EFP. The role of the support group in promoting breastfeeding in developing countries. *J Trop Pediatr*, 1983, 29:244.

Transparency 4.10.4

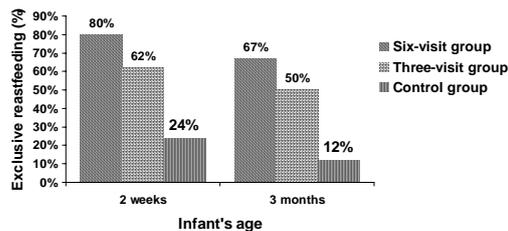
Step 10: Effect of trained peer counsellors on the duration of exclusive breastfeeding



Adapted from: Haider R, Kabir I, Huttly S, Ashworth A. Training peer counselors to promote and support exclusive breastfeeding in Bangladesh. *J Hum Lact*, 2002;18(1):7-12.

Transparency 4.10.5

Home visits improve exclusive breastfeeding



From: Morrow A, Guerrero ML, Shults J, et al. Efficacy of home-based peer counselling to promote exclusive breastfeeding: a randomised controlled trial. *Lancet*, 1999, 353:1226-31

Transparency 4.10.6

Combined Steps: The impact of baby-friendly practices: The Promotion of Breastfeeding Intervention Trial (PROBIT)

- In a randomized trial in Belarus 17,000 mother-infant pairs, with mothers intending to breastfeed, were followed for 12 months.
- In 16 control hospitals & associated polyclinics that provide care following discharge, staff were asked to continue their usual practices.
- In 15 experimental hospitals & associated polyclinics staff received baby-friendly training & support.

Adapted from: Kramer MS, Chalmers B, Hodnett E, et al. Promotion of breastfeeding intervention trial (PROBIT) A randomized trial in the Republic of Belarus. *JAMA*, 2001, 285:413-420.

Transparency 4.11.1

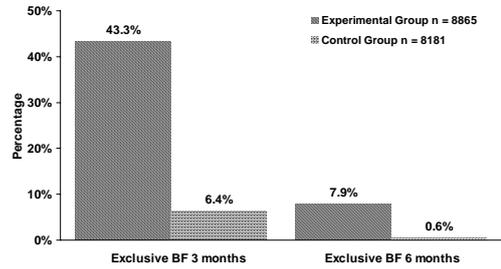
Differences following the intervention

Control hospitals:	Experimental hospitals:
▪ Routine separation of mothers & babies at birth	▪ Mothers & babies together from birth
▪ Routine tight swaddling	▪ No swaddling—skin-to-skin contact encouraged
▪ Routine nursery-based care	▪ Rooming-in on a 24-hr basis
▪ Incorrect latching & positioning techniques	▪ Correct latching & positioning techniques
▪ Routine supplementation with water & milk by bottle	▪ No supplementation
▪ Scheduled feedings every 3 hrs	▪ Breastfeeding on demand
▪ Routine use of pacifiers	▪ No use of pacifiers
▪ No BF support after discharge	▪ BF support in polyclinics

Communication from Chalmers and Kramer (2003)

Transparency 4.11.2

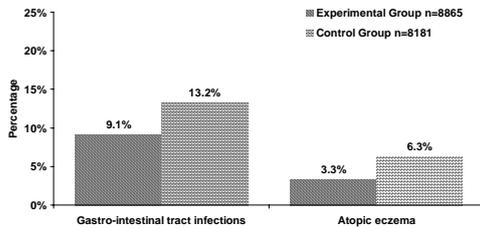
Effect of baby-friendly changes on breastfeeding at 3 & 6 months



Adapted from: Kramer et al. (2001)

Transparency 4.11.3

Impact of baby-friendly changes on selected health conditions



Note: Differences between experimental and control groups for various respiratory tract infections were small and statistically non-significant.

Adapted from: Kramer et al. (2001)

Transparency 4.11.4

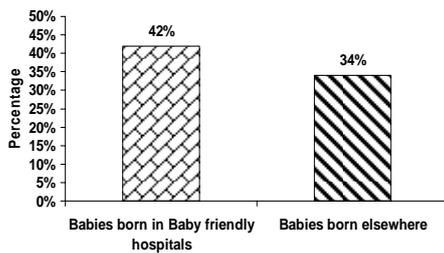
Combined Steps: The influence of Baby-friendly hospitals on breastfeeding duration in Switzerland

- Data was analyzed for 2861 infants aged 0 to 11 months in 145 health facilities.
- Breastfeeding data was compared with both the progress towards Baby-friendly status of each hospital and the degree to which designated hospitals were successfully maintaining the Baby-friendly standards.

Adapted from: Merten S et al. Do Baby-Friendly Hospitals Influence Breastfeeding Duration on a National Level? *Pediatrics*, 2005, 116: e702 – e708.

Transparency 4.11.5

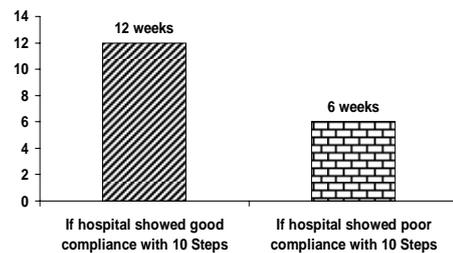
Proportion of babies exclusively breastfed for the first five months of life -- Switzerland



Adapted from: Merten S et al. Do Baby-Friendly Hospitals Influence Breastfeeding Duration on a National Level? *Pediatrics*, 2005, 116: e702 – e708.

Transparency 4.11.6

Median duration of exclusive breastfeeding for babies born in Baby-friendly hospitals -- Switzerland



Adapted from: Merten S et al. Do Baby-Friendly Hospitals Influence Breastfeeding Duration on a National Level? *Pediatrics*, 2005, 116: e702 – e708.

Transparency 4.11.7

Handout 4.2



Sultanate of Oman
Ministry of Health
Department of Nutrition

National policy on infant and young child feeding (for health facilities)

This policy is developed to ensure and improve the survival, health, nutritional status, growth and development of infants and young children through optimal feeding.

To ensure optimal infant and young child feeding, the following should be practiced by all health institutions:

1. Initiate breastfeeding within one hour from birth and promote exclusive breastfeeding for about the first 6 months of age.
2. Ensure timely introduction of complementary feeds at the end of the sixth month. If signs of hunger are observed earlier, complementary feeding could be started after completing four months.
3. Ensure that all children are fed adequate and hygienically prepared complementary foods.
4. Educate the mothers to increase food quality, quantity and frequency with a combination of meals and snacks, as the child gets older, with continued breastfeeding into the second year.
5. Encourage the mothers to diversify the diet to improve quality and micronutrients intake, satisfy protein, iron, vitamin A, and iodine requirements.
6. Encourage caregivers to practice active feeding, respond to motor development, and appropriate care practices.
7. During illness, advise the mother to increase frequency and quantity of meals, and continue breastfeeding.
8. Integration of the specific monitoring and evaluation system is an essential part of the implementation of this policy.
9. The implementation of the Oman Code 55/98 on the marketing of the breast-milk substitutes is the responsibility of all health personal at the health facility, wilayat, and regional levels.
10. Check baby's weight regularly as an indicator of adequate nutrition and refer malnourished children to the nutrition clinic in the health facility for management, counseling and follow up.
11. Train all health worker on the infant and young child feeding policy. Foster establishment of infant and young child feeding support groups in the health facilities and the communities.

HE – 49

First edition – November 2003

Baby and Mother Friendly Hospital Programme Ministry of Health, Mexico

What are the 25 actions which the programme promotes?

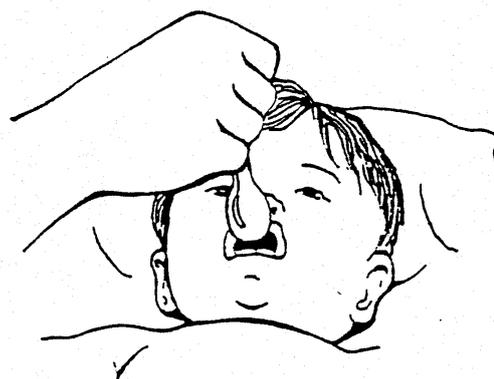
For a hospital to be considered **BABY- AND MOTHER-FRIENDLY**, it must implement the following 25-point programme:

Actions for the support and promotion of breast-feeding:

1. To have a written breast-feeding policy that is routinely communicated to all health care staff.
2. To train all health care staff in those skills necessary to implement this policy.
3. To practise rooming-in—allowing mothers and infants to remain together—24 hours a day.
4. To foster the establishment of breast-feeding support groups and refer mothers to them on discharge from the hospital or clinic.
5. To inform all pregnant women about the benefits and practice of breast-feeding.
6. To practise skin to skin contact in the delivery room and to help mothers initiate breast-feeding within a half-hour of birth.
7. To show mothers how to breast-feed and how to maintain lactation even if they should be separated from their infants.
8. To encourage breast-feeding on demand.
9. To encourage mothers to give newborn infants no food or drink other than breast milk, unless **MEDICALLY PRESCRIBED**.
10. To give no **ARTIFICIAL TEATS OR PACIFIERS** to infants which might cause them to refuse the breast.

Actions aimed at protecting the health of the mother:

11. To carry out pre-natal care and immunise women against tetanus.
12. Early detection of high risk pregnancies.
13. To give orientation on nutrition to pregnant women.
14. To deliver all babies in health facilities.
15. To promote family planning.
16. Early detection of breast cancer.
17. Early detection of cancer of the womb.
18. To study and prevent peri-natal maternal mortality.



Actions for neo-natal and infant care:

19. Application of neo-natal vaccinations (Polio and tuberculosis).
20. To check the scheme of vaccinations of under-fives.
21. To monitor growth and development.
22. To control acute diarrhoeal diseases and to promote the use of oral rehydration salts.
23. To detect and control acute respiratory infections in under fives.

Research activities:

24. To investigate risk factors; to identify and take advantage of lost opportunities.
25. To systematise all experience gained.

Handout 4.4

**UNICEF UK Baby Friendly Initiative:
Sample combined maternity/community services policy on
breastfeeding¹****PRINCIPLES**

This facility believes that breastfeeding is the healthiest way for a woman to feed her baby and recognises the important health benefits now known to exist for both the mother and her child (1).

All mothers have the right to make a fully informed choice as to how they feed and care for their babies. The provision of clear and impartial information to all mothers at an appropriate time is therefore essential.

Health care staff will not discriminate against any woman in her chosen method of infant feeding and will fully support her when she has made that choice. This policy is designed to ensure good professional practice, not to dictate the choices of mothers.

AIMS

To ensure that the health benefits of breastfeeding and the potential health risks of formula feeding are discussed with all women and their families as appropriate, so that they can make an informed choice about how they will feed their babies.

To create an environment where more women choose to breastfeed their babies, and where more women are given sufficient information and support to enable them to breastfeed exclusively for at least 4 months (and preferably up to 6 months), and then as part of their infant's diet for as long as they both wish (2).

To enable all health care staff who have contact with breastfeeding women to provide full and competent support through specialised training in all aspects of breastfeeding management.

To encourage liaison with other health care facilities and delivery of a seamless service, together with the development of a breastfeeding culture throughout the local community.

IN SUPPORT OF THIS POLICY

Adherence to this policy is required for all staff. Any deviation from the policy must be justified and recorded in the mother's and/or baby's health care records. This should be done in the context of professional judgment and codes of conduct. The policy should be implemented in conjunction with both the facility's breastfeeding guidelines [*where these exist*] and the parents' guide to the policy [*where this exists*].

It is the responsibility of all health care professionals to liaise with others should concerns arise about the baby's health. Any guidelines for the support of breastfeeding in special situations and the management of common complications will be drawn up and agreed by a multi-disciplinary team of professionals with clinical responsibility for the care of mothers and babies.

¹ From <http://www.babyfriendly.org.uk/pol-both.asp>

The policy and guidelines will be reviewed annually. Compliance with the policy will be audited on an annual basis.

No advertising of breast-milk substitutes, feeding bottles, teats or dummies is permissible in this Trust/health centre. The display of logos of manufacturers of these products on such items as calendars and stationery is also prohibited (3).

No literature provided by manufacturers of breast-milk substitutes is permitted. Educational materials for distribution to women or their families must be approved by the lead professional.

Parents who have made a fully informed choice to feed their babies artificially should be shown how to prepare formula feeds correctly, either individually or in small groups, in the postnatal period. No routine group instruction on the preparation of artificial feeds will be given in the antenatal period, as this does not provide the information adequately and has the potential to undermine confidence in breastfeeding.

THE POLICY

Communicating the Breastfeeding Policy

- 1.1 This policy is to be communicated to all health care staff who have any contact with pregnant women and mothers, including those employed outside the facility. All staff will receive a copy of the policy.
- 1.2 All new staff will be orientated to the policy as soon as their employment begins.
- 1.3 The policy will be displayed in all areas of Trust premises/clinics/ parts of the health centre. *[Where appropriate]* The policy will also be accessible to women in other forms, for example on audio or video tapes and in appropriate languages.

Training Health Care Staff

- 2.1 Midwives and/or health visitors have the primary responsibility for supporting breastfeeding women and for helping them to overcome related problems.
- 2.2 All professional, clerical and ancillary staff who have contact with pregnant women and mothers will receive training in breastfeeding management at a level appropriate to their professional group. New staff will receive training within six months of taking up their posts.
- 2.3 The responsibility for providing training lies with the lead professional *[insert post]*, who will audit the uptake and efficacy of the training and publish results on an annual basis.

Informing Pregnant Women of the Benefits and Management of Breastfeeding

- 3.1 Every effort must be made to ensure that all pregnant women are aware of the benefits of breastfeeding and of the potential health risks of formula feeding.
- 3.2 All pregnant women should be given an opportunity to discuss infant feeding on a one-to-one basis with a midwife or health visitor. Such discussion should not solely be attempted during a group parentcraft class.
- 3.3 The physiological basis of breastfeeding should be clearly and simply explained to all pregnant women, together with good management practices and some of the common experiences they may encounter. The aim should be to give women confidence in their ability to breastfeed.

- 3.4 All materials and teaching should reflect the WHO/UNICEF Baby Friendly best practice standards.

Supporting the Initiation of Breastfeeding

- 4.1 All mothers should be encouraged to hold their babies in skin-to-skin contact as soon as possible after delivery in an unhurried environment, regardless of their intended feeding method.
- 4.2 All women should be encouraged to offer the first breastfeed when mother and baby are ready. Help must be available from a midwife if needed.

Showing Women how to Breastfeed and how to Maintain Lactation even if Mother and Baby are Separated

- 5.1 A midwife should be available to assist a mother if necessary at all breastfeeds during her hospital stay.
- 5.2 Midwives and health visitors should ensure that mothers are offered the support necessary to acquire the skills of positioning and attachment. They should be able to explain the necessary techniques to the mother, thereby helping her to acquire this skill for herself.
- 5.3 All breastfeeding mothers should be shown how to hand express their milk. A leaflet outlining the process should be provided for women to use for reference.
- 5.4 It is the responsibility of those health professionals caring for both mother and baby to ensure the mother is given help and encouragement to express her milk and to maintain her lactation during periods of separation from her baby.
- 5.5 Mothers who are separated from their babies should be encouraged to express milk at least six to eight times in a 24 hour period.

Supporting Exclusive Breastfeeding

- 6.1 For around the first 6 months, breastfed babies should receive no water or artificial feed except in cases of medical indication or fully informed parental choice. In hospital, no water or artificial feed should be given to a breastfed baby unless prescribed by a midwife or paediatrician who has been appropriately trained. Once home, no water or artificial feed is to be recommended for a breastfed baby by a member of staff unless s/he is trained in lactation management.
- 6.2 Parents should always be consulted if supplementary feeds are recommended and the reasons discussed with them in full.
- 6.3 Any supplements which are prescribed or recommended should be recorded in the baby's hospital notes or health record along with the reason for supplementation.
- 6.4 Parents who elect to supplement their baby's breastfeeds with formula milk or other foods or drinks should be made aware of the health implications and of the harmful impact supplementation may have on breastfeeding to allow them to make a fully informed choice.
- 6.5 All weaning information should reflect the aim of exclusive breastfeeding for around 6 months and partial breastfeeding for at least the first year (2).
- 6.6 Data on infant feeding showing the prevalence of both exclusive and partial breastfeeding will be collected at the following ages: *[for example: delivery, transfer home, 10 days, 6/8 weeks, 4 months, 1 year - we await national recommendations]*.

- 6.7 Breast-milk substitutes will not be sold by facility staff or on health care premises. [Formula milk may be exchanged for welfare tokens (and sold to families in receipt of Working Families Tax Credit) if there is no other local outlet providing this facility].

Rooming-in

- 7.1 Mothers will normally assume primary responsibility for the care of their babies.
- 7.2 Separation of mother and baby while hospitalised will normally occur only where the health of either the mother or her infant prevents care being offered in the postnatal areas.
- 7.3 There is no designated nursery space in the hospital postnatal areas.
- 7.4 Babies should not be routinely separated from their mothers at night. This applies to babies who are being bottle fed as well as those being breastfed. Mothers who have delivered by Caesarean section should be given appropriate care, but the policy of keeping mother and baby together should normally apply.
- 7.5 Mothers will be encouraged to continue to keep their babies near them when they are at home. They will be given appropriate information about the benefits of and contraindications to bed-sharing.

Baby-led Feeding

- 8.1 Demand feeding should be encouraged for all babies unless clinically indicated. Hospital procedures should not interfere with this principle.
- 8.2 Mothers should be encouraged to continue to practise baby-led feeding throughout the time they are breastfeeding.

Use of Artificial Teats, Dummies and Nipple Shields

- 9.1 Health care staff should not recommend the use of artificial teats or dummies during the establishment of breastfeeding. Parents wishing to use them should be advised of the possible detrimental affects on breastfeeding to allow them to make a fully informed choice. The information given and the parents' decision should be recorded in the appropriate health record.
- 9.2 Nipple shields will not be recommended except in extreme circumstances and then only for as short a time as possible. Any mother considering using a nipple shield must have the disadvantages fully explained to her prior to commencing use. She should be under the care of a skilled practitioner whilst using the shield and should be given every help to discontinue use as soon as possible.

Breastfeeding Support Groups

- 10.1 This facility supports co-operation between health care professionals and voluntary support groups whilst recognising that health care facilities have their own responsibility to promote breastfeeding.
- 10.2 Telephone numbers (or other means of contact) for infant feeding advisors [*where these exist*], community midwives, health visitors, and voluntary breastfeeding counsellors will be issued to all mothers and be routinely displayed in all areas relevant to maternity and child health. Details will be given of the times at which these advisors can be contacted.

10.3 Breastfeeding support groups will be invited to contribute to further development of the breastfeeding policy through involvement in appropriate meetings.

A Welcome for Breastfeeding Families

11.1 Breastfeeding will be regarded as the normal way to feed babies and young children. Mothers will be enabled and supported to feed their infants in all public areas of Trust premises/the health centre.

11.2 Comfortable facilities will be made available for mothers who prefer privacy.

11.3 Signs in all public areas of the facility will inform users of this policy.

Encouraging Community Support for Breastfeeding

12.1 Handover of care from midwife to health visitor will follow established procedure.

12.2 Health professionals should ask about the progress of breastfeeding at each contact with a breastfeeding mother. This will enable early identification of any potential complications and allow appropriate information to be given to prevent or remedy them.

12.3 Members of the health care team should use their influence wherever and whenever possible to encourage a breastfeeding culture in the local community.

12.4 Health care facilities will work with local breastfeeding support groups to raise society's awareness of the importance of breastfeeding and to encourage the provision of facilities for breastfeeding mothers and infants through liaison with local businesses, authorities, community groups and the media.

12.5 Opportunities to influence or take part in educational programmes in local schools (e.g. as part of the role of school nurses) will be explored.

1. Standing Committee on Nutrition of the British Paediatric Association (1994): Is breast feeding beneficial in the UK? *Arch Dis Child*, 71: 376-80.

2. The COMA Working Group on the Weaning Diet (1994) recommends that 'the majority of infants should not be given solid foods before the age of four months, and that a mixed diet should be offered by the age of six months'. The World Health Assembly (Resolution 47.5, 1994) recommends that babies should be exclusively breastfed until 'about 6 months'.

3. The Infant Formula and Follow-on Formula Regulations 1995 stipulate a legal requirement that infant formula advertising should be restricted to baby care publications distributed through the health care system. There is no legal requirement for facilities in the UK to comply with the International Code of Marketing of Breast-milk Substitutes (WHO, Geneva, 1981). However, the requirements of the Baby Friendly Initiative are based on the International Code, which aims 'to contribute to the provision of safe and adequate nutrition for infants, by the protection and promotion of breastfeeding, and by ensuring the proper use of breast-milk substitutes, when these are necessary, on the basis of adequate information and through appropriate marketing and distribution.' Articles 5 and 6 of the Code state that no promotion of breast-milk substitutes, bottles or teats should occur.

Handout 4.5

WHO/NMH/NHD/09.01
WHO/FCH/CAH/09.01



**Acceptable medical reasons for use
of breast-milk substitutes**

© World Health Organization 2009

All rights reserved. Publications of the World Health Organization can be obtained from WHO Press, World Health Organization, 20 Avenue Appia, 1211 Geneva 27, Switzerland (tel.: +41 22 791 3264; fax: +41 22 791 4857; e-mail: bookorders@who.int). Requests for permission to reproduce or translate WHO publications – whether for sale or for noncommercial distribution – should be addressed to WHO Press, at the above address (fax: +41 22 791 4806; e-mail: permissions@who.int).

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by the World Health Organization in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

All reasonable precautions have been taken by the World Health Organization to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either expressed or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall the World Health Organization be liable for damages arising from its use.

Preface

A list of acceptable medical reasons for supplementation was originally developed by WHO and UNICEF as an annex to the Baby-friendly Hospital Initiative (BFHI) package of tools in 1992.

WHO and UNICEF agreed to update the list of medical reasons given that new scientific evidence had emerged since 1992, and that the BFHI package of tools was also being updated. The process was led by the departments of Child and Adolescent Health and Development (CAH) and Nutrition for Health and Development (NHD). In 2005, an updated draft list was shared with reviewers of the BFHI materials, and in September 2007 WHO invited a group of experts from a variety of fields and all WHO Regions to participate in a virtual network to review the draft list. The draft list was shared with all the experts who agreed to participate. Subsequent drafts were prepared based on three inter-related processes: a) several rounds of comments made by experts; b) a compilation of current and relevant WHO technical reviews and guidelines (see list of references); and c) comments from other WHO departments (Making Pregnancy Safer, Mental Health and Substance Abuse, and Essential Medicines) in general and for specific issues or queries raised by experts.

Technical reviews or guidelines were not available from WHO for a limited number of topics. In those cases, evidence was identified in consultation with the corresponding WHO department or the external experts in the specific area. In particular, the following additional evidence sources were used:

-The Drugs and Lactation Database (LactMed) hosted by the United States National Library of Medicine, which is a peer-reviewed and fully referenced database of drugs to which breastfeeding mothers may be exposed.

-The National Clinical Guidelines for the management of drug use during pregnancy, birth and the early development years of the newborn, review done by the New South Wales Department of Health, Australia, 2006.

The resulting final list was shared with external and internal reviewers for their agreement and is presented in this document.

The list of acceptable medical reasons for temporary or long-term use of breast-milk substitutes is made available both as an independent tool for health professionals working with mothers and newborn infants, and as part of the BFHI package. It is expected to be updated by 2012.

Acknowledgments

This list was developed by the WHO Departments of Child and Adolescent Health and Development and Nutrition for Health and Development, in close collaboration with UNICEF and the WHO Departments of Making Pregnancy Safer, Essential Medicines and Mental Health and Substance Abuse. The following experts provided key contributions for the updated list: Philip Anderson, Colin Binns, Riccardo Davanzo, Ros Escott, Carol Kolar, Ruth Lawrence, Lida Lhotska, Audrey Naylor, Jairo Osorno, Marina Rea, Felicity Savage, María Asunción Silvestre, Tereza Toma, Fernando Vallone, Nancy Wight, Anthony Williams and Elizabeta Zisovska. They completed a declaration of interest and none identified a conflicting interest.

Introduction

Almost all mothers can breastfeed successfully, which includes initiating breastfeeding within the first hour of life, breastfeeding exclusively for the first 6 months and continuing breastfeeding (along with giving appropriate complementary foods) up to 2 years of age or beyond.

Exclusive breastfeeding in the first six months of life is particularly beneficial for mothers and infants.

Positive effects of breastfeeding on the health of infants and mothers are observed in all settings. Breastfeeding reduces the risk of acute infections such as diarrhoea, pneumonia, ear infection, *Haemophilus influenza*, meningitis and urinary tract infection (1). It also protects against chronic conditions in the future such as type I diabetes, ulcerative colitis, and Crohn's disease. Breastfeeding during infancy is associated with lower mean blood pressure and total serum cholesterol, and with lower prevalence of type-2 diabetes, overweight and obesity during adolescence and adult life (2). Breastfeeding delays the return of a woman's fertility and reduces the risks of post-partum haemorrhage, pre-menopausal breast cancer and ovarian cancer (3).

Nevertheless, a small number of health conditions of the infant or the mother may justify recommending that she does not breastfeed temporarily or permanently (4). These conditions, which concern very few mothers and their infants, are listed below together with some health conditions of the mother that, although serious, are not medical reasons for using breast-milk substitutes.

Whenever stopping breastfeeding is considered, the benefits of breastfeeding should be weighed against the risks posed by the presence of the specific conditions listed.

INFANT CONDITIONS

Infants who should not receive breast milk or any other milk except specialized formula

- Infants with classic galactosemia: a special galactose-free formula is needed.
- Infants with maple syrup urine disease: a special formula free of leucine, isoleucine and valine is needed.
- Infants with phenylketonuria: a special phenylalanine-free formula is needed (some breastfeeding is possible, under careful monitoring).

Infants for whom breast milk remains the best feeding option but who may need other food in addition to breast milk for a limited period

- Infants born weighing less than 1500 g (very low birth weight).
- Infants born at less than 32 weeks of gestation (very preterm).
- Newborn infants who are at risk of hypoglycaemia by virtue of impaired metabolic adaptation or increased glucose demand (such as those who are preterm, small for gestational age or who have experienced significant intrapartum hypoxic/ischaemic stress, those who are ill and those whose mothers are diabetic (5) if their blood sugar fails to respond to optimal breastfeeding or breast-milk feeding).

MATERNAL CONDITIONS

Mothers who are affected by any of the conditions mentioned below should receive treatment according to standard guidelines.

Maternal conditions that may justify permanent avoidance of breastfeeding

- HIV infection²: if replacement feeding is acceptable, feasible, affordable, sustainable and safe (AFASS) (6). Otherwise, exclusive breastfeeding for the first six months is recommended.

Maternal conditions that may justify temporary avoidance of breastfeeding

- Severe illness that prevents a mother from caring for her infant, for example sepsis.
- Herpes simplex virus type 1 (HSV-1): direct contact between lesions on the mother's breasts and the infant's mouth should be avoided until all active lesions have resolved.
- Maternal medication:
 - sedating psychotherapeutic drugs, anti-epileptic drugs and opioids and their combinations may cause side effects such as drowsiness and respiratory depression and are better avoided if a safer alternative is available (7);
 - radioactive iodine-131 is better avoided given that safer alternatives are available - a mother can resume breastfeeding about two months after receiving this substance;
 - excessive use of topical iodine or iodophors (e.g., povidone-iodine), especially on open wounds or mucous membranes, can result in thyroid suppression or electrolyte abnormalities in the breastfed infant and should be avoided;
 - cytotoxic chemotherapy requires that a mother stops breastfeeding during therapy.

Maternal conditions during which breastfeeding can still continue, although health problems may be of concern

- Breast abscess: breastfeeding should continue on the unaffected breast; feeding from the affected breast can resume once treatment has started (8).
- Hepatitis B: infants should be given hepatitis B vaccine, within the first 48 hours or as soon as possible thereafter (9).
- Hepatitis C.
- Mastitis: if breastfeeding is very painful, milk must be removed by expression to prevent progression of the condition(8).
- Tuberculosis: mother and baby should be managed according to national tuberculosis guidelines (10).
- Substance use³ (11):
 - maternal use of nicotine, alcohol, ecstasy, amphetamines, cocaine and related stimulants has been demonstrated to have harmful effects on breastfed babies;
 - alcohol, opioids, benzodiazepines and cannabis can cause sedation in both the mother and the baby.

Mothers should be encouraged not to use these substances, and given opportunities and support to abstain.

² The most appropriate infant feeding option for an HIV-infected mother depends on her and her infant's individual circumstances, including her health status, but should take consideration of the health services available and the counselling and support she is likely to receive. Exclusive breastfeeding is recommended for the first six months of life unless replacement feeding is AFASS. When replacement feeding is AFASS, avoidance of all breastfeeding by HIV-infected women is recommended. Mixed feeding in the first 6 months of life (that is, breastfeeding while also giving other fluids, formula or foods) should always be avoided by HIV-infected mothers.

³ Mothers who choose not to cease their use of these substances or who are unable to do so should seek individual advice on the risks and benefits of breastfeeding depending on their individual circumstances. For mothers who use these substances in short episodes, consideration may be given to avoiding breastfeeding temporarily during this time.

References

- (1) *Technical updates of the guidelines on Integrated Management of Childhood Illness (IMCI). Evidence and recommendations for further adaptations.* Geneva, World Health Organization, 2005.
- (2) *Evidence on the long-term effects of breastfeeding: systematic reviews and meta-analyses.* Geneva, World Health Organization, 2007.
- (3) León-Cava N et al. *Quantifying the benefits of breastfeeding: a summary of the evidence.* Washington, DC, Pan American Health Organization, 2002 (<http://www.paho.org/English/AD/FCH/BOB-Main.htm>, accessed 26 June 2008).
- (4) Resolution WHA39.28. Infant and Young Child Feeding. In: *Thirty-ninth World Health Assembly, Geneva, 5–16 May 1986. Volume 1. Resolutions and records. Final.* Geneva, World Health Organization, 1986 (WHA39/1986/REC/1), Annex 6:122–135.
- (5) *Hypoglycaemia of the newborn: review of the literature.* Geneva, World Health Organization, 1997 (WHO/CHD/97.1; http://whqlibdoc.who.int/hq/1997/WHO_CHD_97.1.pdf, accessed 24 June 2008).
- (6) *HIV and infant feeding: update based on the technical consultation held on behalf of the Inter-agency Task Team (IATT) on Prevention of HIV Infection in Pregnant Women, Mothers and their Infants, Geneva, 25–27 October 2006.* Geneva, World Health Organization, 2007 (http://whqlibdoc.who.int/publications/2007/9789241595964_eng.pdf, accessed 23 June 2008).
- (7) *Breastfeeding and maternal medication: recommendations for drugs in the Eleventh WHO Model List of Essential Drugs.* Geneva, World Health Organization, 2003.
- (8) *Mastitis: causes and management.* Geneva, World Health Organization, 2000 (WHO/FCH/CAH/00.13; http://whqlibdoc.who.int/hq/2000/WHO_FCH_CAH_00.13.pdf, accessed 24 June 2008).
- (9) *Hepatitis B and breastfeeding.* Geneva, World Health Organization, 1996. (Update No. 22).
- (10) *Breastfeeding and Maternal tuberculosis.* Geneva, World Health Organization, 1998 (Update No. 23).
- (11) *Background papers to the national clinical guidelines for the management of drug use during pregnancy, birth and the early development years of the newborn.* Commissioned by the Ministerial Council on Drug Strategy under the Cost Shared Funding Model. NSW Department of Health, North Sydney, Australia, 2006. http://www.health.nsw.gov.au/pubs/2006/bkg_pregnancy.html

Further information on maternal medication and breastfeeding is available at the following United States National Library of Medicine (NLM) website:

<http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?LACT>

For further information, please contact:

Department of Nutrition for Health and Development

E-mail: nutrition@who.int

Web: www.who.int/nutrition

Department of Child and Adolescent Health and Development

E-mail: cah@who.int

Web: www.who.int/child_adolescent_health

Address: 20 Avenue Appia, 1211 Geneva 27, Switzerland

Session 4: The scientific basis for the “Ten steps to successful breastfeeding” for settings with high HIV prevalence

Note: This alternate Session 4 has been prepared for use in settings with high HIV prevalence. Some HIV-related content is included in the basic Session 4, since it is important to consider the effects of the epidemic in all settings. This version of the Session is identical to Session 4, except that additional content concerning HIV and infant feeding have been added, wherever useful.

Additional handouts, transparencies, and slides related to HIV and infant feeding have been prepared for this version of the Session. The additional handouts and transparencies are included with this version of the Session. The basic handouts and transparencies are presented with the basic Session and should be used with this one as well. The additional slides have been integrated into the basic slide set and included all together with this Session, for ease of use.

Objective

At the conclusion of this session, participants will be able to:

- Describe the scientific basis for the “Ten steps to successful breastfeeding”.
- Discuss current scientific evidence concerning the advantages and risks of breastfeeding versus replacement feeding in settings with high HIV prevalence and how this should influence the approach to the “Ten steps”.

Duration

Total: 90 minutes

Teaching methods

Lecture and discussion

Preparation for session

- Review the WHO document, *Evidence for the ten steps to successful breast-feeding*. Geneva, World Health Organization, 1998.
http://www.who.int/nutrition/publications/infantfeeding/evidence_ten_step_eng.pdf
- Review all handouts and research summaries which follow the Session 4 outline as well as the additional handouts and summaries in this Session Plan (be sure to have the most up-to-date statement from the Joint United Nations Programme on HIV/AIDS (UNAIDS) on HIV and infant feeding).

- Review video, *Delivery, Self Attachment*. (time: 6 minutes). See the *Course Guide* for information on how to order the video.
- Review all PowerPoint slides and/or transparencies from both the basic Session Plan and this version and choose *for each step* about three slides or transparencies most appropriate for your audience. If desired, you may change the order of the slide/transparency presentation. Review the generic photo slides and use them and/or your own slides, to illustrate points as needed.
- Review locally available breastfeeding and HIV and infant feeding training courses and list them on an overhead or flipchart.
- If available, display poster of the Ten Steps where the speaker can easily refer to it.

Training materials

Summaries

Summaries of research studies

Note: Only the additional summaries of studies related to HIV are included with this session. The other summaries are included with the basic Session 4.

Handouts

Protecting, Promoting and Supporting Breast-feeding, The Special Role of Maternity Services, A Joint WHO/UNICEF Statement (booklet, same as Session 3).

4.1 (HIV) Presentation for Session 4 HIV.

4.2 National policy on infant and young child feeding (for health institutions), Sultanate of Oman.

4.3 Baby and Mother Friendly Hospital Programme, Ministry of Health, Mexico.

4.4 UNICEF UK Baby Friendly Initiative: Sample combined maternity/community services policy on breastfeeding.

4.5 Acceptable medical reasons for use of breast-milk substitutes.

4.6 (HIV) Infant and young child feeding in the context of HIV.

4.7 (HIV) Infant feeding policy: Rusape Hospital, Zimbabwe.

Slides/Transparencies

4.1.1-4.11.7 and photo slides 4.a-4.z.

4 Intro. 1 HIV, 4 Intro. 2 HIV, 4.3.5-11 HIV, and 4.6.10-14 HIV.

The website featuring this Course contains links to the slides and transparencies for this session in two Microsoft PowerPoint files. The photo slides are included in the “slides” file in the order in which they are listed in the Session Plan. When possible, trainers should substitute appropriate photos taken locally or in situations that are similar to local conditions. The slides (in colour) can be used with a laptop computer and LCD projector, if available.

Alternatively, the transparencies (in black and white) can be printed out and copied on acetates and projected with an overhead projector. The photos are not included in the transparency file, as they do

not reproduce well in black and white. The transparencies are also reproduced as the first handout for this session, with 6 transparencies to a page.

Other training materials

Flipchart

Video

Poster with the Ten Steps

References

Note: Some of the references related to HIV and infant feeding in the list below are included in the basic Session 4 reference list. Additional HIV-related references that have been added here are asterisked and have been placed at the beginning of this reference list.

* *Breastfeeding and HIV/AIDS Frequently Asked Questions (FAQ Sheet 1)*. Washington D.C., LINKAGES Project, Academy for Educational Development, Updated May 2001 (http://linkagesproject.org/FAQ_Html/FAQ_HIV.htm).

* *HIV and Infant Feeding Counselling: A Training Course. Participants' Manual*. Geneva, World Health Organization, 2000 (WHO/FCH/CAH/00.4).

* *HIV in Pregnancy: A Review*. Geneva, World Health Organization, 1999 (WHO/CHS/RHR/99.15).

* *New data on the prevention of mother-to-child transmission of HIV and their policy implications: conclusions and recommendations. WHO Technical Consultation on Behalf of the UNFPA/ UNICEF/ WHO/ UNAIDS Interagency Task Force Team on Mother-to-Child transmission of HIV, Geneva, 11-13 October 2000*. Geneva, World Health Organization, 2001.

* Piwoz EG, Llif PJ, Tavengwa N, Gavin L, Marinda E, Lunney K, Zunguza C, Nathoo KJ, the ZVITAMBO Study Group, Humphrey JH. An Education and Counseling Program for Preventing Breast-Feeding-Associated HIV Transmission in Zimbabwe: Design and Impact on Maternal Knowledge and Behavior (Symposium: Women's Voices, Women's Choices: The Challenge of Nutrition and HIV/AIDS). *American Society for Nutritional Sciences*, 2005, 950-955.

* Richardson BA, John-Stewart GC, Hughes JP, Nduati R, Mbori-Ngacha D, Overbaugh J, Kreiss JK. Breast-milk Infectivity in Human Immunodeficiency Virus Type 1 – Infected Mothers. *Journal of Infectious Diseases*, 2003, 187:736-740.

* Ross JS, Labbok MH. Modeling the Effects of Different Infant Feeding Strategies on Young Child Survival and Mother-to-Child Transmission of HIV. *Am J Public Health*. 2004; 94(7):1174-1180.

* Walley J, Whitter S, Nicholl A. Simplified antiviral prophylaxis with or and without artificial feeding to reduce mother-to-child transmission of HIV in low and middle income countries: modeling positive and negative impact on child survival. *Med Sci Monit*, 2001, 7(5):1043-1051.

* *World Linkages: Zambia* (including "Country Profile" and description of the "Ndola Demonstration Project"), Washington D.C., LINKAGES Project, Academy for Educational Development, 2000 ([http://www.linkagesproject.org/media/publications/world linkages/worldzambia.pdf](http://www.linkagesproject.org/media/publications/world%20linkages/worldzambia.pdf)).

Albernaz E, Giugliani ERJ, Victora CG. Supporting breastfeeding: a successful experience. *J Hum Lact*, 1998, 14(4):283-285.

Breastfeeding and the use of water and teas. Division of Child Health and Development, Update, No. 9. Geneva, World Health Organization, reissued November 1997.

Cattaneo A, Buzzetti R. Effect on rates of breast feeding of training for the Baby Friendly Hospital Initiative. *BMJ*, 2001, 323:1358-1362.

Coutsoudis A, Kubendran P, Kuhn L, Spooner, E, Tsai W, Coovadia, HM. South African Vitamin A Study Group. Method of feeding and transmission of HIV-1 from mothers to children by 15 months of age: prospective cohort study from Durban, South Africa. *AIDS*, 2001 Feb 16; 15(3):379-87.

Christensson K, Siles C, Moreno L, et al. Temperature, metabolic adaptation and crying in healthy full-term newborns cared for skin-to-skin or in a cot. *Acta Paediatr*, 1992, 81:481-493.

DeCarvalho M, Klaus MH, Merkatz RB. Frequency of breast-feeding and serum bilirubin concentration. *Am J Dis Child*, 1982, 136:737-738.

DeCock KM, Fowler MG, Mercier E et al. Prevention of mother-to-child HIV transmission in resource poor countries. *JAMA*, 2000, 238 (9):175-82.

DeChateau P, Wiberg B. Long term effect on mother-infant behavior of extra contact during the first hour postpartum. *Acta Paediatr*, 1977, 66:145-151.

Evidence for the ten steps to successful breastfeeding. Geneva, World Health Organization, 1998 (WHO/CHD/98.9).

Guidelines concerning the main health and socioeconomic circumstances in which infants have to be fed on breast-milk substitutes. In: *Thirty-Ninth World Health Assembly* [A39/8 Add. 1- 10 April 1986], pp. 122-135, Geneva, World Health Organization, 1992.

Guise, J-M, Palda V, Westhoff C, Chan BKS, Helfand M, Lieu T. The effectiveness of primary care-based interventions to promote breastfeeding: Systematic evidence review and meta-analysis for the US preventive services task force. *Annals of Family Medicine*, 2003 1(2):70-78.

Haider R et al. Breast-feeding counselling in a diarrhoeal disease hospital. *Bulletin of the World Health Organization*, 1996, 74(2):173-179.

Haider R, Kabir I, Huttly S and Ashworth A. A training peer counselors to promote and support exclusive breastfeeding in Bangladesh. *J Hum Lact*, 2002, 18:7-12.

HIV transmission through breastfeeding: A review of available evidence. Geneva, World Health Organization, 2004.

Jayathilaka AC. *A study in breastfeeding and the effectiveness of an intervention in a district of Sri Lanka.* [DM thesis]. Sri Lanka, University of Colombo, 1999.

Jelliffe DB, Jelliffe EFP. The role of the support group in promoting breastfeeding in developing countries. *J Trop Pediatr*, 1983, 29:244.

Kramer MS, Chalmers B, Hodnett E et al. Promotion of Breastfeeding Intervention Trial (PROBIT) A randomized trial in the Republic of Belarus. *JAMA*, 2001, 285:413-420.

Lu M, Lange L, Slusser W et al. Provider encouragement of breast-feeding: evidence from a national survey. *Obstetrics and Gynecology*, 2001, 97:290-295.

Martens PJ. Does Breastfeeding education affect nursing staff beliefs, exclusive breastfeeding rates, and Baby-Friendly Hospital Initiative compliance? The experiences of a small, rural Canadian hospital. *J Hum Lact*, 2000, 16:309-318.

Merten S et al. Do Baby-Friendly Hospitals Influence Breastfeeding Duration on a National Level? *Pediatrics*, 2005, 116: e702 – e708.

Morrow A, Guerrereo ML, Shultis J et al. Efficacy of home-based peer counselling to promote exclusive breastfeeding: a randomized controlled trial. *Lancet*, 1999, 353:1226-31.

Nielsen B, Hedegaard M, Thilsted S, Joseph A, Liliestrand J. Does antenatal care influence postpartum health behaviour? Evidence from a community based cross-sectional study in rural Tamil Nadu, South India. *British Journal of Obstetrics and Gynaecology*, 1998, 105: 697-703.

Nylander G, Lindemann R, Helsing E, Bendvold E. Unsupplemented breastfeeding in the maternity ward. *Acta Obstet Gynecol Scand*, 1991, 70: 205-209.

Philipp BL, Merewood A, Miller LW et al. Baby Friendly Hospital Initiative improves breastfeeding initiation rates in a US hospital setting. *Pediatrics*, 2001, 108:677-681.

Pipes PL. *Nutrition in Infancy and Childhood*. Boston, Massachusetts, Times Mirror/Mosby, 1989.

Powers NG, Naylor AJ, Wester RA. Hospital policies: crucial to breastfeeding success. *Semin Perinatol*, 1994, 18(6): 517-524.

Righard L, Alade MO. Effect of delivery room routines on success of first breast-feed. *Lancet*, 1990, 336: 1105-1107.

Righard L, Alade MO. Sucking technique and its effect on success of breastfeeding. *Birth*, 1992, 19(4):185-189.

Saadeh RJ, Akre J. Ten steps to successful breast-feeding: a summary of the rationale and scientific evidence. *Birth*, 1996, 23(3):154-160.

Saadeh RJ, ed. *Breast-Feeding: The Technical Basis and Recommendations for Action*. Geneva, World Health Organization, 1993.

Savage-King FS. *Helping Mothers to Breastfeed*, Revised Edition. Nairobi, Kenya, African Medical Research Foundation, 1992.

Soetjiningsih, Suraatmaja S. The advantages of rooming-in. *Pediatrica Indonesia*, 1986, 26:229-235.

Victora G, Behague P, Barros C et al. Pacifier use and short breastfeeding duration: cause, consequence, or coincidence. *Pediatrics*, 1997, 99:445-453.

WHO/UNICEF/UNFPA/UNAIDS/World Bank/UNHCR/EFP/FAO/IAEA. *HIV and infant feeding: Framework for priority action*. Geneva, World Health Organization, 2003 (http://www.who.int/child-adolescent-health/publications/NUTRITION/HIV_IF_Framework.htm).

WHO Technical Consultation on Infant and Young Child Feeding, Themes, Discussion and Recommendations, WHO, Geneva, 13-17 March, 2000. Geneva, World Health Organization, 2000 (WHO/NHD/00.8, WHO/FCH/CAH/00.22).

WHO/UNICEF/UNFPA/UNAIDS. *HIV and infant feeding: A guide for health-care managers and supervisors* (revised). Geneva, World Health Organization, 2003 (http://www.who.int/child-adolescent-health/New_Publications/NUTRITION/HIV_IF_MS.pdf).

WHO/UNICEF/UNFPA/UNAIDS. *HIV and infant feeding: guidelines for decision-makers* (revised). Geneva, World Health Organization, 2003 (http://www.who.int/child-adolescent-health/publications/NUTRITION/ISBN_92_4_159122_6.htm).

WHO/UNICEF/UNAIDS/UNFPA, *HIV and Infant Feeding Update. Based on the Technical Consultation held on behalf of the IATT on Prevention of HIV Infection in Pregnant Women, Mothers and their Infants*. Geneva 25-27 October 2006. Geneva, World Health Organization, 2007. <http://www.who.int/nutrition/publications/hivaids/9789241595964/en/index.html>

Woolridge M. The “anatomy” of infant sucking. *Midwifery*, 1986, 2:164-171.

Worthington-Roberts B, Williams SR. *Nutrition in Pregnancy and Lactation*, 5th Edition. St. Louis, MO, Mosby, 1993.

Yamauchi Y, Yamanouchi I. Breast-feeding frequency during the first 24 hours after birth in full-term neonates. *Pediatrics*, 1990, 86 (2):171-175.

Yamauchi Y, Yamanouchi I. The relationship between rooming-in/not rooming-in and breast-feeding variables. *Acta Paediatr Scand*, 1990, 79:1017-1022.

Outline

Content	Trainer's Notes
	<p>This session will review selected studies to illustrate the physiological and sociological basis for the Ten Steps. All steps are interrelated. The first 2 steps provide the foundation for implementing the remaining eight. Refer participants to the handout (booklet), "Promoting, Protecting, and Supporting Breast-feeding".</p> <p>Invite participants to comment or ask questions during the presentation. Write down problems, barriers or solutions that come up during the presentation so they can be addressed in Session 5 (HIV). Try to allow some discussion during this presentation but postpone major discussions until Session 5 (HIV) due to time constraints.</p> <p>Mention that a mini-version of the presentation is reproduced in Handout 4.1 (HIV) and included in the participants' folder.</p> <p>Begin the session by briefly presenting some background information related to HIV and infant feeding, tailoring your brief overview to the needs of the participants.</p> <p>Show and describe the data in slides 4 Intro 1 HIV, 4 Intro 2 HIV, and 4 Intro 3 HIV.</p> <p>Refer the participants to Handout 4.6 (HIV). Summarize the information in this handout and/or present information of your own concerning HIV and infant feeding.</p>
<p>1. Step 1: Have a written breastfeeding policy that is routinely communicated to all health-care staff.</p>	<p><i>Slides</i></p> <p>4.1.4 Step 1.</p> <p>4.1.5 Why have a policy?</p> <p>4.a Mention the "Joint Statement" and fact that it serves as the background document for BFHI and the "Ten Steps".</p> <p>4.1.6 What should it cover? In some HIV prevalent countries there has been a shift to an "infant feeding policy" that includes breastfeeding as well as replacement feeding guidelines and a support framework.</p> <p>4.1.7 How should it be presented? Pass out handout 4.7 (HIV) or your own</p>

Content	Trainer's Notes
	<p>policy example and discuss it. Policies need to be adapted to your own settings and should be based on the Ten Steps. Mention that issues related to development of appropriate policies for settings with high HIV prevalence will be discussed further in Session 5 (HIV).</p> <p>4.b Show photo of health professionals consulting a written policy during on-the-job training (optional).</p> <p>4.1.8 Graph: Rates of exclusive breast-milk feeds improved while in the birth hospital after implementing the Baby Friendly Hospital Initiative (<i>Philipp et al., see summary</i>).</p>
<p>2. Step 2: Train all health-care staff in the skills necessary to implement this policy.</p>	<p><i>Slides</i></p> <p>4.2.1 Step 2.</p> <p>4.c Show photo of health professionals attending a classroom session (optional).</p> <p>4.d. Show photo of group discussion during training (optional).</p> <p>4.2.2 Areas of knowledge to be included in staff education (may ask participants to answer before showing).</p> <p>4.2.3 Additional topics for training in the context of HIV.</p> <p>4.2.4 Hospital staff breastfeeding training had a significant effect on exclusive breastfeeding rate at discharge, which increased from 41% to 77% (<i>Cattaneo et al., see summary</i>).</p> <p>4.2.5 In several studies health professionals trained in breastfeeding counselling provided counselling and/or trained support groups to assist mothers in a variety of circumstances (prenatally, postnatally, after admission for diarrhoea). In each of the studies there was a significant increase in exclusive breastfeeding, when compared to the control group (<i>WHO/CAH, see summary</i>).</p> <p>4.2.6 Ask participants to give examples of health professionals - other than perinatal staff - who influence breastfeeding success. Consider other staff in the</p>

Content	Trainer's Notes
	<p>institution coming into contact with mothers such as cleaning staff, clerks, or other specialty groups.</p>
<p>3. Step 3: Inform all pregnant women about the benefits and management of breastfeeding.</p>	<p><i>Slides</i></p> <p>4.3.1 Step 3.</p> <p>4.3.2 Antenatal education content (can be adapted to reflect individual country needs). In settings where there is high HIV there are additional considerations in the antenatal period including voluntary counselling and testing for HIV. After learning one's HIV status there are additional areas for counselling during pregnancy.</p> <p>4.e-f Show photos of an antenatal group class and individual counselling (optional).</p> <p>4.3.3 Antenatal care can significantly impact breastfeeding practices related to colostrum feeding and early breastfeeding initiation within 2 hours of birth (<i>Nielsen et al., see summary</i>).</p> <p>4.3.4 Antenatal education can lead to significant increases in initiation rates (23%) and duration of short-term breastfeeding (up to 3 months) (39%), as shown by a meta-analysis of studies of education and support (<i>Guise et al., see summary</i>).</p> <p>4.3.5 (HIV) Why test for HIV in pregnancy? There are several reasons why a woman may want to consider learning her HIV status. Mothers may want to be assured of privacy and confidentiality before testing as in some cases there is stigma associated with having a test.</p> <p>4.3.6 (HIV) Replacement feeding. It's important to review the definition of "replacement feeding" in the context of HIV.</p> <p>4.3.7 (HIV) Risk of mother-to-child transmission of HIV. This graphic illustrates the risk of mother-to-child transmission of HIV if there is a 20% prevalence of HIV infection among mothers, 20% transmission rate during pregnancy/delivery and 15% transmission rate during breastfeeding. With these rates, for every 100 mothers, 20</p>

Content	Trainer's Notes
	<p>would be HIV+, 4 of their babies infected during pregnancy and delivery, and 3 of their babies infected via breastfeeding.</p> <p>4.3.8 (HIV) HIV positive mothers need to be counselled concerning the risks of breastfeeding versus replacement feeding. The WHO recommendations on infant feeding for HIV+ women presents key issues to consider.</p> <p>4.3.9 11 (HIV) These slides summarize the key recommendations to give if a mother's HIV status is unknown, if her HIV status is negative, if her HIV status is positive, if her HIV status is positive and she decides to breastfeed, and if her HIV status is positive and she chooses replacement feeding. These recommendations can help guide health providers at the facility that counsel pregnant women facing decisions concerning how they will feed their infants. WHO has recently published a series of counseling cards that can be very useful in this process. Health providers need to receive special training through the WHO HIV and infant feeding course or something similar, to gain the knowledge and skills needed for this work.</p>
<p>4. Step 4: Help mothers initiate breastfeeding within a half-hour of birth.</p>	<p><i>Slides</i></p> <p>4.4.1 Step 4 (may have discussions relating to timing of first breastfeed. Could elaborate on issues relating to this step, i.e. drugs during delivery, cesarean sections, etc.).</p> <p>4.4.2 The revised BFHI Global Criteria interpret this step as "Place babies in skin-to-skin contact with their mothers immediately following birth for at least an hour. Encourage mothers to recognize when their babies are ready to breastfeed and offer help if needed". Discuss reasons for this change, including research on the time it takes babies to start breastfeeding without assistance (see photos 4h-j and slide 4.4.8 below).</p> <p>4.4.3 Why encourage early initiation? The points in this list are illustrated in the following transparencies.</p>

Content	Trainer's Notes
	<p>4.4.4 How to encourage early initiation?</p> <p>4.g-j Show one or more photos illustrating early initiation. The first photo shows a nurse assisting a mother to position her baby just after delivery. The next three photos illustrate how the baby will find the mother's nipple and begin to suck on his own, if time is allowed for this process.</p> <p>4.4.5 Graph: Study demonstrates how contact within the first hour after delivery increased duration of breastfeeding at 3 months (<i>DeChateau et al., see summary</i>).</p> <p>4.4.6 Graph: Study concluded that skin-to-skin care as compared to care in a bed during the unique period just following birth is associated with higher body and skin temperatures and more rapid metabolic adaptation. Maternal body is an efficient heat source for the baby (<i>Christensson et al., see summary</i>).</p> <p>4.4.7 Table: This summary of when immune factors are produced in the infant demonstrates the importance of colostrum and mature milk's role in compensating for the relative absence of immunity in the infant (<i>Worthington-Roberts</i>).</p> <p>4.4.8 Graph: Study concluded that in order to promote successful suckling patterns naked infants should be left undisturbed on their mothers' abdomens until the first suckling is accomplished and the infants' efforts to take the breast actively should be promoted (<i>Righard et al., see summary</i>).</p> <p>Show "Delivery, Self Attachment" video if available, as an alternative to photo slides g, h, and i. Note the infant's suckling pattern when there is no interference with the mother and newborn.</p>
<p>5. Step 5: Show mothers how to breastfeed and how to maintain lactation even if they are separated from their infants.</p>	<p><i>Slides</i></p> <p>4.5.1 Step 5.</p> <p>4.5.2 Quote (Woolridge).</p> <p>4.k-1 Show photos of staff showing mothers how to breastfeed (optional).</p>

Content	Trainer's Notes
	<p>4.5.3 Graph: Study demonstrates that if at hospital discharge a mother is breastfeeding her infant with good technique, or if 5-10 minutes of instruction time is spent correcting faulty technique, the duration of breastfeeding is almost doubled compared to mothers discharged with uncorrected faulty breastfeeding technique (<i>Righard et al., see summary</i>).</p> <p>4.5.4 Graph: Breastfeeding initiation occurred among 75% of women who were encouraged to breastfeed compared to only 43% who were not encouraged to breastfeed by a health professional (<i>Lu et al., see summary</i>).</p> <p>4.5.5 Graph: breastfeeding duration rates were significantly higher among mothers whose babies roomed in postpartum and whose mothers received breastfeeding guidance during the hospital stay compared to mothers whose babies did not room in and did not receive any breastfeeding guidance while in the hospital (<i>Perez-Escamilla et al., see summary</i>).</p> <p>4.5.6 Supply and demand.</p> <p>4.m Show photo of milk expression.</p>
<p>6. Step 6: Give newborn infants no food or drink other than breast milk unless medically indicated.</p>	<p><i>Slides</i></p> <p>4.6.1 Step 6.</p> <p>4.n Show photo of breast-milk substitute and water bottles, <u>not</u> to be given unless medically indicated (<i>optional</i>).</p> <p>4.o Show photo of nurse giving baby a bottle (<u>not</u> appropriate unless medically indicated) (<i>optional</i>).</p> <p>4.6.2 Graph: This study suggests a correlation between a more “physiologic” start of breastfeeding and the overall duration of the lactation period (<i>Nylander et al., see summary</i>).</p> <p>4.6.3 To address the concern that colostrum alone is “not enough”, this graphic illustrates that newborn and infant stomach capacities are perfectly matched to the amount of colostrum (about 200 ml/24 hours at day two) and mature milk (about</p>

Content	Trainer's Notes
	<p>800-900 ml/24 hours at 1 year).</p> <p>4.6.4 Impact of routine formula supplementation.</p> <p>4.6.5 This study shows that early introduction of a bottle is inversely associated with breastfeeding duration (<i>Perez-Escamilla et al., see summary</i>).</p> <p>4.6.6 The data in this table shows there is no need for water supplementation for infants exclusively breastfed no matter what temperature and humidity, as reflected in normal urine osmolarity.</p> <p>4.6.7 There are rare exceptions during which infants may require other fluids or food in addition to, or in place of, breast milk.</p> <p>4.6.8 - Acceptable medical reasons for use 4.6.10 of breast-milk substitutes (distribute Handout 4.5). If questions arise concerning HIV and breastfeeding refer participants to Handout 4.6 (HIV): Infant and young child feeding in the context of HIV.</p> <p>4.6.11 (HIV) Risk factors for HIV transmission during breastfeeding. Review the risk factors for both mothers and infants that affect the likelihood of HIV transmission during breastfeeding.</p> <p>4.6.12 (HIV) Graph (<i>Richardson et al., 2003</i>) One important maternal risk factor for HIV transmission through breastfeeding is maternal blood viral load. If the viral load is low the risk is 4 times less than if it is high.</p> <p>4.6.13 (HIV) Graph (<i>Coutsoudis et al., 2001</i>). Shows the probability of an HIV positive test at various months of age among babies that were never breastfed (always fed breast-milk substitutes), exclusively breastfed, and mixed fed. The probability of an HIV positive test is higher for mixed feeders at all months of age. It is lowest for babies exclusively breastfed until six months and then in lower for those never breastfed (<i>Coutsoudis et al., see summary</i>).</p> <p>4.6.14 (HIV) (<i>Piwoz et al., 2005</i>) A recent HIV and infant feeding trial in Zimbabwe (ZVITAMBO) included an education and counseling program for new mothers in Harare. Mothers of unknown or negative</p>

Content	Trainer's Notes
	<p>HIV status or HIV positive mothers who chose to breastfeed were counseled to exclusively breastfeed and practice other elements of “safer breastfeeding”.</p> <p>4.6.15 (HIV) Graph (<i>Piwoz et al., 2005</i>) Exposure to the safer breastfeeding intervention in the above study in Zimbabwe was associated with reduced postnatal transmission (through breastfeeding) among mothers who did not know their status. The more educational exposures to the concepts of “safer breastfeeding” that the women received, the greater the likelihood that they followed the recommendations and the less chance of HIV transmission to their infants. This type of education and counseling can begin both during pregnancy and before discharge, as well as during postnatal contacts after the mothers return home.</p>
<p>7. Step 7: Practice rooming-in—allow mothers and infants to stay together—24 hours a day.</p>	<p><i>Slides</i></p> <p>4.7.1 Step 7.</p> <p>4.7.2 Definition (Describe bedding-in if relevant. “Bedding-in” is when infant and mother stay in the same bed).</p> <p>4.p-q Show one or more photos of rooming-in and bedding-in.</p> <p>4.7.3 Why institute rooming-in? (points discussed in slides to follow).</p> <p>4.7.4 Graph: Positive impact of rooming-in policy on prevention of infectious disease when infants rooming-in were compared to newborns not rooming-in with their mothers (<i>Soetjningsih et al., see summary</i>).</p> <p>4.7.5 Graph: Positive effect of infants rooming-in with their mothers on frequency of breastfeeding in the first 6 days of life compared to infants not rooming-in (<i>Yamauchi et al., see summary</i>).</p>
<p>8. Step 8: Encourage breastfeeding on demand.</p>	<p><i>Slides</i></p> <p>4.8.1 Step 8.</p> <p>4.8.2 Definition of “on-demand”.</p>

Content	Trainer's Notes
	<p>4.8.3 Why feed on demand?</p> <p>4.r-s Show one or more photos of feeding on demand.</p> <p>4.8.4 Table: Study demonstrates the positive impact of on-demand, frequent breastfeeding (number of times during the first 24 hours) on bilirubin levels of 6 day-old full-term healthy infants (<i>Yamauchi et al., see summary</i>).</p> <p>4.8.5 This data shows that the greater the frequency of feeds, the lower the level of serum bilirubin (<i>DeCarvalho et al., see summary</i>).</p>
<p>9. Step 9: Give no artificial teats or pacifiers (also called dummies and soothers) to breastfeeding infants.</p>	<p><i>Slides</i></p> <p>4.9.1 Step 9.</p> <p>4.t Show photo of various nipples/teats – should <u>not</u> be used (optional).</p> <p>4.u Show photo of various pacifiers/dummies/soothers – should <u>not</u> be used (optional).</p> <p>4.9.2 Alternatives to artificial teats or pacifiers.</p> <p>4.9.3 Illustration of cup feeding. It is recommended to use an ordinary small 50-100 ml glass or polypropylene plastic “cup”. The rim of the “cup” should be smooth and not sharp and the “cup” should be boiled or sterilised.</p> <p>4.v Show photo of cup feeding (optional).</p> <p>4.9.4 Early weaning was associated with daily pacifier use even when confounding factors were accounted for (<i>Victora et al., see summary</i>).</p> <p>Stress the fact that no artificial teats or pacifiers are recommended for any babies, including those with HIV positive mothers who have chosen not to breastfeed.</p>
<p>10. Step 10: Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from hospital or clinic.</p>	<p><i>Slides</i></p> <p>4.10.1 Step 10.</p> <p>4.10.2 Quote.</p> <p>4.10.3 Examples of support.</p>

Content	Trainer's Notes
	<p>4.10.4 Summary of types of breastfeeding support. A “doula” is a woman caregiver of another woman who provides support during the perinatal period. HIV positive mothers need extra support. Health providers and volunteers need training in how to provide this support. If HIV+ mothers decided to breastfeed they must do so exclusively and safely. If they replacement feed this also must be done exclusively and safely.</p> <p>4.w-z Show photos illustrating various types of mother support (home visiting by nurse, mother support groups, and mothers dancing in a community breastfeeding meeting).</p> <p>4.10.5 Trained peer counselors positively effected the duration of exclusive breastfeeding (<i>Haider et al., see summary</i>).</p> <p>4.10.6 Home visits improved exclusive breastfeeding at 2 weeks and 3 months (<i>Morrow et al., see summary</i>).</p>
<p>11. Effects of combined steps</p>	<p>In addition, it is highly effective to combine the steps since by applying all steps or some in combination the hospital and the administration obtain better results. This is illustrated in many of the previous studies presented above. To further elaborate on this point the following series of slides are presented.</p> <p>4.11.1 In a randomised trial in Belarus 17,000 mother-infant pairs, with mothers intending to breastfeed, were followed for 12 months. In 15 control hospitals & associated polyclinics that provide care following discharge, staff members were asked to continue their usual practices. In 16 experimental hospitals & associated polyclinics staff received baby-friendly training & support (<i>Kramer et al., see summary</i>).</p> <p>4.11.2 Differences following intervention between control and intervention hospitals.</p>

Content	Trainer's Notes
	<p>4.11.3 Effect of baby-friendly changes on breastfeeding at 3 and 6 months.</p> <p>4.11.4 Impact of baby-friendly changes on selected health conditions.</p> <p>4.11.5 In a study in Switzerland, data was analyzed for 2861 infants aged 0 – 11 months in 145 health facilities. Breastfeeding data was compared with both the progress towards Baby-friendly status of each hospital and the degree to which designated hospitals were successfully maintaining the Baby-friendly standards (<i>Merten et al., see summary</i>).</p> <p>4.11.6 The proportion of babies exclusively breastfed for 5 months for those born in Baby-friendly hospitals compared to those born elsewhere.</p> <p>4.11.7 The median duration of exclusive breastfeeding for babies born in Baby-friendly hospitals if the hospital showed good compliance with the 10 steps, and if it did not. This result illustrates the importance of maintaining Baby-friendly standards.</p>
<p>12. Conclusion</p>	<p>Acknowledge differences in opinion, perceived barriers, and innovative solutions relating to this subject matter. These areas of interest will be covered in the remaining sessions.</p>

Summaries of research studies presented during Session 4

Note: The summaries for the slides that are asterisked (featuring additional information related to HIV and infant feeding) are presented in this Session Plan. The summaries for the rest of the slides may be found in the basic Session Plan 4.

<i>Slide:</i>	<i>Study:</i>
4.1.5	Philipp BL, Merewood A, Miller LW et al. Baby Friendly Hospital initiative improves breastfeeding initiation rates in a US hospital setting. <i>Pediatrics</i> , 2001, 108:677-681.
4.2.4	Cattaneo A, Buzzetti R. Effect on rates of breast feeding of training for the Baby Friendly Hospital Initiative. <i>BMJ</i> , 2001, 323:1358-1362.
4.2.5	Albernaz E, Giugliani ERJ, Victora CG. Supporting breastfeeding: a successful experience. <i>Journal of human lactation</i> , 1998, 14(4):283-285.
	Haider R et al Breast-feeding counselling in a diarrhoeal disease hospital. <i>Bulletin of the World Health Organization</i> , 1996, 74(2):173-179.
4.3.3	Nielsen B, Hedegaard M, Thilsted S, Joseph A and Liliestrand J. Does antenatal care influence postpartum health behaviour? Evidence from a community based cross-sectional study in rural Tamil Nadu, South India. <i>British Journal of Obstetrics and Gynaecology</i> , 1998, 105:697-703.
4.3.4	Guisse, J-M, Palda V, Westhoff C, Chan BKS, Helfand M, and Lieu T. The effectiveness of primary care-based interventions to promote breastfeeding: Systematic evidence review and meta-analysis for the US preventive services task force. <i>Annals of Family Medicine</i> , 2003, 1(2):70-78.
*4.3.7 (HIV)	WHO. HIV and infant feeding counselling: A training course. Participants' Manual. Geneva, Switzerland, 2000 (WHO/FCH/CAH/00.4).
4.4.4	DeChateau P and Wiberg B. Long term effect on mother-infant behavior of extra contact during the first hour postpartum. <i>Acta Paediatr</i> , 1977, 66:145-151.
4.4.5	Christensson K, Siles C, Moreno L, Belaustequi A, De La Fuente P, Lagercrantz H, Puyol P, and Winberg J. Temperature, metabolic adaptation and crying in health full-term newborns cared for skin-to-skin or in a cot. <i>Acta Paediatr</i> , 1992, 81:488-93.
4.4.7	Righard L and Alade MO. Effect of delivery room routines on success of first breastfeed. <i>Lancet</i> , 1990, 336:1105-1107.
4.5.3	Righard L & Alade O. Sucking technique and its effect on success of breastfeeding. <i>Birth</i> , 1992, 19(4):185-189.
4.5.4	Lu M, Lange L, Slusser W et al. Provider encouragement of breast-feeding: Evidence from a national survey. <i>Obstetrics and Gynecology</i> , 2001, 97:290-295.
4.5.5	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. <i>Early Hum Dev</i> , 1992, 31(1): 25-40.
4.6.2	Nylander G, Lindemann R, Helsing E, Bendvold E Unsupplemented breastfeeding in the maternity ward. <i>Acta Obstet Gynecol Scand</i> , 1991, 70: 205-209.

- 4.6.5 Perez-Escamilla, Sergura-Millan S, Pollitt E, Dewey KG. Determinants of lactation performance across time in an urban population from Mexico. *Soc Sci Med*, 1993, 37(8):1069-1078.
- *4.6.12 (HIV) Richardson BA, John-Stewart GC, Hughes JP, Nduati R, Mbori-Ngacha D, Overbaugh J and Kreiss JK, Breast-milk Infectivity in Human Immunodeficiency Virus Type 1 – Infected Mothers. *JID*, 2003, 187:736-740.
- *4.6.13 (HIV) Coutoudis A, Kubendran P, Kuhn L, Spooner, E, Tsai W, Coovadia HM.; South African Vitamin A Study Group. Method of feeding and transmission of HIV-1 from mothers to children by 15 months of age: prospective cohort study from Durban, South Africa. *AIDS*, 2001, Feb 16, 15(3):379-87.
- *4.6.14 (HIV) Piwoz EG, Liff PJ, Tavengwa N, Gavin L, Marinda E, Lunney K, Zunguza C,
*4.6.15 (HIV) Nathoo KJ, the ZVITAMBO Study Group, and Humphrey JH, An Education and Counseling Program for Preventing Breast-Feeding-Associated HIV Transmission in Zimbabwe: Design and Impact on Maternal Knowledge and Behavior. *J Nutr*. 2005, Apr, 135(4):950-5.
- 4.7.4 Soetjningsih and Suraatmaja S. The advantages of rooming-in. *Pediatrica Indonesia*, 1986, 26:229-235.
- 4.7.5 Yamauchi Y and Yamanouchi I. The relationship between rooming-in/not rooming-in and breast-feeding variables. *Acta Paediatr Scan*, 1990, 1017-1022.
- 4.8.4 Yamauchi Y and Yamanouchi I. Breast-feeding frequency during the first 24 hours after birth in full-term neonates. *Pediatrics*, 1990, 86(2);171-175.
- 4.8.5 De Carvalho M, Klaus MH, Merkatz RB. Frequency of breast-feeding and serum bilirubin concentration. *Am J Dis Child*, 1982, Aug;136(8):737-8.
- 4.9.4 Victora C, Behague D, Barros F et al. Pacifier use and short breastfeeding duration: cause, consequence, or coincidence? *Pediatrics*, 1997, 99:445-453.
- 4.10.5 Haider R, Kabir I, Huttly S and Ashworth. Training peer counselors to promote and support exclusive breastfeeding in Bangladesh. *J Hum Lact*, 2002, 18:7-12.
- 4.10.6 Morrow A, Guerrereo ML, Shultis J, et al. Efficacy of home-based peer counselling to promote exclusive breastfeeding: a randomised controlled trial. *Lancet*, 1999, 353:1226-31.
- 4.11.1-4 Kramer MS, Chalmers B, Hodnett ED et al. Promotion of Breastfeeding Intervention Trial (PROBIT): a randomized trial in the Republic of Belarus. *JAMA*, 2001, Jan 24-31; 285(4):413-20.
- 4.11.5-7 Merten S et al. Do Baby-Friendly Hospitals Influence Breastfeeding Duration on a National Level? *Pediatrics*, 2005, 116:e702 – e708.

Risk of mother-to-child transmission of HIV

Refers to slide 4.3.7 (HIV)

Reference: WHO, UNICEF, USAID. *HIV and infant feeding counselling tools: Reference guide*. Geneva, World Health Organization, 2005.

The explanation of the data presented in this slide is summarized from page 14 of this reference.

- This example assumes that the prevalence of HIV infection among women is 20% (or 20 out of 100 women).
- The mother-to-child transmission rate during pregnancy and delivery is about 20-25%. A rate of 20% is used in this example. Thus about 4 of the infants of the 20 HIV-positive mothers are likely to be infected during pregnancy or delivery.
- The transmission rate through breastfeeding is about 5-20% of the infants who are breastfed by mothers who are HIV-positive. For this example we use a rate of 15%, taken as an average. 15% of 20 is 3. Thus about 3 of the infants of HIV-positive mothers are likely to be infected by breastfeeding.

In summary:

- In a group of 100 mothers in an area with a 20% prevalence of HIV infection among mothers, only about 3 babies are likely to be infected with HIV through breastfeeding.
- 97% of the babies would not get HIV in this way.

Risk factor: Maternal blood viral load

Refers to Slide 4.6.12 (HIV)

Reference: Richardson BA, John-Stewart GC, Hughes JP, Nduati R, Mbori-Ngacha D, Overbaugh J, Kreiss JK. Breast-milk Infectivity in Human Immunodeficiency Virus Type 1 – Infected Mothers. *JID*, 2003, 187:736-740.

Method: Human immunodeficiency virus type 1 (HIV-1) is transmitted through blood, genital secretions, and breast milk. The probability of heterosexual transmission of HIV-1 per sex act is .0003-.0015, but little is known regarding the risk of transmission per breast-milk exposure. The researchers evaluated the probability of breast-milk transmission of HIV-1 per litre of breast milk ingested and per day of breast-feeding in a study of children born to HIV-1-infected mothers.

Findings: The probability of breast-milk transmission of HIV-1 was .00064 per litre ingested and .00028 per day of breast-feeding. Breast-milk infectivity was significantly higher for mothers with more advanced disease, as measured by prenatal HIV-1 RNA plasma levels and CD4 counts.

Conclusion: The study provides the first quantitative estimates of breast-milk infectivity per litre of milk ingested. The probability of HIV-1 infection per litre of breast milk ingested by an infant is similar in magnitude to the lowest probability of heterosexual transmission of HIV-1 per unprotected sex act in adults.

Feeding pattern and risk of HIV transmission

Refers to Slide 4.6.13 (HIV)

Reference: Coutsooudis A, Kubendran P, Kuhn L, Spooner, E, Tsai W, Coovadia HM. South African Vitamin A Study Group. Method of feeding and transmission of HIV-1 from mothers to children by 15 months of age: prospective cohort study from Durban, South Africa. *AIDS*, 2001, Feb 16: 15(3):379-87.

Objective: To determine the risk of HIV transmission by infant feeding modality.

Design and setting: A prospective study in two hospitals in Durban, South Africa.

Participants: A total of 551 HIV-infected pregnant women enrolled in a randomized trial of vitamin A.

Interventions: Women self-selected to breastfeed or formula feed after being counselled. Breastfeeders were encouraged to practice exclusive breastfeeding for 3-6 months.

Main outcome measures: Cumulative probabilities of detecting HIV over time were estimated using Kaplan-Meier methods and were compared in three groups: 157 formula-fed (never breastfed); 118 exclusively breastfed for 3 months or more; and 276 mixed breastfed.

Results: The three feeding groups did not differ in any risk factors for transmission, and the probability of detecting HIV at birth was similar. Cumulative probabilities of HIV detection remained similar among never and exclusive breastfeeders up to 6 months: 0.194 (95% CI 0.136-0.260) and 0.194 (95% CI 0.125-0.274), respectively, whereas the probabilities among mixed breastfeeders soon surpassed both groups reaching 0.261 (95% CI 0.205-0.319) by 6 months. By 15 months, the cumulative probability of HIV infection remained lower among those who exclusively breastfed for 3 months or more than among other breastfeeders (0.247 versus 0.359).

Conclusion: Infants exclusively breastfed for 3 months or more had no excess risk of HIV infection over 6 months than those never breastfed. These findings, if confirmed elsewhere, can influence public health policies on feeding choices available to HIV-infected mothers in developing countries.

HIV & infant feeding study in Zimbabwe

Refers to Slides 4.6.14 and 4.6.15 (HIV)

Reference: Piwoz EG, Liff PJ, Tavengwa N, Gavin L, Marinda E, Lunney K, Zunguza C, Nathoo KJ, the ZVITAMBO Study Group, Humphrey JH. An Education and Counseling Program for Preventing Breast-Feeding-Associated HIV Transmission in Zimbabwe: Design and Impact on Maternal Knowledge and Behavior. *J Nutr.* 2005, 135(4):950-5.

Method: International guidance on HIV and infant feeding has evolved over the last decade. In response to these changes, the researchers designed, implemented, and evaluated an education and counseling program for new mothers in Harare, Zimbabwe. The program was implemented within the ZVITAMBO trial, in which 14,110 mother-baby pairs were enrolled within 96 hours of delivery and were followed at 6 weeks, 3 months and then 3-month intervals. Mothers were tested for HIV at delivery but were not required to learn their test results. Infant feeding patterns were determined using data provided up to 3 months. Formative research was undertaken to guide the design of the program that included group education, individual counselling, videos and brochures. The program was introduced over a 2-month period: 11,362, 1311, and 1437 women were enrolled into the trial before, during and after this period. Exclusive breastfeeding was recommended for mothers of unknown or negative HIV status, and for HIV-positive mothers who chose to breastfeed. A questionnaire assessing HIV knowledge and exposure to the program was administered to 1996 mothers enrolling after the program was initiated.

Findings: HIV knowledge improved with increasing exposure to the program. Mothers who enrolled when the program was being fully implemented were 70% more likely to learn their HIV status early (<3 months) and 8.4 times more likely to exclusively breastfeed than mothers who enrolled before the program began.

Conclusion: Formative research aided in the design of a culturally sensitive intervention. The intervention increased relevant knowledge and improved feeding practices among women who primarily did not know their HIV status.

Handout 4.1 (HIV)

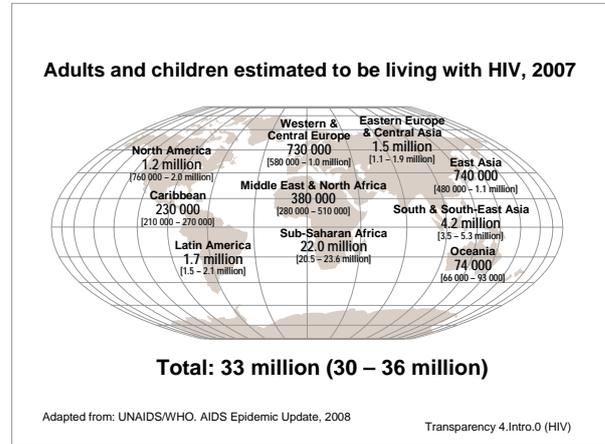
Presentation for Session 4 (HIV): The scientific basis for the “Ten steps” for settings with high HIV prevalence

Global summary of the HIV & AIDS epidemic, December 2007

Number of people living with HIV/AIDS in 2007	Total	33 million (30-36 million)
	Adults	30.8 million (28.2 – 34.0 million)
	Women	15.5 million (14.2 – 16.9 million)
	Children under 15	2.0 million (1.9 – 2.3 million)
People newly infected with HIV in 2007	Total	2.7 million (2.2 – 3.2 million)
	Adults	2.3 million (1.9 – 2.8 million)
	Children under 15	370 000 (330 000 - 410 000)
AIDS deaths in 2007	Total	2.0 million (1.8 - 2.3 million)
	Adults	1.8 million (1.6 - 2.1 million)
	Children under 15	270 000 (250 000 - 290 000)

The ranges around the estimates in this table define the boundaries within which the actual numbers lie, based on the best available information.

From: UNAIDS/WHO. AIDS Epidemic Update, 2008. Transparency 4.Intro.0 (HIV)



Regional HIV statistics for women, 2006

Region	# of women (15+) living with HIV	% of HIV+ adults who are women (15+)
Sub-Saharan Africa	13.3 million	59%
N. Africa & Middle East	200,000	48%
S. & S.A. Asia	2.2 million	29%
East Asia	210,000	29%
Oceania	36,000	47%
Latin America	510,000	31%
Caribbean	120,000	50%
Eastern Europe & Central Asia	510,000	30%
W. & C. Europe	210,000	28%
North America	350,000	26%
TOTAL:	17.7 million	48%

From: UNAIDS/WHO. AIDS Epidemic Update, 2006. Transparency 4.Intro.3 (HIV)

Ten steps to successful breastfeeding

Step 1. Have a written breastfeeding policy that is routinely communicated to all health care staff.

A JOINT WHO/UNICEF STATEMENT (1989)

Transparency 4.1.4

Breastfeeding policy
Why have a policy?

- Requires a course of action and provides guidance
- Helps establish consistent care for mothers and babies
- Provides a standard that can be evaluated

Transparency 4.1.5

Breastfeeding policy
What should it cover?

- At a minimum, it should include:
 - The 10 steps to successful breastfeeding
 - An institutional ban on acceptance of free or low cost supplies of breast-milk substitutes, bottles, and teats and its distribution to mothers
 - A framework for assisting HIV positive mothers to make informed infant feeding decisions that meet their individual circumstances and then support for this decision
- Other points can be added

Transparency 4.1.6

Breastfeeding policy

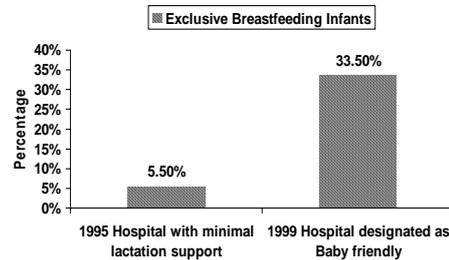
How should it be presented?

It should be:

- Written in the most common languages understood by patients and staff
- Available to all staff caring for mothers and babies
- Posted or displayed in areas where mothers and babies are cared for

Transparency 4.1.7

Step 1: Improved exclusive breast-milk feeds while in the birth hospital after implementing the Baby-friendly Hospital Initiative



Adapted from: Philipp BL, Merewood A, Miller LW et al. Baby-friendly Hospital Initiative improves breastfeeding initiation rates in a US hospital setting. *Pediatrics*, 2001, 108:677-681.

Transparency 4.1.8

Ten steps to successful breastfeeding

Step 2. Train all health-care staff in skills necessary to implement this policy.

A JOINT WHO/UNICEF STATEMENT (1989)

Transparency 4.2.1

Areas of knowledge

- Advantages of breastfeeding
- Risks of artificial feeding
- Mechanisms of lactation and suckling
- How to help mothers initiate and sustain breastfeeding
- How to assess a breastfeed
- How to resolve breastfeeding difficulties
- Hospital breastfeeding policies and practices
- Focus on changing negative attitudes which set up barriers

Transparency 4.2.2

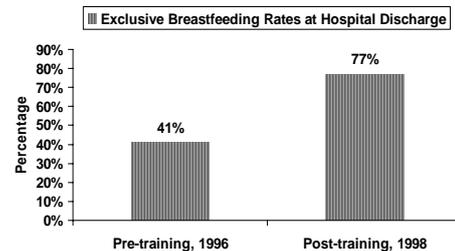
Additional topics for BFHI training in the context of HIV

Train all staff in:

- Basic facts on HIV and on Prevention of Mother-to-Child Transmission (PMTCT)
- Voluntary testing and counselling (VCT) for HIV
- Locally appropriate replacement feeding options
- How to counsel HIV + women on risks and benefits of various feeding options and how to make informed choices
- How to teach mothers to prepare and give feeds
- How to maintain privacy and confidentiality
- How to minimize the "spill over" effect (leading mothers who are HIV - or of unknown status to choose replacement feeding when breastfeeding has less risk)

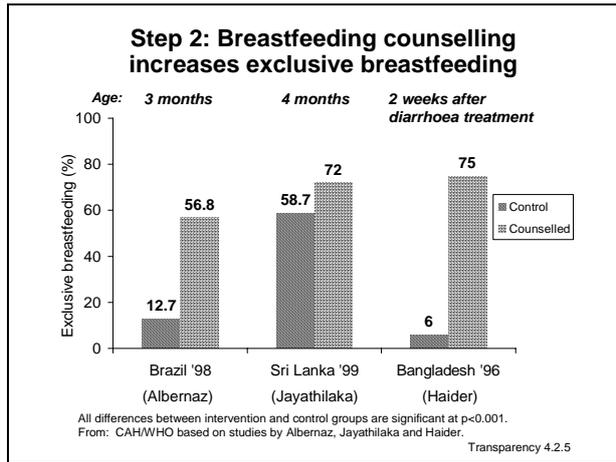
Transparency 4.2.3

Step 2: Effect of breastfeeding training for hospital staff on exclusive breastfeeding rates at hospital discharge



Adapted from: Cattaneo A, Buzzetti R. Effect on rates of breast feeding of training for the Baby Friendly Hospital Initiative. *BMJ*, 2001, 323:1358-1362.

Transparency 4.2.4



Which health professionals other than perinatal staff influence breastfeeding success?

Transparency 4.2.6

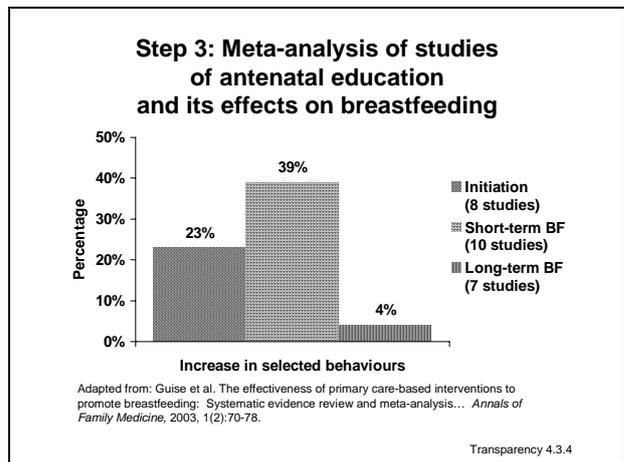
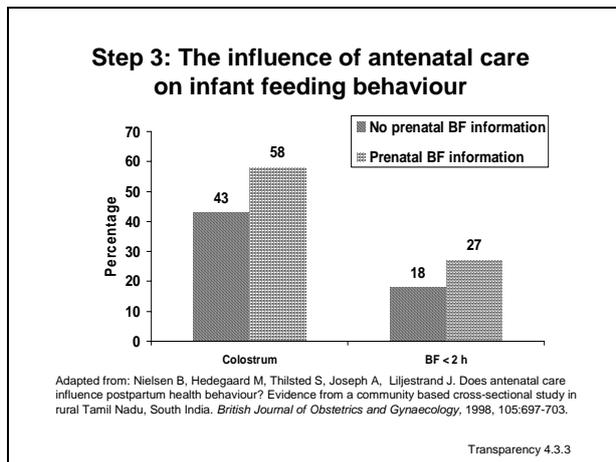
Ten steps to successful breastfeeding

Step 3. Inform all pregnant women about the benefits of breastfeeding.

A JOINT WHO/UNICEF STATEMENT (1989)

Transparency 4.3.1

- ### Antenatal education should include:
- Benefits of breastfeeding
 - Early initiation
 - Importance of rooming-in (if new concept)
 - Importance of feeding on demand
 - Importance of exclusive breastfeeding
 - How to assure enough breastmilk
 - Risks of artificial feeding and use of bottles and pacifiers (soothers, teats, nipples, etc.)
 - Basic facts on HIV
 - Prevention of mother-to-child transmission of HIV (PMTCT)
 - Voluntary testing and counselling (VCT) for HIV and infant feeding counselling for HIV+ women
 - Antenatal education should not include group education on formula preparation
- Transparency 4.3.2



Why test for HIV in pregnancy?

- If HIV negative
 - Can be counseled on prevention and risk reduction behaviors
 - Can be counseled on exclusive breastfeeding
- If HIV positive
 - Can learn ways to reduce risk of MTCT in pregnancy, at delivery and during infant feeding
 - Can better manage illnesses and strive for "positive" living
 - Can plan for safer infant feeding method and follow-up for baby
 - Can decide about termination (if a legal option) and future fertility
 - Can decide to share her status with partner /family for support



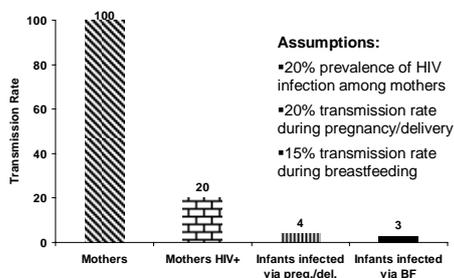
Transparency 4.3.5 (HIV)

Definition of replacement feeding

- The process, in the context of HIV/AIDS, of feeding a child who is not receiving any breast milk with a diet that provides all the nutrients the child needs.
- During the first six months this should be with a suitable breast-milk substitute, usually commercial formula.
- After six months it should preferably be with a suitable breast-milk substitute, and complementary foods made from appropriately prepared and nutrient-enriched family foods, given three times a day. If suitable breast-milk substitutes are not available, appropriately prepared family foods should be further enriched and given five times a day.

Transparency 4.3.6 (HIV)

Risk of mother-to-child transmission of HIV



Assumptions:
 •20% prevalence of HIV infection among mothers
 •20% transmission rate during pregnancy/delivery
 •15% transmission rate during breastfeeding

Based on data from *HIV & infant feeding counselling tools: Reference Guide*. Geneva, World Health Organization, 2005. Transparency 4.3.7 (HIV)

WHO recommendations on infant feeding for HIV+ women

Exclusive breastfeeding is recommended for HIV-infected mothers for the first six months of life unless replacement feeding is acceptable, feasible, affordable, sustainable and safe for them and their infants before that time.

When replacement feeding is acceptable, feasible, affordable, sustainable and safe, avoidance of all breastfeeding by HIV-infected mothers is recommended.

WHO/UNICEF/JUNAIDS/UNFPA, *HIV and Infant Feeding Update. Based on the Technical Consultation held on behalf of the IATT on Prevention of HIV Infection in Pregnant Women, Mothers and their Infants. Geneva 25-27 October 2006*. Geneva, World Health Organization, 2007. Transparency 4.3.8 (HIV)

HIV & infant feeding recommendations

If the mother's HIV status is unknown:

- Encourage her to obtain HIV testing and counselling
- Promote optimal feeding practices (exclusive BF for 6 months, introduction of appropriate complementary foods at about 6 months and continued BF to 24 months and beyond)
- Counsel the mother and her partner on how to avoid exposure to HIV

Adapted from WHO/Linkages, *Infant and Young Child Feeding: A Tool for Assessing National Practices, Policies and Programmes*. Geneva, World Health Organization, 2003 (Annex 10, p. 137). Transparency 4.3.9 (HIV)

If the mother's HIV status is negative:

- Promote optimal feeding practices (see above)
- Counsel her and her partner on how to avoid exposure to HIV

If the mother's HIV status is positive:

- Provide access to anti-retroviral drugs to prevent MTCT and refer her for care and treatment for her own health
- Provide counselling on the risks and benefits of various infant feeding options, including the acceptability, feasibility, affordability, sustainability and safety (AFASS) of the various options.
- Assist her to choose the most appropriate option
- Provide follow-up counselling to support the mother on the feeding option she chooses

ibid. Transparency 4.3.10 (HIV)

If the mother is HIV positive and chooses to breastfeed:

- Explain the need to exclusively breastfeed for the first six months with cessation when replacement feeding is AFASS
- Support her in planning and carrying out a safe transition
- Prevent and treat breast conditions and thrush in her infant

If the mother is HIV positive and chooses replacement feeding:

- Teach her replacement feeding skills, including cup-feeding and hygienic preparation and storage, away from breastfeeding mothers

Ibid.

Slide 4.3.11 (HIV)

Ten steps to successful breastfeeding

Step 4. Help mothers initiate breastfeeding within a half-hour of birth.

A JOINT WHO/UNICEF STATEMENT (1989)

Transparency 4.4.1

New interpretation of Step 4 in the revised BFHI Global Criteria (2007):

“Place babies in skin-to-skin contact with their mothers immediately following birth for at least an hour. Encourage mothers to recognize when their babies are ready to breastfeed and offer help if needed.”

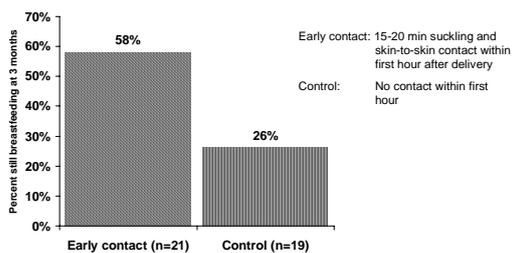
Transparency 4.4.2

Early initiation of breastfeeding for the normal newborn
Why?

- Increases duration of breastfeeding
- Allows skin-to-skin contact for warmth and colonization of baby with maternal organisms
- Provides colostrum as the baby’s first immunization
- Takes advantage of the first hour of alertness
- Babies learn to suckle more effectively
- Improved developmental outcomes

Transparency 4.4.3

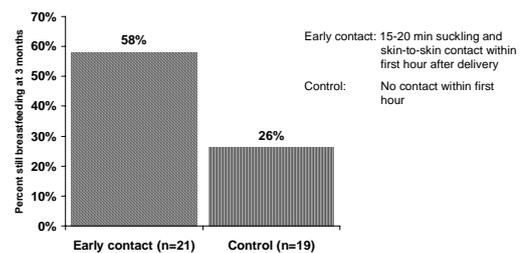
Impact on breastfeeding duration of early infant-mother contact



Adapted from: DeChateau P, Wiberg B. Long term effect on mother-infant behavior of extra contact during the first hour postpartum *Acta Paediatr*, 1977, 66:145-151.

Transparency 4.4.5

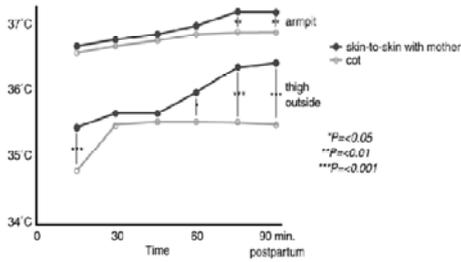
Impact on breastfeeding duration of early infant-mother contact



Adapted from: DeChateau P, Wiberg B. Long term effect on mother-infant behavior of extra contact during the first hour postpartum *Acta Paediatr*, 1977, 66:145-151.

Transparency 4.4.5

Temperatures after birth in infants kept either skin-to-skin with mother or in cot



Adapted from: Christensson K et al. Temperature, metabolic adaptation and crying in healthy full-term newborns cared for skin-to-skin or in a cot. *Acta Paediatr*, 1992, 81:490.

Transparency 4.4.6

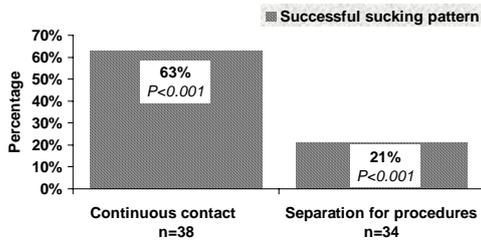
Protein composition of human colostrum and mature breast milk (per litre)

Constituent	Measure	Colostrum (1-5 days)	Mature Milk (>30 days)
Total protein	G	23	9-10.5
Casein	mg	1400	1870
α-Lactalbumin	mg	2180	1610
Lactoferrin	mg	3300	1670
IgA	mg	3640	1420

From: Worthington-Roberts B, Williams SR. *Nutrition in Pregnancy and Lactation*, 5th ed. St. Louis, MO, Times Mirror/Mosby College Publishing, p. 350, 1993.

Transparency 4.4.7

Effect of delivery room practices on early breastfeeding



Adapted from: Righard L, Alade O. Effect of delivery room routines on success of first breastfeed. *Lancet*, 1990, 336:1105-1107.

Transparency 4.4.8

Ten steps to successful breastfeeding

Step 5. Show mothers how to breastfeed and how to maintain lactation, even if they should be separated from their infants.

A JOINT WHO/UNICEF STATEMENT (1989)

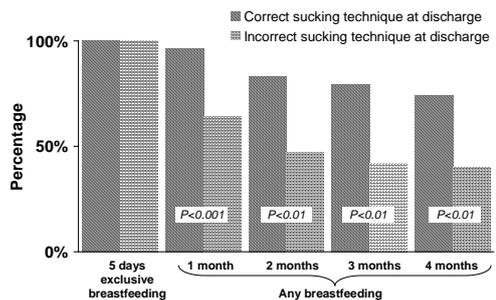
Transparency 4.5.1

“ Contrary to popular belief, attaching the baby on the breast is not an ability with which a mother is [born...]; rather it is a learned skill which she must acquire by observation and experience. ”

From: Woolridge M. The "anatomy" of infant sucking. *Midwifery*, 1986, 2:164-171.

Transparency 4.5.2

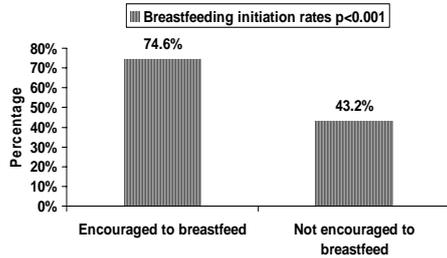
Effect of proper attachment on duration of breastfeeding



Adapted from: Righard L, Alade O. (1992) Sucking technique and its effect on success of breastfeeding. *Birth* 19(4):185-189.

Transparency 4.5.3

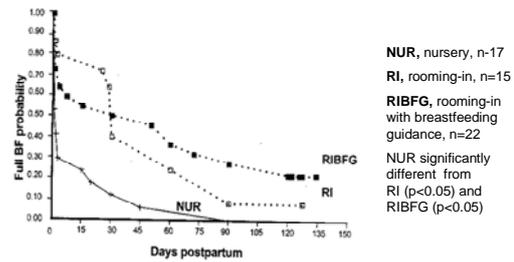
Step 5: Effect of health provider encouragement of breastfeeding in the hospital on breastfeeding initiation rates



Adapted from: Lu M, Lange L, Slusser W et al. Provider encouragement of breast-feeding: Evidence from a national survey. *Obstetrics and Gynecology*, 2001, 97:290-295.

Transparency 4.5.4

Effect of the maternity ward system on the lactation success of low-income urban Mexican women



From: 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 Hum Dev*, 1992, 31 (1): 25-40.

Transparency 4.5.5

Supply and demand

- Milk removal stimulates milk production.
- The amount of breast milk removed at each feed determines the rate of milk production in the next few hours.
- Milk removal must be continued during separation to maintain supply.

Transparency 4.5.6

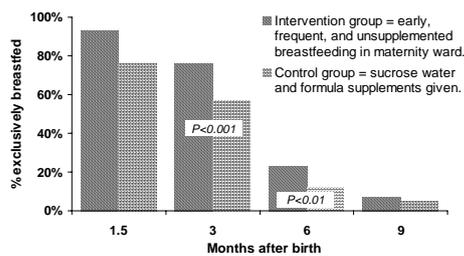
Ten steps to successful breastfeeding

Step 6. Give newborn infants no food or drink other than breast milk unless *medically* indicated.

A JOINT WHO/UNICEF STATEMENT (1989)

Transparency 4.6.1

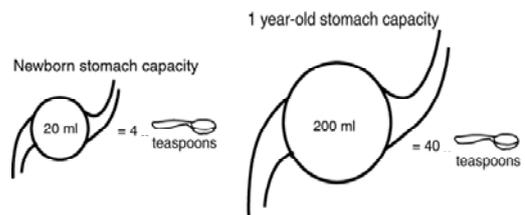
Long-term effects of a change in maternity ward feeding routines



Adapted from: Nylander G et al. Unsupplemented breastfeeding in the maternity ward: positive long-term effects *Acta Obstet Gynecol Scand*, 1991, 70:208.

Transparency 4.6.2

The perfect match: quantity of colostrum per feed and the newborn stomach capacity



Adapted from: Pipes PL. *Nutrition in Infancy and Childhood*, Fourth Edition St. Louis, Times Mirror/Mosby College Publishing, 1989.

Transparency 4.6.3

Impact of routine formula supplementation

Decreased frequency or effectiveness of suckling



Decreased amount of milk removed from breasts



Delayed milk production or reduced milk supply
Some infants have difficulty attaching to breast if formula given by bottle

Transparency 4.6.4

Determinants of lactation performance across time in an urban population from Mexico

- Milk came in earlier in the hospital with rooming-in where formula was not allowed
- Milk came in later in the hospital with nursery (p<0.05)
- Breastfeeding was positively associated with early milk arrival and inversely associated with early introduction of supplementary bottles, maternal employment, maternal body mass index, and infant age.

From: Perez-Escamilla et al. Determinants of lactation performance across time in an urban population from Mexico. *Soc Sci Med*, 1993, (8):1069-78.

Transparency 4.6.5

Summary of studies on the water requirements of exclusively breastfed infants

Country	Temperature °C	Relative Humidity %	Urine osmolarity (mOsm/l)
Argentina	20-39	60-80	105-199
India	27-42	10-60	66-1234
Jamaica	24-28	62-90	103-468
Peru	24-30	45-96	30-544

Note: Normal range for urine osmolarity is from 50 to 1400 mOsm/kg.

From: *Breastfeeding and the use of water and teas*. Division of Child Health and Development Update No. 9. Geneva, World Health Organization, reissued, Nov. 1997.

Transparency 4.6.6

Medically indicated

There are rare exceptions during which the infant may require other fluids or food in addition to, or in place of, breast milk. The feeding programme of these babies should be determined by qualified health professionals on an individual basis.

Transparency 4.6.7

Acceptable medical reasons for use of breast-milk substitutes

Infant conditions:

Infants who should not receive breast milk or any other milk except specialized formula:

- Classic galactosemia: A special galactose-free formula is needed.
- Maple syrup urine disease: A special formula free of leucine, isoleucine and valine is needed.
- Phenylketonuria: A special phenylalanine free formula is required (some BF is possible, under careful monitoring).

Infants for whom breast milk remains the best feeding option but may need other food in addition to breast milk for a limited period:

- Very low birth weight infants (less than 1500g)
- Very preterm infants (less than 32 weeks gestational age)
- Newborn infants at risk of hypoglycaemia.

Transparency 4.6.8

Maternal conditions:

Mothers who may need to avoid BF permanently:

- HIV infection – if replacement feeding is AFASS.

Mothers who may need to avoid BF temporarily:

- Severe illness that prevents a mother from caring for her infant
- Herpes simplex virus type 1. (If lesions on breasts, avoid BF until active lesions have resolved.)
- Maternal medications – sedating psychotherapeutic drugs; radioactive iodine – 131 better avoided given that safer alternatives are available; excessive use of topical iodine; cytotoxic chemotherapy usually requires mother to stop BF permanently.

Transparency 4.6.9

Mothers who can continue breastfeeding:

- Breast abscess
- Hepatitis B – infants should get vaccine.
- Hepatitis C
- Mastitis – if painful, remove milk by expression
- TB – manage together following national guidelines
- Substance use: maternal use of nicotine, alcohol, ecstasy, amphetamines, cocaine and related stimulants have harmful effects on BF babies; alcohol, opioids, benzodiazepines and cannabis can cause sedation in mother and baby

WHO/UNICEF, Acceptable Medical Reasons for use of BMS, 2009

Transparency 4.6.10

Risk factors for HIV transmission during breastfeeding*

Mother

- Immune/health status
- Plasma viral load
- Breast milk virus
- Breast inflammation (mastitis, abscess, bleeding nipples)
- New HIV infection

Infant

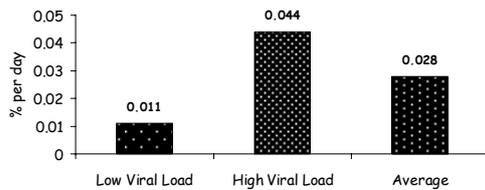
- Age (first month)
- Breastfeeding duration
- Non-exclusive BF
- Lesions in mouth, intestine
- Pre-maturity, low birth weight
- Genetic factors – host/virus

* Also referred to as postnatal transmission of HIV (PNT)

HIV transmission through breastfeeding: A review of available evidence. Geneva, World Health Organization, 2004 (summarized by Ellen Piwoz).

Transparency 4.6.11 (HIV)

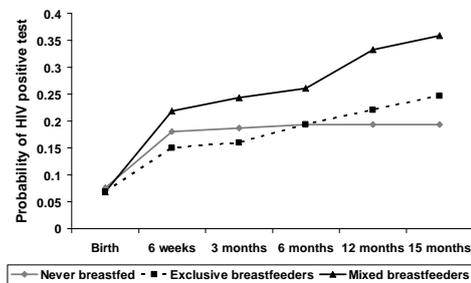
Risk factor: Maternal blood viral load
Risk of HIV transmission per day of BF in Nairobi, Kenya (%)



From: Richardson et al, Breast-milk Infectivity in Human Immunodeficiency Virus Type 1 – Infected Mothers, JID, 2003 187:736-740 (adapted by Ellen Piwoz)

Transparency 4.6.12 (HIV)

Feeding pattern & risk of HIV transmission



From: Coutousidis et al. Method of feeding and transmission of HIV-1 from mothers to children by 15 months of age: prospective cohort study from Durban, South Africa. AIDS, 2001 Feb 16; 15(3):379-87.

Transparency 4.6.13 (HIV)

HIV & Infant feeding study in Zimbabwe

Elements of safer breastfeeding:

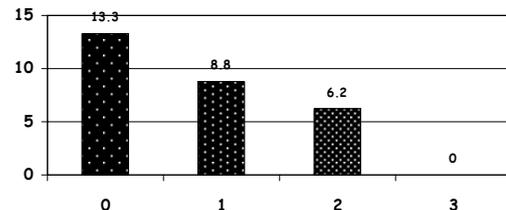
- Exclusive breastfeeding
- Proper positioning & attachment to the breast to minimize breast pathology
- Seeking medical care quickly for breast problems
- Practicing safe sex

Piwoz et al. An education and counseling program for preventing breastfeeding-associated HIV transmission in Zimbabwe: Design & Impact on Maternal Knowledge & Behavior Amer. Soc. for Nutr Sci 950-955 (2005)

Transparency 4.6.14 (HIV)

Exposure to safer breastfeeding intervention was associated with reduced postnatal transmission (PNT) by mothers who did not know their HIV status

Cumulative PNT HIV transmission (%) according to reported exposure to SBF program



N=365; p=0.04 in test for trend. Each additional intervention contact was associated with a 38% reduction in PNT after adjusting for maternal CD4

Piwoz et al. in preparation, 2005.

Transparency 4.6.15 (HIV)

Ten steps to successful breastfeeding

Step 7. Practice rooming-in — allow mothers and infants to remain together — 24 hours a day.

A JOINT WHO/UNICEF STATEMENT (1989)

Transparency 4.7.1

Rooming-in

A hospital arrangement where a mother/baby pair stay in the same room day and night, allowing unlimited contact between mother and infant

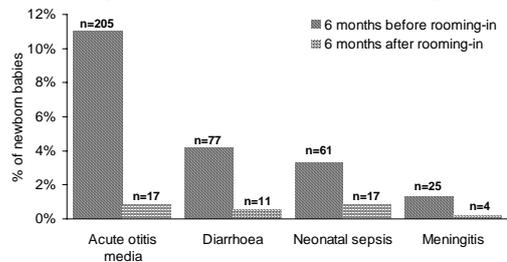
Transparency 4.7.2

Rooming-in Why?

- Reduces costs
- Requires minimal equipment
- Requires no additional personnel
- Reduces infection
- Helps establish and maintain breastfeeding
- Facilitates the bonding process

Transparency 4.7.3

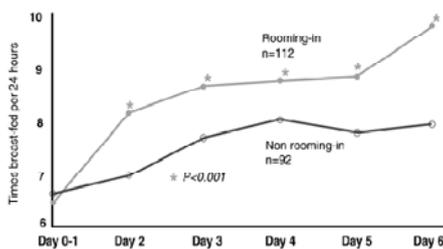
Morbidity of newborn babies at Sanglah Hospital before and after rooming-in



Adapted from: Soetjiniingsih, Suraatmaja S. The advantages of rooming-in. *Pediatrica Indonesia*, 1986, 26:231.

Transparency 4.7.4

Effect of rooming-in on frequency of breastfeeding per 24 hours



Adapted from: Yamauchi Y, Yamanouchi I. The relationship between rooming-in/not rooming-in and breastfeeding variables. *Acta Paediatr Scand*, 1990, 79:1019.

Transparency 4.7.5

Ten steps to successful breastfeeding

Step 8. Encourage breastfeeding on demand.

A JOINT WHO/UNICEF STATEMENT (1989)

Transparency 4.8.1

Breastfeeding on demand:

Breastfeeding whenever the baby or mother wants, with no restrictions on the length or frequency of feeds.

Transparency 4.8.2

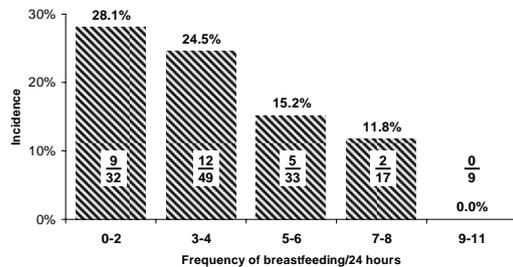
On demand, unrestricted breastfeeding Why?

- Earlier passage of meconium
- Lower maximal weight loss
- Breast-milk flow established sooner
- Larger volume of milk intake on day 3
- Less incidence of jaundice

From: Yamauchi Y, Yamanouchi I. Breast-feeding frequency during the first 24 hours after birth in full-term neonates. *Pediatrics*. 1990, 86(2):171-175.

Transparency 4.8.3

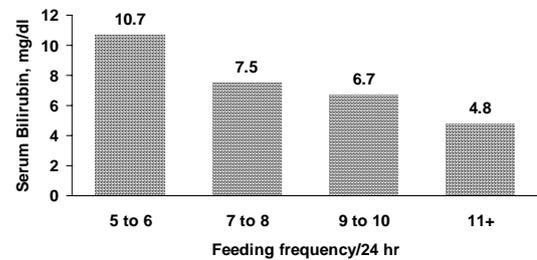
Breastfeeding frequency during the first 24 hours after birth and incidence of hyperbilirubinaemia (jaundice) on day 6



From: Yamauchi Y, Yamanouchi I. Breast-feeding frequency during the first 24 hours after birth in full-term neonates. *Pediatrics*. 1990, 86(2):171-175.

Transparency 4.8.4

Mean feeding frequency during the first 3 days of life and serum bilirubin



From: DeCarvalho et al. *Am J Dis Child* 1982; 136:737-738

Transparency 4.8.5

Ten steps to successful breastfeeding

Step 9. Give no artificial teats or pacifiers (also called dummies and soothers) to breastfeeding infants.

A JOINT WHO/UNICEF STATEMENT (1989)

Transparency 4.9.1

Alternatives to artificial teats

- cup
- spoon
- dropper
- Syringe

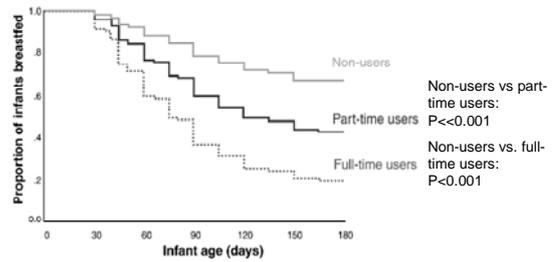
Transparency 4.9.2

Cup-feeding a baby



Transparency 4.9.3

Proportion of infants who were breastfed up to 6 months of age according to frequency of pacifier use at 1 month



From: Victora CG et al. Pacifier use and short breastfeeding duration: cause, consequence or coincidence? *Pediatrics*, 1997, 99:445-453.

Transparency 4.9.4

Ten steps to successful breastfeeding

Step 10. Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic.

A JOINT WHO/UNICEF STATEMENT (1989)

Transparency 4.10.1

“The key to best breastfeeding practices is continued day-to-day support for the breastfeeding mother within her home and community.”

From: Saadeh RJ, editor. *Breast-feeding: the Technical Basis and Recommendations for Action*. Geneva, World Health Organization, pp. 62-74, 1993.

Transparency 4.10.2

Support can include:

- Early postnatal or clinic checkup
- Home visits
- Telephone calls
- Community services
 - Outpatient breastfeeding clinics
 - Peer counselling programmes
- Mother support groups
 - Help set up new groups
 - Establish working relationships with those already in existence
- Family support system

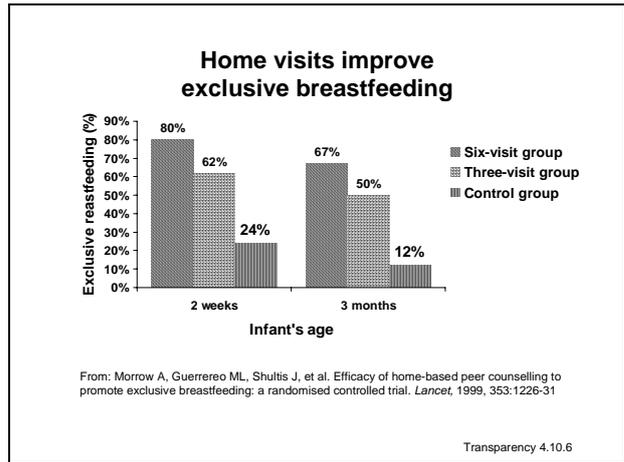
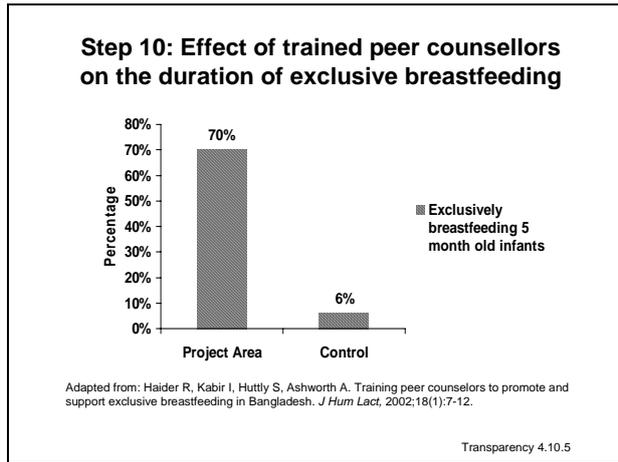
Transparency 4.10.3

Types of breastfeeding mothers' support groups

- Traditional
 - extended family
 - culturally defined *doulas*
 - village women
- Modern, non-traditional
 - Self-initiated
 - by mothers
 - by concerned health professionals
 - Government planned through:
 - networks of national development groups, clubs, etc.
 - health services -- especially primary health care (PHC) and trained traditional birth attendants (TBAs)

From: Jelliffe DB, Jelliffe EFP. The role of the support group in promoting breastfeeding in developing countries. *J Trop Pediatr*, 1983, 29:244.

Transparency 4.10.4



Combined Steps: The impact of baby-friendly practices: The Promotion of Breastfeeding Intervention Trial (PROBIT)

- > In a randomized trial in Belarus 17,000 mother-infant pairs, with mothers intending to breastfeed, were followed for 12 months.
- > In 16 control hospitals & associated polyclinics that provide care following discharge, staff were asked to continue their usual practices.
- > In 15 experimental hospitals & associated polyclinics staff received baby-friendly training & support.

Adapted from: Kramer MS, Chalmers B, Hodnett E, et al. Promotion of breastfeeding intervention trial (PROBIT) A randomized trial in the Republic of Belarus. *JAMA*, 2001, 285:413-420.

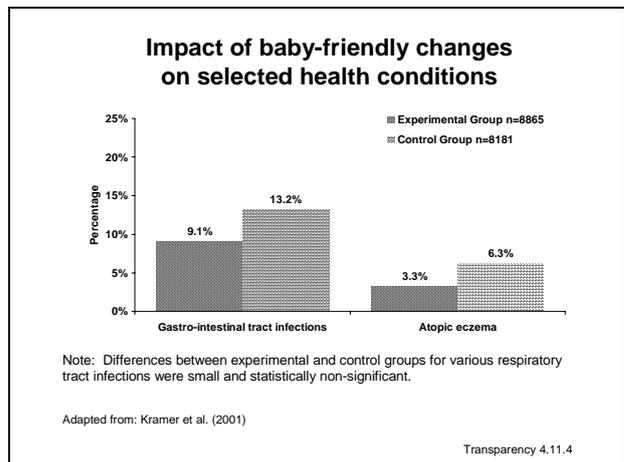
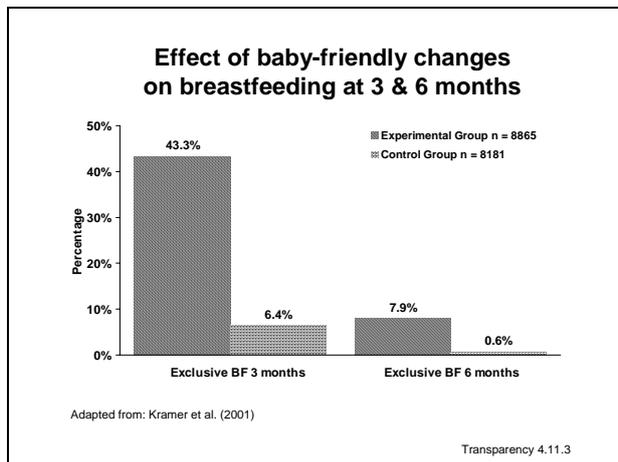
Transparency 4.11.1

Differences following the intervention

Control hospitals:	Experimental hospitals:
▪ Routine separation of mothers & babies at birth	▪ Mothers & babies together from birth
▪ Routine tight swaddling	▪ No swaddling—skin-to-skin contact encouraged
▪ Routine nursery-based care	▪ Rooming-in on a 24-hr basis
▪ Incorrect latching & positioning techniques	▪ Correct latching & positioning techniques
▪ Routine supplementation with water & milk by bottle	▪ No supplementation
▪ Scheduled feedings every 3 hrs	▪ Breastfeeding on demand
▪ Routine use of pacifiers	▪ No use of pacifiers
▪ No BF support after discharge	▪ BF support in polyclinics

Communication from Chalmers and Kramer (2003)

Transparency 4.11.2



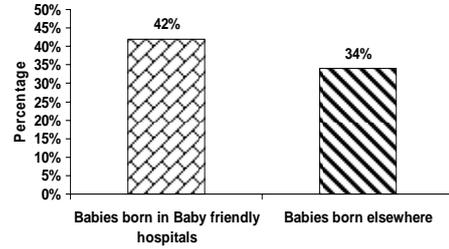
**Combined Steps:
The influence of Baby-friendly hospitals on
breastfeeding duration in Switzerland**

- Data was analyzed for 2861 infants aged 0 to 11 months in 145 health facilities.
- Breastfeeding data was compared with both the progress towards Baby-friendly status of each hospital and the degree to which designated hospitals were successfully maintaining the Baby-friendly standards.

Adapted from: Merten S et al. Do Baby-Friendly Hospitals Influence Breastfeeding Duration on a National Level? *Pediatrics*, 2005, 116: e702 – e708.

Transparency 4.11.5

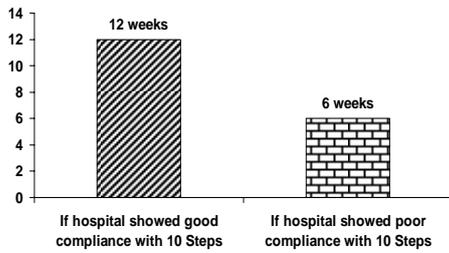
**Proportion of babies exclusively breastfed for
the first five months of life -- Switzerland**



Adapted from: Merten S et al. Do Baby-Friendly Hospitals Influence Breastfeeding Duration on a National Level? *Pediatrics*, 2005, 116: e702 – e708.

Transparency 4.11.6

**Median duration of exclusive breastfeeding for
babies born in Baby-friendly hospitals --
Switzerland**



Adapted from: Merten S et al. Do Baby-Friendly Hospitals Influence Breastfeeding Duration on a National Level? *Pediatrics*, 2005, 116: e702 – e708.

Transparency 4.11.7

Handout 4.6 (HIV)

Infant and young child feeding in the context of HIV¹

Background

Breastfeeding by HIV-positive women is a major means of HIV transmission, but not breastfeeding carries significant health risks to infants and young children. Breastfeeding is vital to the health of children, reducing the impact of many infectious diseases, and preventing some chronic diseases. In the face of this dilemma, the objective of health services should be to protect, promote and support breastfeeding as the best infant-feeding choice for all women in general, while giving special advice and support to HIV-positive women and their families so that they can make decisions about how best to feed infants in relation to HIV.

Achieving this objective requires the organization of services that:

- recognize the need to protect child survival and development, and not only to prevent HIV transmission;
- incorporate the interventions of the Global Strategy on Infant and Young Child Feeding (see section 2.1 and Annex 3);
- prevent HIV infection in women and their partners by providing information and promoting safer and responsible sexual behaviour and practices, including as appropriate, delaying the onset of sexual activity, practising abstinence, reducing the number of sexual partners and using condoms, and the early detection and treatment of sexually transmitted infections (STIs);
- encourage use of pre-conception, family planning and antenatal care (ANC) services by women of reproductive age, including, in particular, women and their partners in relationships in which one or both partners are HIV-infected;
- include the following services as part of the basic package of ANC:
 - provision of information about breastfeeding and complementary feeding
 - prevention of HIV infection
 - STI management
 - counselling on safer sex practices
 - HIV testing and counselling
 - other interventions to reduce HIV transmission
- provide and promote HIV testing and counselling for the whole population;

¹ Adapted from WHO/UNICEF/UNFPA/UNAIDS. HIV and infant feeding: A guide for health-care managers and supervisors (revised). Geneva, World Health Organization, 2003, pp 3-7.

- for HIV-positive women, provide ongoing counselling and support to help them make their infant-feeding decisions and to carry them out;
- for HIV- negative women and women of unknown status, provide support to exclusively breastfeed for the first six months, with continued breastfeeding for up to two years and beyond, with adequate and appropriate complementary feeding from age six months;
- prevent any spillover effect of replacement feeding;
- observe, implement and monitor the Code of Marketing of Breast-milk Substitutes. The Code is relevant to, and fully covers the needs of, mothers who are HIV-positive;
- consider support for infant and young child feeding as part of a continuum of care and support services for all women, especially HIV-positive women, taking into account the critical importance of the mother as a caregiver for her child;
- provide care and support for pregnant women, mothers and their infants;
- promote an enabling environment for women living with HIV by strengthening community support and by reducing stigma and discrimination.

Protect, respect and fulfil human rights

Protecting, respecting and fulfilling human rights in relation to HIV implies that:

- All women and men, irrespective of their HIV status, have a right to determine the course of their sexual and reproductive lives and to have access to information and services that allow them to protect their own and their family's health
- Children have a right to survival, development and health
- A woman has a right to make decisions about infant feeding, on the basis of full information, and to receive support for the course of action she chooses
- Women and girls have a right to information about HIV/AIDS and to access to the means to protect themselves against HIV infection
- Women have the right to have access to voluntary and confidential HIV testing and counselling and to know their HIV status
- Women have a right to choose not to be tested or to choose not to be told the result of an HIV test

These principles are derived from international human rights instruments, including the Convention on the Elimination of All Forms of Discrimination Against Women (1979) and the Convention on the Rights of the Child.

Overview

Adopted in 2002, the Global Strategy on Infant and Young Child Feeding (Annex 3) clearly sets out that, as a public health recommendation, infants should be exclusively breastfed for the first six months of life to achieve optimal growth, development and health. Afterwards, infants should receive nutritionally adequate and safe complementary food while breastfeeding continues for up to two years of age and beyond. However, the feeding of children living in the exceptionally difficult circumstances of being born to an HIV-positive woman merits special consideration and support.

This section sets out information on the risks of HIV transmission through breastfeeding, the risks of not breastfeeding, and goals and current approaches for the prevention of HIV infection in infants and young children. On the basis of this information managers should:

- be fully aware of the population benefits and risks of all infant-feeding options for HIV-positive women
- take into account the global goals and approaches related to the prevention of HIV infection in infants and young children
- apply these in programme planning and implementation
- keep in mind that the ultimate objective is to reduce infant and young child morbidity and mortality in the general population and specifically in the HIV-infected population.

1.1 Risk of HIV infection in infants and young children

By far the principal source of HIV infection in young children is mother-to-child transmission. The virus may be transmitted during pregnancy, labour or delivery, or through breastfeeding.

About two-thirds of infants born to HIV-infected mothers will not be infected, even with no intervention, such as anti-retroviral prophylaxis or caesarean section. About 15–30% of infants of HIV-infected women will be infected during pregnancy or during delivery, and an additional 5–20% may become infected during breastfeeding² (see table).

Estimated risk and timing of mother-to-child transmission of HIV in the absence of interventions³

Timing	Transmission rate
During pregnancy	5–10%
During labour and delivery	10–20%
During breastfeeding	5–20%
Overall without breastfeeding	15–30%
Overall with breastfeeding to 6 months	25–35%
Overall with breastfeeding to 18 to 24 months	30–45%

² Few studies give information on the mode of breastfeeding (exclusive or mixed). In most cases, mixed feeding may be assumed.

³ Adapted from De Cock KM, Fowler MG, Mercier E, et al. Prevention of mother-to-child HIV transmission in resource-poor countries – Translating research into policy and practice. *JAMA*, 2000, 283: 1175-82.

Evidence for HIV transmission through breast milk:

- The virus has been found in breast milk, and women with detectable virus are more likely to transmit infection compared to women who do not have detectable virus.
- HIV infection has occurred in breastfed infants of mothers who were not infected with HIV during pregnancy or at delivery but who became infected while breastfeeding, from either an infected blood transfusion or through sexual transmission.
- Infants born to HIV-uninfected mothers have been infected by breast milk from HIV-infected wet-nurses or by breast milk from unscreened donors.
- Infants born without infection to HIV-infected women, and who were diagnosed as HIV-uninfected at six months of age, have been found to be infected after this age, with breastfeeding as the only concurrent risk factor.

1.2 Risk factors for HIV transmission through breastfeeding

A number of factors increase the risk of HIV transmission through breastfeeding:

- **Recent infection with HIV** – a woman who has been infected with HIV during delivery or while breastfeeding is more likely to transmit the virus to her infant
- **HIV disease progression** – as measured by low CD4 count or high RNA viral load in plasma, with or without severe clinical symptoms
- **Breast conditions** – sub-clinical or clinical mastitis, cracked or bleeding nipples, or breast abscess
- **Oral thrush** – in the infant
- **Longer duration of breastfeeding** – infants continue to be at risk of infection as long as they are exposed to HIV-contaminated milk
- **Micronutrient deficiencies in the mother** – although evidence on this point is weak.

Mode of breastfeeding may also affect the risk of HIV transmission: exclusive breastfeeding may be less likely to transmit HIV than mixed feeding

1.3 Health risks to non-breastfed infants

The risks associated with not breastfeeding vary with the environment – for example, with the availability of suitable replacement feeds and safe water. It varies also with the individual circumstances of the mother and her family, including her education and economic status.

Lack of breastfeeding compared with any breastfeeding has been shown to expose children to increased risk of malnutrition and life-threatening infectious diseases other than HIV, especially in the first year of life, and exclusive breastfeeding appears to offer greater protection against disease than any breastfeeding. This is especially the case in developing countries, where over one-half of all under-five deaths are associated with malnutrition. Not breastfeeding during the first two months of life is also associated, in poor countries, with a six fold increase in mortality from infectious diseases. This risk drops to less than threefold by six months, and continues to decrease with time.

1.4 Current approaches to prevention of HIV transmission in pregnant women, mothers and their children

Reducing HIV transmission to pregnant women, mothers and their children, including transmission by breastfeeding, should be part of a comprehensive approach both to HIV prevention, care and support, and to antenatal, perinatal and postnatal care and support. Policies should serve the best interests of the mother and infant as a pair, in view of the critical link between survival of the mother and that of the infant. These policies should reflect government commitments made in the UN General Assembly Declaration of Commitment on HIV/AIDS, which set the goal: “By 2005, reduce the proportion of infants infected with HIV by 20 per cent, and by 50 per cent by 2010”, and at the UN General Assembly Special Session for Children, which set a goal of reduction in the infant and under-five mortality rates by at least one third by 2010.

The UN strategic approach to prevention of HIV transmission in pregnant women, mothers and their children has four parts: 1) prevention of HIV infection in general, especially in young women, and pregnant women; 2) prevention of unintended pregnancies among HIV-infected women; 3) prevention of HIV transmission from HIV-infected women to their infants; and 4) provision of care, treatment and support to HIV-infected women, their infants and families. Parts 3 and 4 concern the prevention of transmission through breastfeeding.

Programmes for prevention of HIV infection in pregnant women, mothers and their children, including infection through breastfeeding, directed primarily at part 3 may have a variety of components, but generally include:

- the incorporation of HIV testing and counselling into routine antenatal care;
- ensuring that antenatal care includes management of sexually transmitted infections and counselling for safer sex, including promotion of faithfulness or reducing the number of sexual partners and provision of condoms;
- prophylaxis with antiretroviral drugs to HIV-positive women and, in some regimens, to their babies;
- safer obstetric practices;
- infant-feeding counselling and support, including promotion of exclusive breastfeeding by HIV-negative women and by women unaware of their status; and
- follow-up care and support to HIV-positive women, their infants and families.

Handout 4.7 (HIV)

Infant feeding policy: Rusape Hospital, Zimbabwe⁴

AIM

To protect, promote and support infant feeding practices at Rusape Hospital.

POLICY

TRAINING ALL HEALTH WORKERS AT RUSAPE HOSPITAL

- All health workers should be trained on the importance of breastfeeding and its advantages.
- All health workers should be trained on:
 - (a) Lactation Management (22 hours with 3 hours clinical practice)
 - (b) Prevention of Mother to Child Transmission
 - (c) Breastfeeding, HIV and Infant Feeding Counselling (44-hour course with 8 hours clinical practice and 4 hours practicals on milk measurements, preparation, use and costing).
- All health workers should be knowledgeable about the infant feeding policy.

HEALTH EDUCATION DURING PREGNANCY

- Educate mothers on:
 - a) Nutrition
 - b) Importance of exclusive breastfeeding in the first six months of life
 - c) Dangers of mixed feeding
 - d) Advantages and benefits of breastfeeding and breast milk
 - e) Timely introduction of complementary feeding
 - f) Positioning and attachment at the breast
 - g) Manual expression of breast milk
 - h) Prevention of Mother to Child Transmission
 - Mode of transmission of HIV
 - Voluntary Confidential Counselling and Testing
 - Antiretroviral
 - Infant feeding options
 - i) Nutrition and HIV/AIDS
 - j) Side effects of drugs, smoking and drinking alcohol
- Documentation:
 - a) Document what has been taught pertaining to infant feeding to mothers on the ANC cards.
 - b) Provide clients with leaflets and handouts.

PROMOTION OF INFANT FEEDING

- Initiate infant feeding to all newborn babies within 1-hour post delivery depending on the condition of both mother and baby.
- All mothers regardless of their HIV status should be supported and assisted to bond skin-to-skin immediately after delivery depending on the condition of the mother and baby (Caesar).
- Health workers should give assistance where necessary.

⁴Used with permission from Rufaro Madzima, Head of Nutrition, Ministry of Health and Child Welfare, Zimbabwe.

- Breastfeeding mothers are encouraged to feed their babies with colostrums, which is rich in nutrients required by the baby.

POSITIONING, ATTACHMENT AND MAINTANANCE OF LACTATION

Good positioning and attachment of baby to the breast is important in prevention of breast conditions such as cracked or sore nipples, assuring enough milk and other breast conditions.

- Breastfeeding mothers should be in a comfortable position either sitting or sleeping.
- All breastfeeding babies should be breastfed on demand. The pre-term and the ill babies should be given expressed breast milk by cup or nasogastric tube.
- Individual needs of babies not breastfed should be respected and responded to.
- Cup feeding should also be encouraged for non-breastfeeding babies.

EXCLUSIVE BREASTFEEDING

- All babies below the age of six months (6/12) should be exclusively breastfed, - i.e. giving breast milk only without any other food or fluids even water- unless medically indicated.
- Those babies not breastfed should be exclusively fed for the first six months with the chosen replacement feed /option.

ROOMING IN

- All mothers regardless of their HIV status should be allowed rooming-in / bedding-in with their babies for 24 hours a day.
- Mothers of admitted babies should be admitted to facilitate continuous breastfeeding except when the mother is critically ill.
- Avoid unnecessary separations of mother and baby except when medically indicated or during hospital procedures.

TIMELY INTRODUCTION OF COMPLEMENTARY FEEDING

- Mothers should be taught to prepare soft and nutritious foods which are locally available and given to the infants gradually in addition to breast milk or other forms of milk, from six months (6/12) of birth.
- Health education on complementary feeding should start at ANC.

SUPPLY OF BREAST-MILK SUBSTITUTES (Code of Marketing of Breast-milk Substitutes)

- All health workers should refuse free and low cost free supply of breast-milk substitutes, bottles, teats and pacifiers/dummies/soothers from manufacturers.
- Should the hospital require any breast-milk substitutes, including special formulae, which are used in the health facility, these should be purchased in the same way as other foods and medicines.
- Feeding bottles, teats, pacifiers/dummies/soothers should not be given to infants.
- Advertising of artificial products is not allowed within the health facilities.

FOLLOW-UP SUPPORT

- Infant feeding mothers and their babies should be supported and followed-up.
- The existing community based support groups and systems should be strengthened, supported and involved in PMTCT and infant feeding follow-up.
- Networking amongst existing support groups and systems should be promoted.

WORKING MOTHERS

- Working mothers should be encouraged to express breast milk in clean containers. This milk is to be given to the babies during their absence by cup.

Session 5: Becoming “Baby-friendly”

Objective

At the conclusion of this session, participants will be able to:

- Develop a plan for building staff enthusiasm and consensus for working to become “Baby-friendly”.
- Identify actions necessary to implement at least four of the “Ten steps to successful breastfeeding” in their health facilities.
- Identify at least five common concerns related to instituting the Ten Steps and practical solutions for addressing them.

Duration

Discussion and brainstorming: 15 minutes

Introduction to group work: 5 minutes

Group work: 30-45 minutes

Presentations and discussion: 40-55 minutes

Total: 1½ to 2 hours

Teaching methods

Small group work

Presentations in plenary

Discussion

Preparation for session

- Review the WHO document, *Evidence for the ten steps to successful breastfeeding*. Geneva, Switzerland, 1998.
http://www.who.int/nutrition/publications/infantfeeding/evidence_ten_step_eng.pdf
- Read the section on “combined interventions” (pp. 93-99) that gives evidence that the *Ten Steps* should be implemented as a package. Also review the WHO/UNICEF document, *Global Strategy for Infant and Young Child Feeding*. Geneva, Switzerland, 2003.
http://www.who.int/nutrition/publications/infantfeeding/g_s_infant_feeding_eng.pdf
- Read in particular sections 30, 31 and 34, pages 13-19, which focus on the importance of continuing to support the *Baby-friendly Hospital Initiative* and implementation of the *Ten Steps to Successful Breastfeeding*, as well as monitoring and reassessing facilities that are already designated.

- If possible, the group work for this session should be scheduled as the last activity for the first day of the course. Since it involves active participation by course participants, it is more likely to keep their attention than a lecture-type session at the end of an intensive day. If this plan is followed, the group reports and discussion can come first on the schedule the next day, giving participants the flexibility to do some final work, if necessary, to prepare for their reports the evening before.
- The group work for this session should focus only on four to five of the *Ten Steps* since there is not enough time during either the group work or the reporting and discussion period to adequately cover the concerns and solutions for all Ten Steps. Preparation for this session should include an analysis, by the trainers, of which steps tend to be most difficult to implement and thus on which it would be most important to focus in a session of this type. Indications of which steps need the most work may come from trainers' experience with BFHI assessments and training. A review of the forms participants were asked to complete prior to arriving at the course, indicating what difficulties they have had, or think they will have, in assisting their institutions to become baby-friendly, should also be helpful. Consider including "Step Ten" as one of the steps chosen for group work, since it appears to be a challenge for health facility personnel almost everywhere.
- Before the session, the trainers also need to organize the working groups and assign facilitators to each of them. Consideration should be given during the formation of working groups to insuring that each group includes some participants who are good at problem solving and supportive of BFHI. Facilitators should be made aware that their role is not to "lead" the working groups but rather to make sure the groups understand the assignment, offer help if the group is having difficulty, and make suggestions if there are important issues the group hasn't considered. The facilitators should review the sections of Handout 5.3 which deal with the steps the groups will be working on, as they may provide ideas on important points the facilitators should mention, if they are not discussed, during the group work or the group reports.
- Once the four or five Steps have been selected for the group work, it would be useful to make enough copies of the Handout 5.2 "sample sheet" for each of the groups, with one of the Steps and wording for the Step inserted on each of the four or five sheets.
- Consider whether participants should be provided with copies of the completed Handout 5.2 sheets developed by the working groups, so they can refer to them for ideas as they implement their action plans on their return home. The completed sheets can be copied "as is" or, if there is time, the course secretary can be asked to prepare typed versions for copying.
- Review Handout 5.3 and decide whether to distribute it at the end of the session. If the Course will be given a number of times, consider adapting this Handout to the country situation, eliminating concerns and solutions that aren't applicable and possibly adding others.

Training materials

Handouts

- 5.1 Presentation for session 5
- 5.2 The Ten Steps to Successful Breastfeeding: Actions, Concerns and Solutions – Sample Worksheet
- 5.3 The Ten Steps to Successful Breastfeeding: Summary of Experiences

Slides/Transparencies

- 5.1-2 The Ten Steps to Successful Breastfeeding: Actions, concerns, and solutions -- Worksheet, example for Step 1: Have a written breastfeeding policy (blank copy)
- 5.3-7 The Ten Steps to Successful Breastfeeding: Actions, concerns, and solutions -- Worksheet, example for Step 7: Practice rooming-in (filled in)

The website featuring this Course contains links to the slides and transparencies for this session in two Microsoft PowerPoint files. The slides (in colour) can be used with a laptop computer and LCD projector, if available. Alternatively, the transparencies (in black and white) can be printed out and copied on acetates and projected with an overhead projector. The transparencies are also reproduced as the first handout for this session, with 6 transparencies to a page.

References

US Committee for UNICEF, *Barriers and Solutions to the Global Ten Steps to Successful Breastfeeding*: Washington D.C., 1994 (to obtain a copy, send \$9.00 US to Baby-Friendly USA, 327 Quaker Meeting House Road, E. Sandwich, MA 02537, USA (Tel. 508-888-8092, Fax. 508-888-8050, e-mail: info@babyfriendlyusa.org, <http://www.babyfriendlyusa.org/>)

- *Evidence for the ten steps to successful breastfeeding*. Geneva, World Health Organization, 1998. http://www.who.int/nutrition/publications/infantfeeding/evidence_ten_step_eng.pdf
- WHO/UNICEF. *Global Strategy for Infant and Young Child Feeding*. Geneva, World Health Organization, 2003. http://www.who.int/nutrition/publications/infantfeeding/g_s_infant_feeding_eng.pdf
- UNAIDS, FAO, UNHCR, UNICEF, WHO, WFP, World Bank, UNFPA, IAEA. *HIV and infant feeding: Framework for priority action*. Geneva, World Health Organization, 2003. http://www.who.int/nutrition/publications/hiv_infantfeed_framework_en.pdfhttp://whqlibdoc.who.int/publications/2003/9241590777_eng.pdf

Outline

Content	Trainer's Notes
<p>1. Discussion on building consensus for “Becoming Baby-friendly”</p>	<p>Mention that a mini-version of the slides is reproduced in Handout 5.1 and included in the participants’ folder.</p>
<ul style="list-style-type: none"> ■ Discussion and brainstorming session on strategies for gaining support within the health facility for becoming Baby-friendly and drafting a policy and plan of action. <ul style="list-style-type: none"> ■ The importance of “thinking strategically”. ■ How best to gain support within the participants’ culture and institutional administrative system for a policy and plan of action. ■ How best to convince those staff members likely to be most resistant. 	<p>Discussion: 15 minutes</p> <p>Discuss the importance for health facility administrators and policy-makers of “thinking strategically” about how best to gain support within the health facility for making the changes necessary to become Baby-friendly.</p> <p>Ask the participants to brainstorm concerning how, within their culture and institutional administrative system, they can best work to gain the support needed to develop a breastfeeding policy and plan.</p> <p>Before the session starts, review the “Actions” suggested for “Step 1” in Handout 5.3 and, if necessary, mention the strategies suggested under the first four bullets as examples, to help get the participants thinking about what would work best in their own settings.</p> <p>Record the suggestions made by the participants either on a flip chart or board or on transparencies 5.1 and 5.2. Emphasize that these strategies are part of the actions needed to successfully implement “Step 1” in a way that is most likely to have full administrative and staff support.</p>
<p>2. Group work on implementing the Ten Steps</p> <ul style="list-style-type: none"> ■ Small group work to identify actions necessary to implement four or five of the most challenging of the Ten Steps and address common concerns. 	<p>Introduction: 5 minutes</p> <p>Describe the group work, explaining that participants will be divided into four or five small groups, with each group assigned one of the Ten Steps that experience has shown can be a challenge, as health facilities work to become Baby-friendly. For the step it is assigned, each group should identify:</p> <ol style="list-style-type: none"> 1) common concerns or problems related to instituting the step and possible solutions, and then, if they have time, 2) actions necessary to implement the step. <p>(The worksheet for each step starts with “Actions Necessary to Implement the Step”, but ask the groups first to identify “Concerns and Solutions” and record them on the back of the worksheet, as some of the “solutions” may</p>

Content	Trainer's Notes
	<p>be useful to include in their list of "actions".</p> <p>If it seems necessary to use an example to show participants how to complete the group work, display transparencies showing how to complete Handout 5.2 for one of the steps that will not be assigned to the working groups. Transparencies (5.3-5) have been prepared using "Step 7" (rooming-in) as an example. If necessary, the trainer can prepare other transparencies, focusing on a different step. Use the transparencies to explain how to complete the worksheet for both sections on "Concerns and Solutions" and "Actions".</p> <p>Emphasize that during this session the groups won't be making "Action Plans" for their own health facilities, but will be working to identify common concerns and solutions and then, if they have time, possible actions to address them.. Later in the course the participants from the same facility will work together to develop specific "Action Plans" that identify the activities needed for BFHI in their own facilities.</p> <p>Ask if there are any questions.</p> <p>Group work: 30-45 minutes</p> <p><i>Divide participants into four or five working groups, assigning a facilitator to each group, if possible. Assign each working group one of the Ten Steps to work on. Distribute one of the Handout 5.2 worksheets (with "Concerns and Solutions" on one side and "Actions" on the other) to each group, with the Step and the wording for the Step that the group will be working on inserted at the top.</i></p> <p>Ask each group to record its work on the worksheet and summarize results on transparencies or flip charts, and to assign one of its members to present the work during the reporting and discussion period to follow.</p>
<p>3. Presentations and discussion</p> <ul style="list-style-type: none"> ■ Presentation of group work. ■ Discussion of issues raised after each group's presentation. 	<p><i>Presentations and discussion: 40-55 minutes</i></p> <p>Ask each group to present its work. Lead a discussion on each presentation, making sure major points are covered.</p> <p>Collect the group work on each step at the end of the session. If feasible and not too costly, make copies and distribute them to all participants before the course is over. In addition, include copies of this group work in</p>

Content	Trainer's Notes
	<p>the course report.</p> <p>Distribute Handout 5.3, which summarizes experience in a number of countries at the end of the session as a “reference document”.</p> <p>Explain that since the material in this handout comes from many countries not all the concerns and solutions will be relevant. The handout may be helpful, however, as its review of experience worldwide in implementing the Ten Steps may give participants some new and creative ideas concerning what to do in their own situations.</p>

Handout 5.1

Presentation for session 5: Becoming "Baby-friendly"

**The Ten Steps to successful breastfeeding:
Actions, concerns and solutions - worksheet
Example**

STEP 1: Have a written breast-feeding policy that is routinely communicated to all health care staff

Actions necessary to implement the step

Transparency 5.1

STEP 1: Have a written breast-feeding policy that is routinely communicated to all health care staff

Common concerns and solutions

Concerns	Solutions

Transparency 5.2

**The Ten Steps to successful breastfeeding:
Actions, concerns and solutions - worksheet
Example**

STEP 7: Practice rooming-in.

Common concerns and solutions

Concern	Solutions
It's difficult to supervise the condition of a baby who is rooming-in. In the nursery one staff member is sufficient to supervise several babies.	<ul style="list-style-type: none"> ■ Assure staff that babies are better off rooming-in with their mothers, with the added benefits of security, warmth, and feeding on demand. ■ Stress that 24-hour supervision is not needed. Periodic checks and availability of staff to respond to mothers' needs are all that are necessary.

Transparency 5.3

Concern	Solutions
Infection rates will be higher when mothers and babies are together than when they are in a nursery.	<ul style="list-style-type: none"> ■ Stress that danger of infection is reduced when babies remain with mothers than when in a nursery and exposed to more caretakers. ■ Provide staff with data showing that infection rates are lower with rooming-in and breastfeeding, for example, from diarrhoeal disease, neonatal sepsis, otitis media, and meningitis.

Transparency 5.4

Concern	Solutions
Babies will fall off their mothers' beds.	<ul style="list-style-type: none"> ■ Emphasize that newborns don't move. ■ If mothers are still concerned, arrange for beds to be put next to the wall or, if culturally acceptable, for beds to be put in pairs, with mothers placing babies in the centre.

Transparency 5.5

Concern	Solutions
Full rooming-in, without more than half-hour separations, seems unfeasible because some procedures need to be performed on the babies outside their mothers' rooms.	<ul style="list-style-type: none"> ■ Study these procedures well. Some are not needed. (Example: weighing baby before and after breastfeeding.) Other procedures can be performed in the mothers' rooms. ■ Review advantages to mother and time saved by physician when infant is examined in front of mother.

Transparency 5.6

**The Ten Steps to successful breastfeeding:
Actions, concerns and solutions - worksheet
Example**

STEP 7: Practice rooming-in.

Actions necessary to implement the step

- Make needed changes in physical facility. Discontinue nursery. Make adjustments to improve comfort, hygiene, and safety of mother and baby.
- Require and arrange for cross training of nursery and postpartum personnel so they all have the skills to take care of both baby and mother.
- Institute individual or group education sessions for mothers on mother-baby postpartum care. Sessions should include information on how to care for babies who are rooming-in.

Transparency 5.7

Handout 5.2

The Ten Steps to Successful Breastfeeding Worksheet: Concerns and Solutions

STEP ____:	
<p>Concerns (list concerns, problems or challenges your maternity services face in implementing this Step)</p>	<p>Solutions (list possible solutions to each of the concerns, including both actions that have been successful and other approaches you think might be useful)</p>

The Ten Steps to Successful Breastfeeding

Worksheet: Actions necessary to implement the step

STEP ____:

(list key actions you think are necessary to successful implement this Step within maternity services that do not yet follow the Step)

Handout 5.3

The Ten Steps to Successful Breastfeeding

Summary of experiences¹

STEP 1: Have a written breastfeeding policy that is routinely communicated to all health care staff.

Actions necessary to implement the step

- Identify a core group of people who will provide the primary source of support for developing a hospital breastfeeding policy and plan.
- Ask the core group to develop a rough first draft of a breastfeeding policy and a plan for making the necessary changes to implement it. Work with the group as they develop the first draft, providing whatever guidance is needed.
- Establish a multi-disciplinary in-house committee or task force to whom the policy and plan will be presented for input. Include representatives from all appropriate units or departments. When the policy and plan are discussed, ask committee members to identify barriers to implementing specific policies, as well as potential solutions. If necessary, form smaller working groups to work on specific barriers or problems.
- Finalize and display written hospital breastfeeding policy and work with designated staff to initiate changes needed to implement it.
- Policy may include guidelines on topics such as:
 1. How the “Ten steps to successful breastfeeding” will be implemented;
 2. Maternal nutrition issues that should be addressed;
 3. Breastfeeding of low-birth-weight infants and infants delivered by C-section;
 4. Purchase and use of breast-milk substitutes;
 5. Acceptable medical reasons for supplementation (see WHO/UNICEF list);
 6. Hazards of bottle-feeding education. How to provide counselling for women who choose to formula-feed without lessening hospital support for breastfeeding;
 7. Code related issues (e.g., prohibiting donations of free and low-cost [under 80% of retail price] breast-milk substitutes, distribution of samples of breast-milk substitutes, gifts or coupons, use of materials distributed by formula companies);
 8. Prohibiting the practice, if it exists, of giving names of pregnant or recently delivered mothers to companies producing or distributing breast-milk substitutes;
 9. Storing any necessary hospital supplies of breast-milk substitutes, bottles, etc., out of view;

¹ This handout summarizes experiences from a variety of countries.

10. Allocating staff responsibilities and time related to the implementation of the breastfeeding policy.
- Work with designated staff to develop plans for monitoring implementation of the policy and the effects of the initiative on staff knowledge and practices, patient satisfaction and quality of care. Publicize positive results to reinforce support for changes made, and use information concerning problem areas to assist in determining whether further adjustments are needed.

STEP 1: Have a written breastfeeding policy that is routinely communicated to all health care staff.

Common concerns and solutions

Concerns	Solutions
<p>Resistance to introducing new breastfeeding policies. Concern that policies will be inappropriate, dangerous to infant health, difficult to implement considering other tasks, etc.</p>	<ul style="list-style-type: none"> ■ Provide scientific evidence of the soundness of the new policies through presentations such as one on “The Scientific Basis of the Ten Steps” or shorter session on key concerns (see Session 4). ■ Organize a task force to develop the policies, including representatives of all the departments that will be affected. If necessary, provide orientation for the task force so it is well informed about potential policies, their scientific basis, and how they will affect hospital practices before beginning work. ■ Arrange for presentations by administrators or department heads from hospitals that have model breastfeeding policies or have key staff visit other institutions with good policies in place. ■ As the policies are being developed, make sure that input is obtained from all influential parties, even if opposition is anticipated, so that plans can be made to address concerns identified. ■ Present the new policies as the “current state of the art” and highlight other hospitals in the country or region that have already successfully implemented the BFHI. ■ If resistance is high, make just a few changes at a time, starting with those for which support is greatest. Consider addressing just a few of the “steps” at a time to prevent staff from becoming overwhelmed.
<p>Economic concerns related to potential costs of policy changes (e.g. costs of conversion to rooming-in, loss of formula company support, cessation of free and low-cost supplies).</p>	<ul style="list-style-type: none"> ■ Work with key staff to identify both the costs and savings to hospital and larger health system that will result from the changes and weigh the trade-offs (see Session 6).

The Ten Steps to Successful Breastfeeding

Summary of experiences

STEP 2: Train all health care staff in skills necessary to implement this policy.

Actions necessary to implement the step

- Identify who will be responsible for planning and implementing an on-going training program for breastfeeding and lactation management. Work with the designated individual or group to develop a training strategy which will include:
 11. Identifying who needs to be trained in departments providing maternal/infant services and what their training needs are (both knowledge and clinical skills).
 12. Identifying the types and content of training for each target group.
- Obtaining existing training materials. Available courses include, for example:
 13. WHO and UNICEF breastfeeding courses:

“Breastfeeding Promotion and Support in a Baby-friendly Hospital: A 20-hour Course for Maternity Staff” (Section 3 of the revised BFHI documents), New York, UNICEF, 2006.

”Breastfeeding Counselling: A Training Course” (40 hours), Geneva, World Health Organization, 1993.

“Infant and Young Child Feeding Counselling: An Integrated Course” (5 days), Geneva, World Health Organization, 2006.
 14. Other training materials developed within the country or region.
- Selecting appropriate training materials and making any necessary adaptations to them.
- Identifying trainers with the help of appropriate government breastfeeding, nutrition and MCH authorities.
- Developing a training schedule, considering the need for initial training, refresher training and training of new staff, as well as for training of trainers.
- Allot the necessary budget and staff time.

STEP 2: Train all health care staff in skills necessary to implement this policy.

Common concerns and solutions

Concerns	Solutions
<p>Little or no time for training.</p>	<ul style="list-style-type: none"> ■ Reassess priorities. ■ Consider time saved by staff in the long run if breastfeeding problems are prevented and health of infants improved, thus decreasing time and resources necessary for caring for sick infants. ■ Consider scheduling breastfeeding-related training in conjunction with staff meetings or other on going training activities or integrating training into daily routines through apprenticeships or on-the-job training when appropriate. ■ Consider requiring staff to read selected materials or complete a self-guided course and then test their knowledge. Combine with clinical practice sessions and performance assessment. ■ Provide a resource collection where staff can borrow books, articles, and videos on breastfeeding, lactation management, and related topics.
<p>Lack of faculty/trainers/resources.</p>	<ul style="list-style-type: none"> ■ Identify training resources. Contact national, regional, or international organizations such as UNICEF; WHO; IBFAN; LINKAGES, Wellstart and its Associate network; Institute of Child Health, University of London; La Leche League International, ILCA, WABA, etc., for assistance, if necessary (see list of addresses on page 5-17). ■ Consider initiating a training strategy in which key health staff members are first trained as trainers and then used to train the rest of the staff. Choose strong candidates to be the trainers, if possible including staff from the various service units and shifts. ■ Ask the training coordinator to identify good training videos already prepared or videotape training sessions and have new employees view the tapes. Supplement with clinical practice sessions.
<p>Staff members do not understand the importance of breastfeeding support and thus see little need for training in this area.</p>	<ul style="list-style-type: none"> ■ Consider holding an orientation or advocacy session for staff before the training cycle begins. Introduce the hospital's breastfeeding policy and review evidence of the importance of breastfeeding support, linking the policies with increased breastfeeding and lowered morbidity and mortality.

Concerns	Solutions
	<ul style="list-style-type: none"> ■ Identify times when staff can gather for informal reviews of case studies of mothers with breastfeeding problems and how they were resolved. Follow by discussion on how to address similar situations in the future. ■ Arrange for bulletin board displays or include items in newsletters featuring BFHI progress, new articles, letters from patients, results from surveys, etc. ■ Establish an employee breastfeeding support program to increase the number of staff members with positive personal breastfeeding experiences.
<p>Attendance at training sessions is low or health staff members are pulled out of the training to go back to the unit.</p>	<ul style="list-style-type: none"> ■ Stress the importance of breastfeeding support skills along with other areas of expertise and require attendance at training sessions. ■ Bring the training to staff on each shift. ■ Offer continuing education credits for the training or other incentives such as recognition for new skills. ■ Arrange for several hospitals to sponsor joint training in an attractive site. ■ Work with hospital management to insure that training is considered a priority.
<p>Hospital and its health staff members rely on funding from companies selling breast-milk substitutes for training activities, conference attendance, etc.</p>	<ul style="list-style-type: none"> ■ Convince staff of the hidden agenda of the formula industry and the moral issues involved in accepting its funding. ■ Calculate the cost to hospital and families of illnesses due to feeding breast-milk substitutes. ■ Search for alternative sources of funding.

List of training resources

Institute of Child Health
University of London
30 Guilford Street
London WCN 1EH
United Kingdom
Tel.: +44 171-242-9789
Fax: +44 171-404-2062

International Baby Food Action Network
(IBFAN)
P.O. Box 781
Mbabane
Swaziland
Tel: [268] 45006
Fax: [268] 44246

International Lactation Consultant Association
(ILCA)
1500 Sunday Drive, Suite 102
Raleigh, North Carolina, 27607, USA
Tel.: +1 919-861-5577
Fax: +1 919-787-4916
E-mail: info@ilca.org

La Leche League International
1400 N. Meacham Road
P.O. Box 4079
Schaumburg, IL 60173-4809
USA
Tel.: +1 847-592-7570
Fax: +1 847-969-0460

LINKAGES Project
Academy for Educational Development
1825 Connecticut Avenue, N.W.
Washington, DC. 20009
Website: <http://www.linkagesproject.org/>
(note: The LINKAGES Project ended
December 2006. Publications are still
available on the LINKAGES website)

Infant and Young Child Nutrition Project
PATH
1800 K Street, NW, Suite 800
Washington, DC 20006

UNICEF Headquarters
3 United Nations Plaza
44th Street Between 1st and 2nd,
New York, NY 10017
USA
Tel.: +1 212-326-7000
Fax: +1 212-887-7465
Website: <http://www.unicef.org/>

Wellstart International
E-mail: info@wellstart.org
Website: www.wellstart.org

World Alliance for Breastfeeding Action
PO Box 1200
19850 Penang, Malaysia.
Tel.: +60 4-658-4816
Fax: +60 4-657-2655
E-mail: waba@streamyx.com
Websites: <http://www.waba.org.my/>
www.waba.org.br

World Health Organization
Department of Nutrition for Health and
Development
20, Avenue. Appia
CH-1211 Geneva 27
Switzerland
Tel.: +41 22-791-3315
Fax: +41 22-791-4156
E-mail: nutrition@who.int
Website: <http://www.who.int/nutrition/en/>

World Health Organization
Department of Child and Adolescent
Health and Development
20, Avenue. Appia
CH-1211 Geneva 27
Switzerland
Tel.: +41 22-791-3281
Fax: +41 22-791-4853
E-mail: cah@who.int
Website:
http://www.who.int/child_adolescent_health/en/

The Ten Steps to Successful Breastfeeding

Summary of experiences

STEP 3: Inform all pregnant women about the benefits and management of breastfeeding.

Actions necessary to implement the step

- Insure routine scheduling of prenatal classes that cover essential topics related to breastfeeding. Ask the staff to keep records of the classes held and their content.
- Review (or prepare) written guidelines for individual prenatal counselling to insure that key breastfeeding topics are covered and time is allowed to address concerns of individual mothers. Essential topics that are important to address during prenatal education and counselling include:
 - benefits of breastfeeding;
 - early initiation;
 - importance of rooming-in (if new concept);
 - importance of feeding on demand;
 - how to assure enough milk;
 - positioning and attachment;
 - importance of exclusive breastfeeding;
 - Risks of artificial feeding and use of bottles and pacifiers;
(prenatal education should **not** include group education on formula preparation).
- Determine if any special strategies are needed to encourage women to attend prenatal classes or counselling sessions (for example, holding late-evening classes for working mothers, providing special incentives for attendance, etc.).
- Take away all literature and posters about bottle-feeding and promotion of breast-milk substitutes.
- Ensure that formula companies do not provide breastfeeding promotion materials.
- Discontinue distribution in prenatal clinics of samples of breast-milk substitutes or coupons.

STEP 3: Inform all pregnant women about the benefits and management of breastfeeding.**Common concerns and solutions**

Concerns	Solutions
Promotional materials are free from the formula industry. It's difficult to find replacement materials and the funds to purchase them.	<ul style="list-style-type: none"> ■ Determine what promotional materials are available free or at low cost from the government, NGOs or other agencies. If there is a BFHI national authority, ask what materials it has available. ■ Pressure local and national health authorities to make materials available. ■ Ask the health facility staff to develop low-cost promotional materials with appropriate breastfeeding messages, adapting materials from elsewhere, when appropriate. ■ Seek other sources of support, including donations from local businesses and volunteer organizations to support the development and production of educational materials.
There's no staff time in busy prenatal clinics for individual counselling or group sessions related to breastfeeding.	<ul style="list-style-type: none"> ■ Convince staff of importance of such sessions. ■ Show how this will save time in the future, due to fewer breastfeeding problems and reduction in levels of illness. ■ Seek volunteer help from local NGOs, mother-support groups etc., for conducting classes or providing counselling. ■ Integrate breastfeeding material into other prenatal classes such as those on childbirth education, infant care, and nutrition.
Promotional and educational materials are often not well adapted to different educational, cultural and language groups.	<ul style="list-style-type: none"> ■ Ask the staff to produce or adapt promotional or educational materials to meet local needs, as necessary. ■ Form a network with other health facilities in the area and share materials or work together to develop them.
Busy mothers are reluctant to spend time to receive information or instructions, or don't know the information is available.	<ul style="list-style-type: none"> ■ Ask the staff to arrange group counselling while mothers are waiting to be seen. ■ Ask the receptionist or registrar at the health facility to encourage participation in breastfeeding classes. ■ Obtain support of clinical staff in assuring time allocation for counselling and stressing its importance during consultations. ■ Ask the staff to prepare written materials that mothers can take with them when they leave the health facility. Include breastfeeding guidelines,

Concerns	Solutions
	<p>overview of the “Ten steps” and hospital breastfeeding support services, invitation/announcement of breastfeeding classes, list of mother-support groups and other community resources etc.</p> <ul style="list-style-type: none"> ■ Hold an extra prenatal class in late evening for working women. ■ Arrange for a resource centre or area where mothers can look at or borrow breastfeeding-related books, articles, videos, or other materials, at their own convenience. ■ Hold a “breastfed baby parade” or a “beautiful breastfed baby contest” at a park, marketplace, or other public area. ■ Ask private practitioners to refer their clients to breastfeeding classes and other support services.

The Ten Steps to Successful Breastfeeding Summary of experiences

STEP 4: Help mothers initiate breastfeeding within a half-hour of birth.

Actions necessary to implement the step

- Work with staff to reprioritise perinatal routines for infant care immediately after birth to allow time for immediate mother/baby contact.
- Institute temperature control in labour, delivery, and recovery areas to insure infant temperature regulation.
- Arrange for continuous mother/baby contact after delivery.
- Assign staff responsibility for seeing that early initiation occurs for mothers who have chosen to breastfeed and insure that staff has the skills to give mothers required support.
- Train staff in the importance of suctioning a normal newborn only if necessary (if initial assessment [APGAR] are good and baby is crying lustily it is NOT necessary). If necessary to suction, do so gently as micro trauma to the mucus membranes of the newborn's throat and upper airway (oropharynx) can interfere with breastfeeding.
- Allot staff time if necessary for breastfeeding support.
- Allow support person (family member, "doula" etc.) to stay with the mother during and immediately after delivery and participate in providing breastfeeding, as appropriate.

When reviewing delivery-room policies, consider issues such as the mother/baby pair's need for privacy, a tranquil environment, subdued lighting, a minimal number of health personnel in room, reduced reliance on sophisticated technology for low-risk births etc.

STEP 4: Help mothers initiate breastfeeding within a half-hour of birth.

Common concerns and solutions

Concerns	Solutions
<p>It is routine to suction all babies immediately after delivery and this is what health staff learned in school.</p>	<ul style="list-style-type: none"> ■ Discuss the anatomic and physiologic reasons for why a normal, crying, newborn will clear its own airway. ■ Review with the head of the maternity, what the current protocol is for babies who do need suctioning and what equipment is used. Suggest that a mucus “bulb” (ear) syringe, may be the cheapest, most effective and least traumatic to use for this purpose.
<p>Not enough staff or personnel time to assist with breastfeeding initiation, considering number of deliveries and other procedures scheduled immediately after birth. Prescribed duration of skin-to-skin contact (at least 30 minutes) is of special concern.</p>	<ul style="list-style-type: none"> ■ Ask key staff to reassess which procedures are necessary immediately after birth. Reorganize “standing orders” to allow time for immediate contact and breastfeeding for mothers who have chosen to breastfeed. For example, review with staff the 5 Steps of the WHO “Warm Chain” recommendations for newborn care that include “immediate drying, skin-to-skin contact, breastfeeding, and postponing weighing and bathing”. ■ Reinforce the positive aspects of this change: time savings, no need to warm infant up, minimal separation of the mother and infant etc. ■ Arrange for staff to be taught how to examine the baby right on the mother’s chest. ■ Arrange for a voluntary breastfeeding counsellor to help mothers to breastfeed right after birth, if staff is too busy. The mother and baby can be left by themselves, part of the time, to get to know each other, while the staff continues its work. ■ If space in labour and delivery is needed right away for another birth, determine if staff can move mother and baby to a nearby empty room and have nurse do charting and exam there, if necessary.
<p>Mother is too tired after delivery to feed infant.</p>	<ul style="list-style-type: none"> ■ Explain that this is often a misconception. If the mother is given her baby to hold, and encouraged, she will almost always become engaged. ■ Arrange to have a breastfeeding support person help her. ■ Ensure that breastfeeding mothers receive instruction during pregnancy about the importance of early feeds and the fact that mother and baby usually remain alert during this period.

Concerns	Solutions
<p>The beds in the delivery room are too narrow. If the infant is placed with the mother (who may be very tired) and there is not constant supervision, the infant may fall.</p>	<ul style="list-style-type: none"> ■ Place the infant on the mother's chest. Elevate the mother's head with pillow, blanket or even her own clothing. If there is danger of the infant falling from a narrow bed, consider wrapping the mother and baby together, lightly, with a sheet or cloth. ■ Alternatively, roll the mother on her side and tuck the newborn next to her to breastfeed.
<p>Need to monitor mothers and babies -- therefore need light, personnel, equipment.</p>	<ul style="list-style-type: none"> ■ Ask that delivery room staff consider clustering procedures, for example, assessing maternal and infant condition and vital signs all at the same time and then leaving mother and infant alone.
<p>If the delivery room is cold, it is too chilly for immediate breastfeeding and the baby must be transferred either to the nursery or mother's room for the first feeding.</p>	<ul style="list-style-type: none"> ■ Review with staff the 5 Steps of the WHO "Warm Chain" recommendations (see Step 4 above). ■ Show staff, by using a thermometer under the baby's arm, that skin-to-skin contact with the mother provides enough heat to keep baby warm. ■ If the delivery room is cold, consider whether it is possible to raise the temperature.
<p>Perinatal personnel think that breastfeeding within 30 to 60 minutes after birth is a lower priority than other procedures.</p>	<ul style="list-style-type: none"> ■ Briefly review with the staff the key research on WHY the very early first breastfeeds are linked to ongoing breastfeeding success (i.e., baby is awake, alert state in first hour, baby's keen sense of smell and crawling reflexes, mother's readiness in first hour, etc.). ■ Convince delivering physicians to routinely suggest to mothers "Let's get you started with breastfeeding right now". ■ Ask the staff responsible to add "time of breastfeeding initiation" to the baby's chart. ■ Make sure that the physiologic and psychological advantages of early breastfeeding are stressed during staff training. When labour and delivery staff are trained, emphasize their critical link to breastfeeding management and that the first hour is a very important and special time in this connection.

The Ten Steps to Successful Breastfeeding Summary of experiences

STEP 5: Show mothers how to breastfeed and maintain lactation even if they should be separated from their infants.

Actions necessary to implement the step

- Train staff on milk-expression techniques and safe handling and storage of breast milk.
- Designate staff time for individual or group counselling of mothers on breastfeeding management and maintenance of lactation when mother and baby are separated.
- Designate areas for mothers to breastfeed and for milk expression and milk storage. Purchase equipment (e.g. milk-storage containers, cups and spoons).
- Facilitate sleeping accommodations that allow mothers to stay with their babies if hospitalised. Likewise, allow healthy breastfed babies to stay with hospitalised breastfeeding mothers.

STEP 5: Show mothers how to breastfeed and maintain lactation even if they should be separated from their infants.

Common concerns and solutions

Concerns	Solutions
<p>In hospitals where the postpartum stay is very short or staffing is minimal, there's very little time for counselling.</p>	<ul style="list-style-type: none"> ■ Emphasize counselling during prenatal period. ■ Reassign nursery staff to do counselling. ■ If minimal time is available for individual counselling, arrange that most of the instruction is provided through group classes. ■ Require that hospital staff members observe at least one breastfeed before discharging each mother/baby pair. ■ Use volunteers to make rounds and provide advice. Arrange to train volunteers and provide them with guidelines concerning their roles and any restrictions. ■ Have breastfeeding education handouts available after delivery. ■ Have the staff arrange to show videos to reinforce proper breastfeeding techniques if the time for classes or bedside instruction is limited.
<p>Reluctance on the part of staff to provide breastfeeding counselling because of lack of competence.</p>	<ul style="list-style-type: none"> ■ Provide short instruction sheets concerning what advice to give for common breastfeeding problems. ■ Post a list of staff members that have completed breastfeeding practicums. Encourage other health personnel that ask for their assistance to watch as these experienced staff members give mothers advice. ■ Make sure an integral part of training includes clinical experience in working with breastfeeding mothers and dealing with common problems.
<p>Lack of understanding among staff of the importance of breastfeeding in the immediate postpartum period and the problems caused by inaccurate or inconsistent messages.</p>	<ul style="list-style-type: none"> ■ In discussions with staff, emphasize the importance of patient-centred care and the role breastfeeding education plays in this connection. ■ Encourage trainers, first, to conduct focus groups with nursing staff on what they were taught and why they do what they do, and then to tailor training to address identified problems.
<p>Fear on the part of staff and mothers of wet-nursing and use of stored breast milk for feeding other babies because of HIV transmission.</p>	<ul style="list-style-type: none"> ■ Wet nursing and using breast milk from other mothers is acceptable in some settings and not acceptable in others. Local formative research will show whether or not mothers will choose these as alternative feeding methods.

Concerns	Solutions
	<ul style="list-style-type: none"> ■ Expressed breast milk from a donor will need to be heat treated per most current WHO recommendations. ■ Generally wet nursing is no longer encouraged as a feeding option, although there are exceptions to this in the case of a family member who is known to be HIV negative.
Lack of milk storage area and equipment.	<ul style="list-style-type: none"> ■ No sophisticated equipment is needed for milk storage. Only a refrigerator and clean collection containers for expressed milk are required. ■ Milk storage may not be needed if mothers have day-and-night access to their hospitalised infants for breastfeeding.
Healthy infants will get sick if kept with their mothers when their mothers become sick and are admitted to the hospital.	<ul style="list-style-type: none"> ■ Offer information regarding the protective effects of breastfeeding and the health risks to newborns if <u>not</u> kept with their mothers and breastfed.
Mothers who are sick in the hospital will not be able to take care of their newborn infants who room in with them.	<ul style="list-style-type: none"> ■ Ask the staff to evaluate this problem case by case. Perhaps a relative or friend will need to room-in to care for the infant in some situations.

The Ten Steps to Successful Breastfeeding Summary of experiences

STEP 6: Give newborn no other food or drink other than breast milk unless medically indicated.

Actions necessary to implement the step

- Examine routine policies concerning the use of breast-milk substitutes. Make sure they conform with the WHO/UNICEF list of “acceptable medical reasons for supplementation” (should be included in hospital policy, see Step # 1).
- Arrange that small amounts of breast-milk substitutes be purchased by the hospital for use if medically indicated.
- Store breast-milk substitutes and related equipment and supplies out of sight.
- Develop policies that facilitate early breastfeeding of low-birth-weight infants and infants delivered by C-section, when there are no medical contraindications (can be included in hospital policy, see Step # 1).

Ensure that adequate space and equipment is available for milk expression and storage (see Step # 5)

STEP 6: Give newborn no other food or drink other than breast milk unless medically indicated.

Common concerns and solutions

Concerns	Solutions
Staff members or mothers worry that mothers' milk is insufficient for babies in the first few hours or days after birth because of delay in the "true milk" coming in.	<ul style="list-style-type: none"> ■ Make sure that staff and mothers are provided information about the sufficiency and benefits of colostrums and the fact that nothing else is needed (e.g. water, tea, or infant formula) in addition to breast milk. Include the fact that it is normal for a baby's weight to drop during the first 48 hours.
Staff members or mothers fear that babies will become dehydrated or hypoglycaemic if given only breast milk.	<ul style="list-style-type: none"> ■ Establish a literature review committee and present findings related to this issue at a staff meeting. ■ Make sure that staff members are reminded of the signs that babies are getting all they need from breastfeeding, and encourage them to pass on this information to mothers who are worried that their milk is insufficient. ■ Consider arranging for brief in-service training sessions to demonstrate how to assess the effectiveness of a breastfeed and give nurses supervised practice in making their own assessments. ■ Remove glucose water from the unit, so it is more difficult to use routinely.
Mothers request supplements.	<ul style="list-style-type: none"> ■ Arrange for mothers to be informed during the prenatal and early postpartum period concerning the problems that arise from supplementation.
Some mothers are too malnourished to breastfeed.	<ul style="list-style-type: none"> ■ Make sure that staff members realize that even malnourished mothers produce enough milk for their infants if their infants feed on demand. ■ In cases where the family provides food for the mother while she is in the hospital, use the opportunity to inform family members about the importance of sound nutrition for the mother and inexpensive, nutritious dietary choices.
The counselling and support necessary to achieve exclusive breastfeeding is too expensive.	<ul style="list-style-type: none"> ■ Stress that costs will be more than offset by savings to the hospital when purchase, preparation and provision of breast-milk substitutes is minimized. Emphasize that savings will also accrue from reduction in neonatal infections, diarrhoea etc.
Medications are being given to the mother that are considered contraindications to breastfeeding.	<ul style="list-style-type: none"> ■ Ensure that staff members are familiar with the list of acceptable medical reasons for supplementation that are included in the revised Annex to the Global Criteria for the Baby-friendly Hospital

Concerns	Solutions
	<p>Initiative and as Handout 4.5 in Session 4 of this course.</p> <ul style="list-style-type: none"><li data-bbox="740 349 1378 450">■ Ask the pharmaceutical department to prepare a list of drugs that are compatible and incompatible with breastfeeding.
Mothers will feel they have been denied something valuable if distribution of samples or discharge packs is discontinued.	<ul style="list-style-type: none"><li data-bbox="740 472 1369 636">■ Consider replacing samples of breast-milk substitutes with a "breastfeeding pack", which includes information on breastfeeding and where to get support and may include samples of products that don't discourage breastfeeding.

The Ten Steps to Successful Breastfeeding: Summary of experiences

STEP 7: Practice rooming-in – allow mothers and infants to remain together – 24 hours a day.

Actions necessary to implement the step

- Make needed changes in physical facility. Discontinue nursery for normal newborns. Make adjustments to improve comfort, hygiene, and safety of mother and baby.
- Require and arrange for cross training of nursery and postpartum personnel so they all have the skills to care for both baby and mother (see Step # 2).

Institute individual or group education sessions for mothers on mother-baby postpartum care. Sessions should include information on how to care for baby who is rooming-in.

STEP 7: Practice rooming-in – allow mothers and infants to remain together – 24 hours a day.

Common concerns and solutions

Concerns	Solutions
<p>It is difficult to supervise the condition of a baby who is rooming-in. In the nursery one staff member is sufficient to supervise a number of babies.</p>	<ul style="list-style-type: none"> ■ Assure staff that babies are better off close to their mothers, with the added benefits of security, warmth, and feeding on demand. “Bedding-in”, if culturally acceptable, provides the best situation for gaining all these benefits and eliminates the need to purchase bassinets or cots. Mothers can provide valuable assistance when their infants are rooming-in or bedding-in, alerting staff if problems arise. ■ Stress that 24-hours supervision is not needed. Periodic checks and availability of staff to respond to mothers’ needs are all that is necessary.
<p>Mothers need to get some rest after delivery (especially at night) and babies still need to eat. Especially after caesarean sections, mothers need time to recuperate. Babies should be fed breast-milk substitutes during this period.</p>	<ul style="list-style-type: none"> ■ Ask staff to assure mothers that by “rooming-in” they are doing the best for their babies, that not much extra work is involved, and that health workers are available in the unit to assist them if needed. ■ Ask staff to discuss with mothers the fact that the more babies are with them the more they’ll understand what is normal and abnormal and how to provide good care. It is best to practice being with their babies (even during the night) while still in the hospital, when staff is around to help if necessary. ■ Suggest to the staff that after good breastfeeds mothers may even sleep better when their babies are with them. ■ Make sure that staff knows how to help mothers who have had Caesarean sections choose breastfeeding techniques and positions that are comfortable and effective. ■ If regional or local anaesthesia is used during Caesarean sections, early breastfeeding will be less of a problem. However, a mother who has had general anaesthesia can breastfeed as soon as she is conscious if a staff member supports her.
<p>Infection rates will be higher when mothers and babies are together than in a nursery.</p>	<ul style="list-style-type: none"> ■ Stress that the danger of infection is less when babies remain with their mothers than when in the nursery and exposed to more caretakers. ■ Provide staff with data that show that with rooming-in and breastfeeding, infection rates are lower, for example, from diarrhoeal disease, neonatal sepsis, otitis media, and meningitis.

Concerns	Solutions
<p>If visitors are allowed in the rooming-in wards, danger of infection and contamination will increase. In situations where visitors are allowed to smoke, it is a health hazard to mother and baby. Some mothers feel they need to entertain their visitors and that they will have time for their babies after discharge.</p>	<ul style="list-style-type: none"> ■ Emphasize that babies receive immunity to infection from colostrum, and that studies show infection is actually less in rooming-in wards than in nurseries. ■ To support mothers further in doing the best for their babies, limit visiting hours and the number of visitors, and prohibit smoking.
<p>The rooms are too small.</p>	<ul style="list-style-type: none"> ■ No need to have bassinets for infants. No extra space is necessary for “bedding-in”.
<p>Babies will fall off the mothers’ beds.</p>	<ul style="list-style-type: none"> ■ Emphasize that newborns don’t move. If mothers are still concerned, arrange for the beds to be put next to the wall or, if culturally acceptable, for the beds to be put in pairs, with mothers keeping their babies in the centre.
<p>Full rooming-in, without more than half hour separations, seems unfeasible because some procedures and routines need to be performed on the babies outside their mothers’ rooms.</p>	<ul style="list-style-type: none"> ■ Study these procedures well. Some are not needed (e.g. weighing baby before and after breastfeeding.) Other procedures can be performed in the mother’s room. ■ Review advantages to mother and time saved by physician when he examines the infant in front of the mother.
<p>Private patients feel they have the privilege to keep their babies in nurseries and feed them breast-milk substitutes, receive expert help from nursery staff etc.</p>	<ul style="list-style-type: none"> ■ Whatever is best for public patients is also best for private patients. ■ Consider pilot projects to “test” rooming-in in private as well as public wards.
<p>Some private hospitals make money from nursery charges and thus are reluctant to disband these units.</p>	<ul style="list-style-type: none"> ■ Explore the compensatory savings from rooming-in due to less frequent use of breast-milk substitutes, less staff time for bottle preparation and nursery care, less infant illness etc. ■ Consider continuing to charge the same fees when the nursery is disbanded, reallocating the charges for mother/baby care on the wards.
<p>Babies more easily kidnapped when rooming-in than in the nursery.</p>	<ul style="list-style-type: none"> ■ Suggest to the staff that they ask mothers to request that someone (e.g. other mothers, family members, or staff members) watch their babies if they go out of the room. ■ Mothers need to know that there is <u>no</u> reason a baby should be removed without the mother’s knowledge.

The Ten Steps to Successful Breastfeeding Summary of experiences

STEP 8: Encourage breastfeeding on demand.

Actions necessary to implement the step

- Introduce rooming-in (see Step # 7).
- Examine routine policies concerning infant procedures (e.g. blood drawing, physical examination, weighing, bathing, circumcision, cleaning of rooms etc.) that separate mother and baby; conduct the procedures on the ward, whenever possible.

Ensure that staff training includes the definition and benefits of on-demand feeding and key messages concerning this issue that mothers should receive during breastfeeding counselling (see Step # 2).

STEP 8: Encourage breastfeeding on demand.

Common concerns and solutions

Concerns	Solutions
<p>On-demand feeding is good, but does not provide enough milk for the baby. Colostrum is insufficient and supplementation is necessary.</p>	<ul style="list-style-type: none"> ■ Remind staff that the infant’s stomach capacity is 10 - 20 ml at birth and the quantity of colostrum is physiologically matched.
<p>In situations where rooming-in is not practised, it saves on staff time and effort if babies are fed in the nursery instead of taking babies to mothers to breastfeed at unpredictable times.</p>	<ul style="list-style-type: none"> ■ Consider rooming-in, which will take less staff time than keeping babies in the nursery and feeding them breast-milk substitutes or transporting them back and forth for breastfeeding.
<p>When babies are taken out of the rooms for exams, lab tests, and measurement procedures this interferes with feeding on demand.</p>	<ul style="list-style-type: none"> ■ Encourage physicians to examine babies in mothers’ rooms. Emphasize that it is a time-saver since mothers’ questions can be answered and any education provided at the same time. Stress that patient satisfaction also increases as a result. ■ Arrange for staff to complete other procedures in mothers’ rooms, when feasible (e.g. the weighing scale might be wheeled from room to room). ■ Ask the staff to try to schedule after feedings procedures that must be performed outside the rooms, or allow mothers to accompany their babies so they can breastfeed when required. ■ Inform the staff that babies are not to be supplemented while they are away for procedures. If necessary, mothers should be called to breastfeed.
<p>Visiting hours that are too long or unrestricted interfere with breastfeeding on demand. Mothers may be embarrassed to breastfeed in front of visitors, may be too busy entertaining visitors, or may be too exhausted afterwards to feed their babies.</p>	<ul style="list-style-type: none"> ■ Shorten visiting hours or limit them (i.e. 2 visitors per patient or only immediate family and grandparents). ■ Arrange for the staff to provide mothers with signs they can place on their doors (if they have private rooms) to ask that they not be disturbed if resting or feeding their babies. ■ Ask instructors in prenatal classes to emphasize the importance of limited visiting hours to allow more time for mother/baby learning, feeding and rest.

The Ten Steps to Successful Breastfeeding Summary of experiences

STEP 9: Give no artificial teats or pacifiers.

Actions necessary to implement the step

- Examine routine policies. Hospital policies should:
 15. Discourage mothers or family members from bringing pacifiers from outside for their babies' use.
 16. Prohibit use of bottles and teats or nipples for infant feeding within the hospital.
 17. Provide guidance for use of alternative feeding methods, for example, use of cups and spoons if breast-milk substitutes are used.

Purchase supplies (e.g. cups, syringes, spoons) for use in feeding breast-milk substitutes to infants (without using teats or bottles) in cases where there are acceptable medical reasons for supplementation (see Step # 5).

STEP 9: Give no artificial teats or pacifiers.

Common concerns and solutions

Concerns	Solutions
<p>When infants are upset, pacifiers will help quiet them. Also, infants may not be hungry, but still need to suck.</p>	<ul style="list-style-type: none"> ■ Babies may cry for a variety of reasons. Ask staff to explore alternatives to pacifiers (e.g. encouraging mother to hold baby, offering the breast, checking for soiled diaper), possibly through a group discussion.
<p>The nursing staff and/or mothers do not believe that pacifier use causes any problems.</p>	<ul style="list-style-type: none"> ■ Make sure that staff and mothers are educated concerning problems with pacifier use (e.g. interferes with oral motor response involved in breastfeeding, easily contaminated). ■ Establish an ad hoc committee to review the literature and make a presentation to the administrative and medical staff on issues related to pacifier use. ■ Post a notice visible to both staff and patients -- “no more pacifiers for breastfed infants” -- and list the reasons why. ■ If the mother requests a pacifier, have staff discuss with her the problems it may cause. Consider asking her to sign a written informed consent form that discusses the risks of nipple confusion, impaired milk supply and contamination. ■ In settings where contamination of pacifiers can lead to diarrhoea and other illness, it is best to encourage calming the bay in other ways or to use a mother’s or family member’s washed finger as a pacifier.
<p>Pacifiers are provided free of charge for mothers requesting them.</p>	<ul style="list-style-type: none"> ■ Calculate the savings to the hospital from not buying pacifiers or artificial teats. ■ Establish a policy stating that the hospital will not supply free pacifiers and mothers, if they wish to use them, must bring their own.
<p>Infants may aspirate if fed by cup.</p>	<ul style="list-style-type: none"> ■ Provide the staff with examples (through video, slides, or visit) of infants being successfully fed by cup in other health facilities. ■ Emphasize the feasibility and safety of cup feeding.
<p>Purchasing cups, syringes, and spoons may be expensive.</p>	<ul style="list-style-type: none"> ■ Special types of cups, syringes and spoons are not necessary. They just need to be clean.

The Ten Steps to Successful Breastfeeding

Summary of experiences

STEP 10: Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic.

Actions necessary to implement the step

- Work with key hospital staff to identify hospital and community resources for breastfeeding mother support.
- Make sure that the hospital provides follow-up support for breastfeeding, for example, through a postnatal clinic, and schedules the first visit within a week of discharge and insures that breastfeeding is assessed and any problems are identified and addressed.
- Explore ways to link mothers with community-level breastfeeding support resources, such as health centres, MCH clinics, and breastfeeding support groups (NGOs such as local La Leche League groups). One means would be to send a discharge/referral slip to the community clinic where the mother can go for postnatal care and at the same time tell the mother where she can receive breastfeeding support.
- Consider arranging for mother-support groups to make contact with mothers while still in the hospital. For example, volunteers can offer refreshments to mothers on the wards and at the same time provide information on where to go for breastfeeding support. Volunteers can help conduct hospital lactation clinics, give breastfeeding advice on wards etc.
- Consider asking hospital personnel to organize breastfeeding support groups for which, at least initially, hospital staff serve as facilitators. Arrange training for hospital staff on organizing and facilitating mother-support groups and consider similar training for other potential mother-support group leaders.

Make information (verbal and written) on breastfeeding support resources available to mother, family and community.

STEP 10: Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic.

Common concerns and solutions

Concerns	Solutions
<p>The hospital staff members are unfamiliar with good sources of breastfeeding support to which they can refer mothers.</p>	<ul style="list-style-type: none"> ■ Form an ad hoc group with a representative from the hospital, the local MCH clinics, and any mother support groups that can be identified. Ask groups to develop a resource list and make it available to hospital staff, local physicians and mothers. ■ Encourage local mother-support groups to meet occasionally at the hospital, which can provide space and publicity free of charge. ■ Arrange for community breastfeeding support groups to provide a mini-training session to the staff on the services they offer.
<p>There is a mistaken impression that health professionals aren't supposed to be involved in organizing or facilitating mother-support groups.</p>	<ul style="list-style-type: none"> ■ If lay leaders are not available to organize and facilitate mother-support groups, explore using health staff for this purpose. If health staff members are involved, they need to be trained not to direct or dominate the groups, but to facilitate sharing and support among mothers. As lay leaders come forward, they can receive additional training and take over the group work.
<p>Lay group leaders and their members may provide incorrect information.</p>	<ul style="list-style-type: none"> ■ Make sure that potential mother-support group leaders are provided with adequate training and that the mothers themselves receive accurate prenatal and postnatal education on breastfeeding from the hospital staff.
<p>Hospital administrators and staff already have too much to do; organizing support groups would be a serious imposition.</p>	<ul style="list-style-type: none"> ■ Explore whether knowledgeable volunteer groups or individuals can help in, or even take full responsibility for, this activity.
<p>Mother-to-mother support doesn't work in the local culture.</p>	<ul style="list-style-type: none"> ■ Explore culturally appropriate support mechanisms for breastfeeding mothers. ■ For example: <ul style="list-style-type: none"> ■ Involving traditional or religious organizations for women in providing breastfeeding or more general mother support. ■ Reinforcing the extended family role in supporting breastfeeding by providing updated information on breastfeeding to family members most likely to provide advice.

Concerns	Solutions
Post-discharge hospital follow-up is too costly. Home visits are either impossible or only possible in emergencies or for very high-risk patients. Phone contact is either not possible or, at best, unreliable.	<ul style="list-style-type: none"><li data-bbox="740 315 1353 412">■ Examine what follow-up mechanisms are most feasible in the local situation, considering constraints. For example:<li data-bbox="740 432 1310 499">■ Arranging for breastfeeding assessment and support during postnatal visits.<li data-bbox="740 519 1353 586">■ Arranging home visits at least for the mother at highest risk of breastfeeding failure.<li data-bbox="740 607 1394 703">■ Referring mothers to community health centres, outreach workers, and/or volunteer groups that <u>can</u> provide support.

Session 5: Becoming “baby-friendly” in settings with high HIV prevalence

Note: This alternate Session 5 has been prepared for use in settings with high HIV prevalence. This version of the Session is identical to Session 5, except that additional content concerning HIV and infant feeding have been added, wherever useful.

Since the launch of the Baby-friendly Hospital Initiative in 1991 the growing HIV/AIDS pandemic, especially in sub-Saharan Africa and parts of Asia, has raised concerns and questions about promoting protecting and supporting breastfeeding where HIV is prevalent. These concerns arise because breastfeeding is known to be one of the routes for infecting infant and young children with HIV. This session, revised in order to address these concerns, provides guidance on how to implement the Ten Steps to Successful Breastfeeding and the BFHI in settings where HIV is a major public health concern.

Objective

At the conclusion of this session, participants will be able to:

- Develop a plan for building staff enthusiasm and consensus for working to become “Baby-friendly”.
- Identify actions necessary to implement at least four of the “Ten steps to successful breastfeeding” in their health facilities.
- Identify at least five common concerns related to instituting the Ten Steps and practical solutions for addressing them.
- Identify at least five challenges to baby-friendly hospital promotion in a setting where there is a high prevalence of HIV/AIDS and how to overcome them.
- Describe the usefulness/need for counselling to help the HIV-infected mother to choose an infant feeding method of her choice which best suits her personal setting and circumstances.

Duration

Presentation/discussion: 20-30 minutes

Discussion and brainstorming: 15 minutes

Introduction to group work: 5 minutes

Group work: 30-45 minutes

Presentations and discussion: 40-55 minutes

Total: 2 to 2½ hours

Teaching methods

Small group work
Presentations in plenary
Discussion

Preparation for session

- Review the WHO document, *Evidence for the ten steps to successful breastfeeding*. Geneva, World Health Organization, 1998.
http://www.who.int/nutrition/publications/infantfeeding/evidence_ten_step_eng.pdf

Read the section on “combined interventions” (pp. 93-99) that gives evidence that the *Ten Steps* should be implemented as a package. Also review the WHO/UNICEF document, *Global Strategy for Infant and Young Child Feeding*. Geneva, Switzerland, 2003.
http://www.who.int/nutrition/publications/infantfeeding/gf_infant_feeding_eng.pdf.

Read in particular sections 30, 31 and 34, pages 13-19, which focus on the importance of continuing to support the *Baby-friendly Hospital Initiative* and implementation of the *Ten Steps to Successful Breastfeeding*, as well as monitoring and reassessing facilities that are already designated.

- If possible, the group work for this session should be scheduled as the last activity for the first day of the course. Since it involves active participation by course participants, it is more likely to keep their attention than a lecture-type session at the end of an intensive day. If this plan is followed, the group reports and discussion can come first on the schedule the next day, giving participants the flexibility to do some final work, if necessary, to prepare for their reports the evening before.
- The group work for this session should focus only on four to five of the *Ten Steps* since there is not enough time during either the group work or the reporting and discussion period to adequately cover the concerns and solutions for all Ten Steps. Preparation for this session should include an analysis, by the trainers, of which steps tend to be most difficult to implement and thus on which it would be most important to focus in a session of this type. Indications of which steps need the most work may come from trainers’ experience with BFHI assessments and training. A review of the forms participants were asked to complete prior to arriving at the course, indicating what difficulties they have had, or think they will have, in assisting their institutions to become Baby-friendly, considering HIV prevalence, should also be helpful. The steps most needing consideration in light of HIV and infection of infants and young children with HIV are Steps 1, 2, 3, 5, 6 and 10. Steps 3 and 5 may present the greatest challenges in that they may require changes in care routines and protocols. Step 10, community follow-up support, poses challenges for the original BFHI and will continue to be a challenge for BFHI in light of HIV.
- Countries (or hospitals) which have already implemented BFHI but who are now rethinking their strategies in light of providing care to HIV infected women, may need guidance by a master trainer who is experienced with BFHI in HIV-prevalent areas. It may be helpful to guide decision-making on which steps should be tackled in-group work based on what other countries have found most challenging in implementing BFHI in HIV-prevalent areas.

- Before the session, the trainers also need to organize the working groups and assign facilitators to each of them. Consideration should be given during the formation of working groups to insuring that each group includes some participants who are good at problem solving and supportive of BFHI. Facilitators should be made aware that their role is not to “lead” the working groups but rather to make sure the groups understand the assignment, offer help if the group is having difficulty, and make suggestions if there are important issues the group hasn’t considered. The facilitators should review the sections of Handout 5.6 HIV which deal with the steps the groups will be working on, as they may provide ideas on important points the facilitators should mention, if they are not discussed, during the group work or the group reports.
- Once the four or five Steps have been selected for the group work, it would be useful to make enough copies of the Handout 5.5 HIV “sample sheet” for each of the groups, with one of the Steps and wording for the Step inserted on each of the four or five sheets.
- Consider whether participants should be provided with copies of the completed Handout 5.5 HIV sheets developed by the working groups, so they can refer to them for ideas as they implement their action plans on their return home. The completed sheets can be copied “as is” or, if there is time, the course secretary can be asked to prepare typed versions for copying.
- Review Handout 5.6 HIV and decide whether to distribute it at the end of the session. If the Course will be given a number of times, consider adapting this Handout to the country situation, eliminating concerns and solutions that aren’t applicable and possibly adding others.

Training materials

Handouts

5.1 HIV Slide Presentation Handout – Session 5 HIV

5.2 HIV The ten steps to successful breastfeeding for settings where HIV is prevalent: Issues to consider

5.3 HIV Applying the Ten Steps in facilities with high HIV prevalence 5.4 HIV The ten steps to successful breastfeeding for settings where HIV is prevalent: Actions, concerns and solutions – Sample Worksheet

5.5 HIV The ten steps to successful breastfeeding for settings where HIV is prevalent: Summary of experiences

Slides/Transparencies

5.1-13 HIV The ten steps to successful breastfeeding for settings where HIV is prevalent –Issues to consider

5.14-15 HIV The ten steps to successful breastfeeding for settings where HIV in prevalent: Actions, concerns and solutions – Worksheet, Example for Step 1: Have a written breastfeeding policy (blank copy)

5.16-21 HIV The ten steps to successful breastfeeding for settings where HIV in prevalent: Example for Step 7: Practice rooming-in

The website featuring this Course contains links to the slides and transparencies for this session in two Microsoft PowerPoint files. The slides (in colour) can be used with a laptop computer and LCD projector, if available. Alternatively, the transparencies (in black and white) can be printed out and copied on acetates and projected with an overhead projector. The transparencies are also reproduced as the first handout for this session, with 6 transparencies to a page.

Note: The slides for the basic Session 5 have been integrated with the additional HIV-related slides and included all together in both the slide and transparency files for this session, for ease of use.

References

Coutsoudis A, Pillay K, Spooner E, et al. Influence of infant feeding patterns on early mother-to-child transmission of HIV-1 in Durban, South Africa: a prospective cohort study. South Africa, Vitamin A Study Group. *Lancet*, 1999, 354(9177): 471-76.

Coutsoudis A, Pillay K, Kuhn L, et al. Method of feeding and transmission of HIV-1 from mothers-to-children by 15 months of age: prospective cohort study. South Africa, Vitamin A Study Group. *AIDS*, 2001, 15(3) 379-87.

DeCock KM, Fowler MG, Mercier E, et al. Prevention of mother-to-child HIV transmission in resource poor countries. *JAMA*, 2000, 238 (9):175-82.

LINKAGES. *World Linkages, Zambia. Pamphlet LINKAGES country programs series*. LINKAGES Project: Academy for Educational Development, Washington DC, 2000.
<http://www.linkagesproject.org/>

LINKAGES. *Breastfeeding and HIV/AIDS Frequently Asked Questions (FAQ Sheet 1)* LINKAGES Project: Academy for Educational Development, Washington DC, updated 2001.
<http://www.linkagesproject.org/>

LINKAGES. *Replacement Feeding*. Spotlight, Academy for Educational Development, Washington D.C., April 2004. <http://www.linkagesproject.org/>

Madzima, R. Baby friendly Hospital Initiative in the context of HIV and AIDS: Africa Region. Geneva, World Health Organization, 2003.

Ministry of Health. Zambia's National Policy Framework on Infant feeding practices and HIV /AIDS Transmission from Mother-to Child, Final Working Draft, Lusaka, Zambia, 1998.

UNICEF/UNAIDS/WHO. Review of HIV transmission through breastfeeding: HIV transmission through breastfeeding: a review of available evidence. New York, UNICEF, 2003.

US Committee for UNICEF, *Barriers and Solutions to the Global Ten Steps to Successful Breastfeeding*: Washington D.C., 1994. (To obtain a copy, send \$9.00 US to Baby-Friendly USA, 327 Quaker Meeting House Road, E. Sandwich, MA 02537, USA (Tel. 508-888-8092, Fax. 508-888-8050, e-mail: info@babyfriendlyusa.org, <http://www.babyfriendlyusa.org>).

Walley J, Whitter S, Nicholl A. Simplified antiviral prophylaxis with or and without artificial feeding to reduce mother-to-child transmission of HIV in low and middle income countries: modelling positive and negative impact on child survival. *Med Sci Monit*, 2001, 7(5): 1043-1051.

Thermal Protection of the Newborn: a practical guide. Geneva, World Health Organization, 1997.
http://whqlibdoc.who.int/hq/1997/WHO_RHT_MSM_97.2.pdf

Evidence for the ten steps to successful breastfeeding. Geneva, World Health Organization, 1998.
http://www.who.int/nutrition/publications/infantfeeding/evidence_ten_step_eng.pdf

HIV in Pregnancy: A Review, Geneva, World Health Organization, 1999.
http://whqlibdoc.who.int/hq/1999/WHO_CHS_RHR_99.15.pdf

New data on the prevention of mother-to-child transmission of HIV and their policy implications: conclusions and recommendations. WHO Technical Consultation on Behalf of the UNFPA/UNICEF/WHO/UNAIDS Interagency Task Force Team on Mother-to-Child transmission of HIV, Geneva, 11-13 October 2000, Geneva. World Health Organization. Geneva, 2001.
http://www.who.int/reproductive-health/publications/new_data_prevention_mtct_hiv/text.pdf

Piwoz, Ellen G. *What are the options? Using Formative Research to Adapt Global Recommendations on HIV and Infant Feeding to the Local Context.* Geneva, World Health Organization, 2004.
<http://whqlibdoc.who.int/publications/2004/9241591366.pdf>

WHO/AED. *HIV and infant feeding counselling tools.* Geneva, World Health Organization and Washington D.C., The LINKAGES Project, 2003.

WHO/UNICEF. *Global Strategy for Infant and Young Child Feeding.* Geneva, World Health Organization, 2003.
http://www.who.int/nutrition/publications/infantfeeding/gf_infant_feeding_eng.pdf

UNAIDS, FAO, UNHCR, UNICEF, WHO, WFP, World Bank, UNFPA, IAEA. *HIV and infant feeding: Framework for priority action.* Geneva, World Health Organization, 2003.
http://www.who.int/nutrition/publications/hiv_infantfeed_framework_en.pdf

UNICEF. Report for the meeting on Baby-friendly Hospital Initiative (BFHI) in the context of HIV/AIDS, Gaborone, June 2nd – 4th 2003.

WHO/UNICEF/UNAIDS/UNFPA. *HIV and infant feeding: guidelines for decision-makers.* Geneva, World Health Organization, 2003.
http://www.who.int/nutrition/publications/HIV_IF_decision_maker.pdf

WHO/UNICEF/UNAIDS/UNFPA. *HIV and Infant Feeding: A Guide for Health Care Managers and Supervisors.* Geneva, World Health Organization, 2003.
http://www.who.int/nutrition/publications/HIV_IF_guide_for_healthcare.pdf

WHO. Consultation on *Nutrition and HIV/AIDS in Africa, Evidence, lessons, and recommendations for action* – ICC, Durban, South Africa, April 2005.
http://www.who.int/nutrition/topics/consultation_nutrition_and_hivaids/en/index.html

WHO. *Regional Consultation on Nutrition and HIV/AIDS, Evidence, lessons and recommendations for action in South-East Asia,* Bangkok, Thailand, 8-11 October 2007.
http://www.who.int/nutrition/topics/hiv_regional_consultation_bangkok/en/index.html

WHO HIV and Infant Feeding Technical Consultation Consensus Statement. Held on behalf of the Inter-agency Task Team (IATT) on Prevention of HIV Infections in Pregnant Women, Mothers and their Infants, Geneva, October 25-27, 2006. World Health Organization, 2007.
http://www.who.int/child_adolescent_health/documents/pdfs/who_hiv_infant_feeding_technical_consultation.pdf

Outline

Content	Trainer's Notes
<p>1. Discussion on building consensus for “Becoming Baby-friendly”</p>	<p>Mention that a mini-version of the slides is reproduced in Handout 5.1 HIV and included in the participants’ folder.</p> <p>Indicate that finding ways of balancing BFHI, its original aims and goals with the threats from HIV and AIDS is crucial for the successful implementation of the Global Strategy for infant and young child feeding, especially as countries develop comprehensive policies. It is also important for the facilities to continue protecting, promoting and supporting breastfeeding while helping HIV-positive mothers to implement the infant feeding methods that they chose. Introduce the “Ten steps to successful breastfeeding in the context of HIV”, using slides 5.1-9 HIV. Go through the 10 steps briefly, discussing what key issues administrators and policy makers need to consider. Pass out Handout 5.2 HIV as a reference.</p>
<ul style="list-style-type: none"> ■ Discussion and brainstorming session on strategies for gaining support within the health facility for becoming Baby-friendly and drafting a policy and plan of action. <ul style="list-style-type: none"> ■ The importance of “thinking strategically” ■ How best to gain support within the participants’ culture and institutional administrative system for a policy and plan of action ■ How best to convince those staff members likely to be most resistant ■ The special concerns about HIV and breastfeeding promotion in this setting 	<p>Discussion: 15 minutes</p> <p>Discuss the importance for health facility administrators and policy-makers of “thinking strategically” about how best to gain support within the health facility for making the changes necessary to become baby-friendly. (Note: if the facilities are already baby-friendly, concentrate on how support can be gained for adjusting the policy and BFHI approach to be most appropriate in facilities where mothers who may be HIV infected receive care).</p> <p>Ask the participants to brainstorm concerning how, within their culture and institutional administrative system, they can best work to gain the support needed to develop a breastfeeding policy and plan (or to adjust the existing policy and plan in the light of high HIV prevalence).</p> <p>Before the session starts, review the “Actions” suggested for “Step 1” in Handout 5.5 HIV and, if necessary, mention the strategies suggested under the first four bullets as examples, to help get the participants thinking about what would work best in their own settings.</p> <p>Record the suggestions made by the participants either on a flip chart or board or on Transparencies 5.14-15 HIV. Emphasize that these strategies are part of the Actions needed to</p>

Content	Trainer's Notes
	<p>successfully implement “Step 1” in a way that is most likely to have full administrative and staff support.</p> <p>Briefly mention the importance of developing hospital infant feeding policies that provide guidance for applying the Ten Steps in facilities with high HIV prevalence. Pass out Handout 5,3 HIV, which can provide the initial guidance for developing policies appropriate to the participants’ particular settings and challenges. Emphasize that the Ten Steps remain “as is”, but that it is essential that policies provide additional guidance for implementing each of them, and that both this Handout and Handout 5.2 HIV can provide useful technical information to use in their development. Also mention the policy developed for Rusape Hospital in Zimbabwe serving a population with high risk of HIV as another example – Handout 4.7 HIV distributed during Session 4-HIV.</p>
<p>2. Group work on implementing the Ten Steps</p> <ul style="list-style-type: none"> ■ Small group work to identify actions necessary to implement four or five of the most challenging of the Ten Steps in the context of HIV and address common concerns. 	<p><i>Introduction: 5 minutes</i></p> <p>Describe the group work, explaining that participants will be divided into four or five small groups, with each group assigned one of the Ten Steps that experience has shown can be a challenge, as health facilities work to become baby-friendly in the context of HIV.</p> <p>(Note: Steps 1, 2, 3, 5, 6 and 10 are most challenging in the context of HIV. Steps 3 and 5 in particular present the challenges in that they may require changes in care routines and protocols. Step 10, community follow-up support, posed challenges for the original BFHI and will continue to be a challenge for BFHI in light of HIV. Thus the Steps to use in group work could be selected from among these, unless the facilitators feel that other Steps should be chosen because they are particularly challenging in general for the health facilities represented).</p> <p>For the step it is assigned, each group should identify: 1) common concerns or problems related to instituting the step and possible solutions, and then, if they have time, 2) actions necessary to implement the step.</p> <p>(the worksheet for each step starts with “Actions necessary to implement the step”, but ask the groups first to identify “Concerns and Solutions” and record them on the back of the worksheet, as</p>

Content	Trainer's Notes
	<p>some of the “Solutions” may be useful to include in their list of “Actions”).</p> <p>If it seems necessary to use an example to show participants how to complete the group work, display transparencies showing how to complete Handout 5.2 HIV for one of the steps that will not be assigned to the working groups.</p> <p>Transparencies (5.16-20 HIV) have been prepared using “Step 7” (rooming-in) as an example, including concerns and solutions related to HIV. Then present Transparency 5.21 HIV that provides an example of “Actions” that could be taken to implement this Step in settings with high HIV prevalence. If necessary, the trainer can prepare other transparencies, focusing on a different step. Use the transparencies to explain how to complete the worksheet for both sections on “Concerns and Solutions” and “Actions”.</p> <p>Emphasize that during this session the groups won't be making “Action plans” for their own health facilities, but will be working to identify common concerns and solutions and then, if they have time, possible actions to address them. Later in the course the participants from the same facility will work together to develop specific “Action plans” that identify the activities needed for BFHI in their own facilities.</p> <p>Ask if there are any questions.</p> <p><i>Group work: 30-45 minutes</i></p> <p>Divide participants into four or five working groups, assigning a facilitator to each group, if possible. Assign each working group one of the Ten Steps to work on. Distribute one of the Handout 5.4 HIV worksheets (with “Concerns and Solutions” on one side and “Actions” on the other) to each group, with the Step and the wording for the Step that the group will be working on inserted at the top.</p> <p>Ask each group to record its work on the worksheet and summarize results on transparencies or flip charts, and to assign one of its members to present the work during the reporting and discussion period to follow.</p>

Content	Trainer's Notes
<p>3. Presentations and discussion</p> <ul style="list-style-type: none"> ■ Presentation of group work. ■ Discussion of issues raised after each group's presentation. 	<p><i>Presentations and discussion: 40-55 minutes</i></p> <p>Ask each group to present its work. Lead a discussion on each presentation, making sure major points are covered.</p> <p>Collect the group work on each step at the end of the session. If feasible and not too costly, make copies and distribute them to all participants before the course is over. In addition, include copies of this group work in the course report.</p> <p>Distribute Handout 5.5 HIV, which summarizes experience in a number of countries at the end of the session as a "reference document". Explain that since the material in this handout comes from many countries not all the concerns and solutions will be relevant. The handout may be helpful, however, as its review of experience worldwide in implementing the Ten Steps in settings where HIV is prevalent may give participants some new and creative ideas concerning what to do in their own situations.</p>

Handout 5.1 (HIV)

Presentation for session 5 (HIV): Becoming “baby-friendly” in settings with high HIV prevalence

The ten steps to successful breastfeeding for settings where HIV is prevalent: Issues to consider

STEP 1: Have a written breastfeeding policy that is routinely communicated to all health care staff

- The hospital policy should promote, protect and support breastfeeding irrespective of the HIV infection rate within the population.
- The policy will need to be adapted so that providing appropriate support in the context of HIV is addressed.
- The policy should require the training of staff in HIV and infant feeding counselling.

Slide 5.1 (HIV)

STEP 1 (continued): Have a written breastfeeding policy that is routinely communicated to all health care staff

- The policy should include a recommendation that all pregnant and lactating women be offered or referred for HIV testing & counselling.
- The policy should require that the hospital offer counselling for HIV-positive pregnant women about feeding options.
- The policy should stress that full compliance with the “Code of Marketing of Breast-milk Substitutes” or a similar national measure is essential.
- The issue of confidentiality should be addressed in the policy.
- If there is a national level policy on infant feeding in the context of HIV the hospital policy should incorporate the national guidelines.

Slide 5.2 (HIV)

Step 2: Train all health care staff in skills necessary to implement this policy.

- Staff training needs may vary from facility to facility.
- If the hospital is already a baby-friendly hospital, then emphasis should be placed on refresher training related to HIV and infant feeding.
- If the facility has never implemented the BFHI then BFHI training will need to include guidance related to HIV and infant feeding, or additional training on this topic will need to be organized, requiring more time and training resources.
- Training may require a multi-sectoral training team from nutrition, HIV/AIDS and other MCH sections.
- If there are no master trainers available locally with experience in implementing BFHI in settings where HIV-positive mothers receive care, external trainers may be needed.

Slide 5.3 (HIV)

Step 3: Inform all pregnant women about the benefits and management of breastfeeding.

- WHO/UNAIDS recommends that pregnant women be offered VCT during antenatal care.
- Where VCT services do not yet exist, this will involve additional equipment, space, reagents, and staff time.
- Mothers may be HIV-infected but not know their status. They need to know their HIV status in order to make informed infant feeding choices.
- Pregnant women who are HIV-positive should be counselled about the benefits and risks of locally appropriate infant feeding options so they can make informed decisions on infant feeding.

Slide 5.4 (HIV)

Step 3 (continued): Inform all pregnant women about the benefits and management of breastfeeding.

- Mothers have to weigh the balance of risks: Is it safer to exclusively breastfeed for a period of time or to replacement feed, given the possibility of illness or death of a baby if not breastfed.
- Counsellors must be knowledgeable about the local situation relative to what replacement feeds are locally appropriate. They should be able to help mothers assess their own situations and choose feeding options.
- Counsellors need to recognize that the social stigma of being labelled as being “HIV-positive or having AIDS” may affect some mothers’ decisions on infant feeding.
- Counselling should be individual and confidential.

Slide 5.5 (HIV)

Step 4: Help mothers initiate breastfeeding within a half-hour of birth.

- All babies should be well dried, given to their mothers to hold skin-to-skin and covered, whether or not they have decided to breastfeed.
- Staff may assume that babies of HIV infected mothers must be bathed and even separated from their mothers at birth.
- They need to understand that HIV is not transmitted by mothers while they are holding their newborns - mothers need to be encouraged to hold and feel close and affectionate towards their newborn babies.
- HIV-positive mothers should be supported in using the feeding option of their choice. They shouldn’t be forced to breastfeed, as they may have chosen to replacement feed without knowledge of the delivery room staff.

Slide 5.6 (HIV)

Step 5: Show mothers how to breastfeed and maintain lactation even if they should be separated from their infants.

- Staff members will need to counsel mothers who have chosen to breastfeed (regardless of their HIV status) on how to maintain lactation by manual expression, how to store their breast milk safely, and how to feed their babies by cup.
- They will also need to counsel HIV-positive mothers on locally available feeding options and the risks and benefits of each, so they can make informed infant feeding choices.
- Staff members should counsel HIV-positive mothers who have chosen to breastfeed on the importance of doing it exclusively and how to avoid nipple damage and mastitis.
- Staff members should help HIV-positive mothers who have chosen to breastfeed to plan and implement early cessation of breastfeeding.

Slide 5.7 (HIV)

Step 5 (continued): Show mothers how to breastfeed and maintain lactation even if they should be separated from their infants.

- Staff members will need to counsel HIV-positive mothers who have chosen replacement feeds on their preparation and use and how to care for their breasts while waiting for their milk to cease and how to manage engorgement.
- Mothers should have responsibility for feeding while in the hospital. Instructions should be given privately.
- Breast milk is particularly valuable for sick or low birth weight infants. Heat treating breast milk is an option.
- If there is a breast-milk bank, WHO guidelines will need to be followed for heat treatment of breast milk. Wet nursing is an option as well, if the wet nurse is given proper support.
- Staff members should try to encourage family and community support of HIV-positive mothers after discharge, but will need to respect the mothers' wishes in regards to disclosure of their status.

Slide 5.8 (HIV)

Step 6: Give newborn infants no food or drink other than breast milk unless medically indicated.

- Staff members should find out whether HIV-positive mothers have made a feeding choice and make sure they don't give babies of breastfeeding mothers any other food or drink.
- Being an HIV-positive mother and having decided not to breastfeed is a medical indication for replacement feeding.
- Staff members should counsel HIV-positive mothers who have decided to breastfeed on the risks if they do not exclusively breastfeed. Mixed feeding brings both the risk of HIV from breastfeeding and other infections.
- Even if many mothers are giving replacement feeds, this does not prevent a hospital from being designated as baby-friendly, if those mothers have all been counselled and offered testing and made genuine choices.

Slide 5.9 (HIV)

Step 7: Practice rooming in — allow mothers and infants to remain together — 24 hours a day.

- In general it is best that HIV-positive mothers be treated just like mothers who are not HIV-positive and provided the same post partum care, including rooming-in/bedding-in. This will be best for the mothers and babies and will help protect privacy and confidentiality concerning their status.
- HIV-positive mothers who have chosen not to breastfeed should be counselled as to how to have their babies bedded in with them, skin-to-skin, if they desire, without allowing the babies access to the breast. General mother-to-child contact does not transmit HIV.
- Staff members who are aware of an HIV-positive mother's status need to take care to ensure that she is not stigmatised or discriminated against. If confidentiality is not insured, mothers are not likely to seek the services and support they need.

Slide 5.10 (HIV)

Step 8: Encourage breastfeeding on demand.

- This step applies to breastfeeding mothers regardless of their HIV status.
- Babies differ in their hunger. The individual needs of both breastfed and artificially fed infants should be respected and responded to.

Slide 5.11 (HIV)

Step 9: Give no artificial teats or pacifiers.

- This step is important regardless of mothers' HIV status and whether they are breastfeeding or replacement feeding.
- Teats, bottles, and pacifiers can carry infections and are not needed, even for the non-breastfeeding infant. They should not be routinely used or provided by facilities.
- If hungry babies are given pacifiers instead of feeds, they may not grow well.
- HIV-positive mothers who are replacement feeding need to be shown ways of soothing other than giving pacifiers.
- Mothers who have chosen to replacement feed should be given instructions on how to cup feed their infants and the fact that cup feeding has less risk of infection than bottle-feeding.

Slide 5.12 (HIV)

Step 10: Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic.

- The facility should provide information on MTCT and HIV and infant feeding to support groups and others providing support for HIV-positive mothers in the community.
- The facility should make sure that replacement-feeding mothers are followed closely in their communities, on a one-to-one basis to ensure confidentiality. In some settings it is acceptable to have support groups for HIV-positive mothers.
- HIV-positive mothers are in special need of on-going skilled support to make sure they continue the feeding options they have chosen. Plans should be made before discharge.
- The babies born to HIV-positive mothers should be seen at regular intervals at well baby clinics to ensure appropriate growth and development.

Slide 5.13 (HIV)

**The Ten Steps to successful breastfeeding for settings where HIV is prevalent:
Actions, concerns and solutions - worksheet
Example**

STEP 1: Have a written breastfeeding policy that is routinely communicated to all health care staff

Actions necessary to implement the step

Slide 5.14 (HIV)

STEP 1: Have a written breastfeeding policy that is routinely communicated to all health care staff

Common concerns and solutions

Concerns	Solutions

Slide 5.15 (HIV)

**The ten steps to successful breastfeeding for settings where HIV is prevalent :
Actions, concerns and solutions - worksheet
Example**

STEP 7: Practice rooming-in.

Common concerns and solutions

Concern	Solutions
It's difficult to supervise the condition of a baby who is rooming-in. In the nursery one staff member is sufficient to supervise several babies.	<ul style="list-style-type: none"> ■ Assure staff that babies are better off rooming-in with their mothers, with the added benefits of security, warmth, and feeding on demand. ■ Stress that 24-hour supervision is not needed. Periodic checks and availability of staff to respond to mothers' needs are all that are necessary.

Slide 5.16 (HIV)

Concern	Solutions
Infection rates will be higher when mothers and babies are together than when they are in a nursery.	<ul style="list-style-type: none"> ■ Stress that danger of infection is reduced when babies remain with mothers than when in a nursery and exposed to more caretakers. ■ Provide staff with data showing that infection rates are lower with rooming-in and breastfeeding, for example, from diarrhoeal disease, neonatal sepsis, otitis media, and meningitis.

Slide 5.17 (HIV)

Concern	Solutions
Babies will fall off their mothers' beds.	<ul style="list-style-type: none"> ■ Emphasize that newborns don't move. ■ If mothers are still concerned, arrange for beds to be put next to the wall or, if culturally acceptable, for beds to be put in pairs, with mothers placing babies in the centre.

Slide 5.18 (HIV)

Concern	Solutions
Full rooming-in, without more than half-hour separations, seems unfeasible because some procedures need to be performed on the babies outside their mothers' rooms.	<ul style="list-style-type: none"> ■ Study these procedures well. Some are not needed. (Example: weighing baby before and after breastfeeding.) Other procedures can be performed in the mothers' rooms. ■ Review advantages to mother and time saved by physician when infant is examined in front of mother.

Slide 5.19 (HIV)

Concern	Solutions
A mother in the postnatal ward may be seen by others while she is replacement feeding her infant, and confidentiality will be hard to protect.	<ul style="list-style-type: none"> ■ For an HIV-positive mother who chooses replacement feeding it is likely others will notice, but she has been counselled and has already decided how she will make this change in her life even after she has left the maternity. ■ For an HIV-positive mother who chooses breastfeeding, she should be supported to exclusively breastfeed and there should be no obvious difference in her care.

Slide 5.20 (HIV)

**The ten steps to successful breastfeeding for settings where HIV is prevalent :
Actions, concerns and solutions - worksheet
Example**

STEP 7: Practice rooming-in.

Actions necessary to implement the step

- Make needed changes in physical facility. Discontinue nursery. Make adjustments to improve comfort, hygiene, and safety of mother and baby.
- Require and arrange for cross training of nursery and postpartum personnel so they all have the skills to take care of both baby and mother.
- Institute individual or group education sessions for mothers on mother-baby postpartum care. Sessions should include information on how to care for babies who are rooming-in.
- Protect privacy and confidentiality of a mother's HIV status by providing the same routine care to ALL mothers and babies, including rooming-in/bedding-in, so that no one is stigmatised or set apart as different.

Slide 5.21 (HIV)

The ten steps to successful breastfeeding for settings where HIV is prevalent: Issues to consider ¹

Step 1: Have a written breastfeeding policy that is a routine communicated to all health care staff.

- The hospital policy should promote, protect and support breastfeeding irrespective of the HIV infection rate within the population.
- The hospital policy will need to be adapted so that providing appropriate support in the context of HIV is addressed.
- The hospital policy should include a recommendation that all pregnant and lactating women be offered or referred for HIV testing and counselling.
- The hospital policy should require that the hospital offer counselling for HIV-positive pregnant women about feeding options.
- The hospital policy should require the training of staff in HIV and infant feeding counselling.
- The issue of confidentiality should be addressed in the policy. Confidentiality is a challenge in settings where many staff members handle patient charts, where storage of charts is not secure, and where shortage of staffing interferes with supervision and quality assurance in care.
- The hospital policy should stress that full compliance with the “Code of Marketing of Breast-milk Substitutes” or similar national measures is essential.
- There may or may not be a national level policy on infant feeding in the context of HIV. Where one exists, the hospital policy should incorporate the national guidelines.

¹ See the Session on “Integrated care for the HIV-positive Woman and her Baby” and the discussion and exercise on implementing BFHI in settings with high HIV prevalence in *HIV and Infant Feeding Counselling: A Training Course*, pp. 45-56, for further information on this topic. Points marked with an asterisk (*) are adapted from this document.

Step 2: Train all health care staff in skills necessary to implement this policy.

- Staff training needs may vary from facility to facility.
- If the hospital is already a BF hospital, then the breastfeeding knowledge and skills should be in place and the issues of adapting for a high HIV prevalence will be foremost in planning for refresher training. If the facility has never implemented the BFHI then BFHI training will need to include guidance related to HIV and infant feeding in the context of BFHI, or additional training on HIV and infant feeding will need to be organized. This will require more time and training resources.
- Staff needs to be trained on such topics as how HIV is transmitted from mother to child and how to prevent it, voluntary counselling and testing (VCT), the risks and benefits associated with various feeding options, how to help mothers make informed choices, how to teach mothers to prepare and give replacement feeds, how to maintain privacy and confidentiality, and how to minimize the “spill over” effect, causing mothers who are HIV negative or of unknown status to choose replacement feeding when breastfeeding has less risk.
- Training may require a multi-sectoral training team from nutrition, HIV/AIDS and other MCH sections.
- If there are no master trainers available locally with knowledge and experience in implementing BFHI in settings where HIV-positive mothers receive care, external trainers may need to be figured into the training budget.

Step 3: Inform all pregnant women about the benefits and management of breastfeeding.

- This step will involve considerable thought and planning for implementation. Pregnant women need general information on HIV and breastfeeding and those that are HIV-positive need additional counselling and assistance.
- WHO/UNAIDS recommends that pregnant women be offered voluntary testing and counselling (VCT) during antenatal care.
- Where VCT services do not yet exist in the antenatal/MCH service setting, their organization will involve additional equipment, space, reagents, and staff time, including for specialized training.
- Mothers may be infected but not know their HIV status. They need to know their HIV status in order to make informed infant feeding choices on the most feasible infant feeding method.
- Pregnant women who are HIV-positive should be counselled about the benefits and risks of locally appropriate infant feeding options so they can make informed decisions on infant feeding before they deliver.
- Mothers have to weigh the balance of risks: Is it safer to exclusively breastfeed for a period of time or to replacement feed, given the risk of illness or death of a baby if not breastfed?
- Staff members who serve as infant-feeding counsellors must be knowledgeable about the local situation relative to what replacement feeds are locally appropriate. They should also be able to help mothers in assessing their own situations to choose the best feeding options for themselves.

- Counsellors need to recognize that other factors such as the social stigma of being labelled as being “HIV-positive” or “having AIDS” may affect some mothers’ decisions on infant feeding. Some mothers may become victims of physical abuse or ostracized if they are suspected of being HIV-positive because they are known to have gone for testing or are not breastfeeding.
- Any discussion of feeding options should be only with HIV-positive mothers. Counselling should be individual and confidential. No group discussion on feeding options is recommended.

Step 4: Help mothers initiate breastfeeding within a half hour of birth.

- All babies should be well dried, covered and given to their mothers to hold skin-to-skin after delivery, whether or not they have decided to breastfeed.
- Staff may assume that babies of HIV-positive mothers must be bathed and even separated from their mothers at birth. They need to understand that HIV is not transmitted by a mother while she is holding her newborn (after drying and covering) and that, in fact, an HIV-positive mother needs to be encouraged to hold and feel close and affectionate towards her newborn baby.
- The HIV-positive mothers may either breastfeed or not, depending on the choices they have made. VCT should be made available to help them make these choices. HIV-positive mothers should be supported in using the infant feeding option of their choice.
- Mothers should not be forced to breastfeed, since they may have chosen to replacement feed without the knowledge of the delivery room staff.

Step 5: Show mothers how to breastfeed, and how to maintain lactation even if they should be separated from their infants.

- Staff members will need to counsel mothers who have chosen to breastfeed (regardless of their HIV status) on how to maintain lactation by expression, how to store their breast milk safely, and how to feed their babies by cup.
- They will also need to counsel HIV-positive mothers on locally available feeding options and the risks and benefits of each, so they can make informed infant feeding choices.
- Staff members should counsel HIV-positive mothers who have chosen to breastfeed on the importance of doing it exclusively, to avoid the increased risks of HIV that come with mixed feeding, and how to use good techniques to avoid nipple damage and mastitis.
- Staff members should help HIV-positive mothers who have chosen to breastfeed to plan and implement early cessation of breastfeeding.
- Staff members will need to counsel mothers who are HIV-positive and who have chosen locally appropriate replacement feeding methods, on their preparation and use. They will also need to teach mothers about breast care while waiting for their breast milk to cease and about managing engorgement at home. Mothers should have responsibility for preparing feeds and cup feeding their infants while in the hospital, with staff assistance. The importance of giving instructions privately and confidentially should be emphasized.
- Breast milk is particularly valuable for sick or low birth weight infants. Expressing and heat treating breast milk is an option for HIV-positive mothers and they will need help to do this.*

- If there is a breast milk bank, WHO guidelines will need to be followed for heat treatment of breast milk.
- If a mother has decided to use a wet nurse who is HIV-negative, the staff will need to discuss breastfeeding with the wet nurse and help her to get started or to relactate.*
- Staff members should try to encourage family and community support of HIV-positive mothers after discharge, but will need to respect the mothers' wishes in regards to disclosure of their status.

Step 6: Give newborn infants no food or drink other than breast milk unless medically indicated.

- Staff members should find out whether HIV-positive mothers have decided to breastfeed or replacement feed and make sure they don't give babies of breastfeeding mothers any other food or drink.
- Being an HIV-positive mother and having decided not to breastfeed is a medical indication for replacement feeding.
- Staff members should counsel HIV-positive mothers on the risks if they do not exclusively breastfeed or replacement feed their babies. Mixed feeding brings with it both the risk of HIV transmission from breastfeeding and the risk of other infections and malnutrition.
- Even if many mothers are giving replacement feeds, this does not prevent a hospital from being designated as baby-friendly, if those mothers have all been counselled and offered testing and made genuine choices.*

Step 7: Practice rooming in – allow mothers and infants to remain together – 24 hours a day.

- In general it is best that HIV-positive mothers be treated just like mothers who are not HIV-positive and provided the same post partum care, including rooming-in/bedding-in. This will be best for the mothers and babies as it will help with bonding and will also help protect privacy and confidentiality concerning their status.
- HIV-positive mothers who have chosen not to breastfeed should be counselled as to how to have their babies bedded in with them, skin-to-skin, if they desire, without allowing the babies access to the breast. General mother-to-child contact does not transmit HIV.*
- Staff members who are aware of an HIV-positive mother's status need to take care to ensure that she is not stigmatised or discriminated against. If privacy and confidentiality are not insured, mothers are not likely to seek the services and support they need for optimal infant feeding.

Step 8: Encourage breastfeeding on demand.

- This step applies to breastfeeding mothers regardless of their HIV status.
- Babies differ in their hunger. The individual needs of both breastfed and artificially fed infants should be respected and responded to.*

Step 9: Give no artificial teats or pacifiers (also called dummies or soothers) to breastfeeding infants.

- This step is important regardless of mothers' HIV status and whether they are breastfeeding or replacement feeding. Teats, bottles and pacifiers can carry infections and are not needed, even for the non-breastfeeding infant and thus should not be routinely used or provided by facilities.*
- If hungry babies are given pacifiers instead of feeds, they may not grow well.*
- HIV-positive mothers who are replacement feeding need to be shown ways of soothing other than giving pacifiers.
- Mothers who have chosen to replacement feed should be given instructions on how to cup feed their infants and the fact that feeding by cup has less risk of infection than bottle-feeding.

Step 10: Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic.

- The facility should provide information on mother-to-child transmission of HIV and HIV and infant feeding to support groups and others providing support for HIV-positive mothers and their babies in the community.
- The facility should make sure that follow-up support exists for HIV-positive breastfeeding mothers in their communities. This may be in the form of support groups or individuals, home visiting, and other ways to ensure safe, optimal breastfeeding.
- The facility should make sure that HIV-positive mothers that have chosen to replacement feed are followed closely in their communities. This should be done on a one-to-one basis to ensure confidentiality and privacy. In some communities it is acceptable to have support groups for HIV-positive mothers.
- HIV-positive mothers are in special need of on-going skilled support to make sure they continue the feeding options they have chosen. Appropriate follow-up care plans should be prepared before they are discharged.
- The babies born to HIV-positive mothers need to be seen at regular intervals at well baby clinics to ensure appropriate growth and development.

Handout 5.3 HIV

Applying the Ten Steps in facilities with high HIV prevalence²

The “Ten Steps” for Successful Breastfeeding	Guidance on applying the “Ten Steps” in facilities with high HIV prevalence
Step 1: Have a written policy on breastfeeding that is routinely communicated to all health care staff.	Expand the policy to focus on infant feeding, including guidance on the provision of support for HIV positive mothers and their infants.
Step 2: Train all health care staff in skills necessary to implement this policy.	Ensure that the training includes information on infant feeding options for HIV-positive women and how to support them.
Step 3: Inform all pregnant women about the benefits and management of breastfeeding.	Where voluntary testing and counselling for HIV and PTMCT is available, counsel all pregnant women on the benefits of knowing their HIV status so that, if they are positive, they can make informed decisions about infant feeding, considering the risks and benefits of various options. Counsel HIV-positive mothers on the various feeding options available to them and how to select options that are acceptable, feasible, affordable, sustainable and safe. Promote breastfeeding for women who are HIV negative or of unknown status.
Step 4: Help mothers initiate breastfeeding within a half-hour of birth.	Place all babies in skin-to-skin contact with their mothers immediately following birth for at least an hour. Encourage mothers who have chosen to breastfeed to recognize when their babies are ready to breastfeed, offering help if needed. Offer mothers who are HIV positive and have chosen not to breastfeed help in keeping their infants from accessing their breasts.
Step 6: Give newborn infants no food or drink other than breast milk, unless medically indicated.	Counsel HIV positive mothers on the importance of feeding their babies exclusively by the option they have chosen (breastfeeding or replacement feeding) and the risks of mixed feeding (that is, giving both the breast and replacement feeds).

² The application of the Steps for facilities with high HIV prevalence provided in this handout has been developed to provide additional guidance for health care managers and staff working in high prevalence settings. Guidance has been prepared, taking account of the: *Report of a meeting on BFHI in the context of HIV/AIDS, Gaborone, June 2nd – 4th 2003*, sample infant feeding policies for settings with high HIV prevalence, and the Consensus Statement for the WHO HIV and Infant Feeding Technical Consultation, Geneva, October 25-27, 2006.

The “Ten Steps” for Successful Breastfeeding	Guidance on applying the “Ten Steps” in facilities with high HIV prevalence
Step 7: Practise rooming-in — allow mothers and infants to remain together — 24 hours a day.	Protect the privacy and confidentiality of mother’ HIV status by providing the same routine care to all mothers and babies, including rooming-in.
Step 8: Encourage breastfeeding on demand.	Address the individual needs of mothers and infants who are not breastfeeding, encouraging replacement feeding at least 8 times a day.
Step 9: Give no artificial teats or pacifiers (also called dummies or soothers) to breastfeeding infants.	Apply this step for both breastfeeding and non-breastfeeding infants.
Step 10: Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic.	Provide on-going support from the hospital or clinic and foster community support for HIV positive mothers to help them maintain the feeding method of their choice and avoid mixed feeding. Offer infant feeding counselling and support, particularly at key points when feeding decisions may be reconsidered, such as the time of early infant diagnosis and at six months of age. If HIV positive mothers are breastfeeding, counsel them to exclusively breastfeed for the first 6 months of life unless replacement feeding is acceptable, feasible, affordable, sustainable and safe for them and their infants before that time.

Handout 5.4 HIV

**The ten steps to successful breastfeeding
for settings where HIV is prevalent:
Worksheet: Concerns and solutions**

STEP ____:	
Concerns (list concerns, problems or challenges your maternity services face in implementing this Step).	Solutions (list possible solutions to each of the concerns, including both actions that have been successful and other approaches you think might be useful).

**The ten steps to successful breastfeeding
for settings where HIV is prevalent:
Worksheet: Actions necessary to implement the step**

STEP ____:

(list key actions you think are necessary to successful implement this Step within maternity services that do not yet follow the Step).

Handout 5.5 (HIV)

The ten steps to successful breastfeeding for settings where HIV is prevalent: Summary of experiences³

STEP 1: Have a written breastfeeding policy that is routinely communicated to all health care staff.

Actions necessary to implement the step

- Identify a core group of people who will provide the primary source of support for developing a hospital breastfeeding policy and plan and addresses the issues of infant feeding in the presence of maternal HIV infection. The core group may include officers from various MOH units including Nutrition, MCH, Primary Health Care, RH, HIV/AIDS programs and others. Many countries have revised their national breastfeeding policy to a broader *infant and young child feeding policy* that encompasses HIV infected mothers.
- Ask the core group to develop a rough first draft of a new infant feeding policy that follows national breastfeeding and young child nutrition guidelines; National Code of Marketing Breast-milk Substitutes; and national HIV and/or MTCT guidelines. If an infant feeding policy exists, plan for making the necessary changes to reflect support for breastfeeding and also enabling mothers of known HIV status to make informed decisions about the safest infant feeding option for them. Work with the group as they develop the first draft, providing whatever guidance is needed.
- Establish a multi-disciplinary in-house committee or task force to whom the policy and plan will be presented for input. Include representatives from all appropriate units or departments. When the policy and plan are discussed, ask committee members to identify barriers to implementing specific policies, as well as potential solutions. If necessary, form smaller working groups to work on specific barriers or problems.
- Finalize and display written hospital breastfeeding policy and work with designated staff to initiate changes needed to implement it.
- Policy may include guidelines on topics such as:
 - How the “Ten steps to successful breastfeeding” will be implemented in the context of HIV and in coordination with other existing national guidelines.
 - Maternal nutrition issues that should be addressed.
 - Breastfeeding of low-birth-weight infants and infants delivered by C-section.
 - Purchase and use of breast-milk substitutes.

³ This handout summarizes experiences from a variety of countries.

- Acceptable medical reasons for supplementation (see WHO/UNICEF list — and refer to the balance of risks for HIV-positive mothers of NOT breastfeeding versus replacement feeding).
- The importance of providing voluntary testing and counselling (VCT) for HIV to pregnant women.
- The importance of providing individual counselling and education on replacement feeding to HIV-positive mothers who choose not to breastfeeding, rather than group education, which violates confidentiality.
- Hazards of bottle-feeding education. How to provide counselling for women who choose to formula-feed without lessening hospital support for breastfeeding.
- Code related issues (e.g., prohibiting donations of free and low-cost [under 80% of retail price] breast-milk substitutes, distribution of samples of breast-milk substitutes, gifts or coupons, use of materials distributed by formula companies). Many countries are choosing to strengthen their national codes in the face of HIV.
- Prohibiting the practice, if it exists, of giving names of pregnant or recently delivered mothers to companies producing or distributing breast-milk substitutes.
- Storing any necessary hospital supplies of breast-milk substitutes, bottles, etc., out of view.
- Allocating staff responsibilities and time related to the implementation of the breastfeeding policy.
- Work with designated staff to develop plans for monitoring implementation of the policy and the effects of the initiative on staff knowledge and practices, patient satisfaction and quality of care. Publicize positive results to reinforce support for changes made, and use information concerning problem areas to assist in determining whether further adjustments are needed.

STEP 1: Have a written breastfeeding policy that is routinely communicated to all health care staff.

Common concerns and solutions

Concerns	Solutions
<p>Considerable evidence documents that some health administrators and care providers are uncertain about promotion of breastfeeding in the face of HIV. They have heard that breastfeeding is a major route of mother to child transmission (MTCT) and are not well informed on basics facts of HIV and infant feeding.</p>	<ul style="list-style-type: none"> ▪ Strengthened infant feeding policy in the face of HIV and training in the implementation of this policy is essential. Provide information on MTCT.
<p>Resistance to introducing new breastfeeding policies. Concern that policies will be inappropriate, dangerous to infant health, difficult to implement considering other tasks, etc.</p>	<ul style="list-style-type: none"> ▪ Provide the latest global guidelines and policies on infant feeding and HIV such as the WHO/UNAIDS/UNICEF global recommendations on HIV and infant feeding. See websites such as: http://www.who.int/nutrition/topics/hivaids/en/index.html http://www.who.int/child_adolescent_health/topics/prevention_care/child/nutrition/hivif/en/index.html http://www.unicef.org/aids/ http://www.linkagesproject.org/publications/index.php http://www.linkagesproject.org/technical/infantfeeding.php http://www.unaids.org/publications/documents/mtct/infantpolicy.pdf. <p>Provide scientific evidence of the soundness of the new policies through presentations such as one on “The Scientific Basis of the Ten Steps” or shorter session on key concerns (see Session 4) and the balance of risks of breastfeeding versus replacement feeding in resource poor settings (see <i>Review of HIV transmission through breastfeeding</i>. UNICEF/UNAIDS/WHO, 2003).</p> <p>Organize a task force to develop the policies, including representatives of all the departments that will be affected. If necessary, provide orientation for the task force so it is well informed about potential policies, their scientific basis, and how they will affect hospital practices before beginning work.</p> <ul style="list-style-type: none"> ▪ Arrange for presentations by administrators or department heads from hospitals that have model breastfeeding policies or have key staff visit other institutions with good policies in place. ▪ As the policies are being developed, make sure that input is obtained from all influential parties, even if opposition is anticipated, so that plans can be made to address concerns identified. ▪ Present the new policies as the “current state of the

Concerns	Solutions
	<p>art” and highlight other hospitals in the country or region that have already successfully implemented the BFHI.</p> <ul style="list-style-type: none"> ▪ If resistance is high, make just a few changes at a time, starting with those for which support is greatest. Consider addressing just a few of the “steps” at a time to prevent staff from becoming overwhelmed.
<p>Economic concerns related to potential costs of policy changes (e.g. costs of conversion to rooming-in, loss of formula company support, cessation of free and low-cost supplies, refusal of donations of breast-milk substitutes for HIV-positive mothers).</p>	<ul style="list-style-type: none"> ▪ Work with key staff to identify both the costs and savings to hospital and larger health system that will result from the changes and weigh the trade-offs (see Session 6). ▪ Work with staff members so they fully understand that the balance of risks for donated formulas to mothers who cannot guarantee sanitary conditions and afford to continue to buy replacement feeds after donations are discontinued. ▪ Work with staff to understand the dangers of “spillover”⁴ to the community at large if free and low cost formula is made available to “some” mothers.

⁴ Spillover: a term used to designate the feeding behaviour of new mothers who either know that they are HIV-negative or are unaware of their HIV status – they do not breastfeed, or they breastfeed for a short time only, or they mix-feed, because of unfounded fears about HIV or of misinformation or of the ready availability of breast milk substitutes (HIV and infant feeding: Guidelines for decision makers, 2003).

The ten steps to successful breastfeeding for settings where HIV is prevalent: Summary of experiences

STEP 2: Train all health care staff in skills necessary to implement this policy.

Actions necessary to implement the step

- Identify who will be responsible for planning and implementing an on-going training program for breastfeeding and lactation management and on counselling on infant feeding and HIV including locally appropriate replacement feeding. Work with the designated individual or group to develop a training strategy which will include:
- Identifying who needs to be trained in departments providing maternal/infant services and what their training needs are (both knowledge and clinical skills).
- Identifying the types and content of training for each target group.
- Obtain existing training materials. Available courses include, for example:
 - *“Breastfeeding “Breastfeeding Promotion and Support in a Baby-friendly Hospital: A 20-hour Course for Maternity Staff”* (Section 3 of the revised BFHI documents), New York, UNICEF.
 - *“Breastfeeding Counselling: A Training Course”*. (40 hours) Geneva, World Health Organization, 1993.
 - *“Infant and Young Child Feeding Counselling: An Integrated Course”* (5 days). Geneva, World Health Organization, 2006.
 - Thomas E; Piwoz EG; World Health Organization; UNICEF; USAID *“HIV and Infant Feeding Counselling Tools”* (flipchart, take home flyers, reference guide and orientation guide). Geneva, World Health Organization, 2005/2008.
 - *“Integrating Counseling on HIV and Infant feeding into MCH and Community Services”*. Basic Course; MOH Zambia and LINKAGES Project (12 days).
 - *“Integrating Counseling on HIV and Infant feeding into MCH and Community Services, Training of Trainers for the Basic Course”*, MOH Zambia and LINKAGES Project (12 days).
 - *“Integrating Counselling on HIV and Infant feeding into MCH and Community Services, Comprehensive Counselling Course”*; MOH Zambia and LINKAGES Project (5 weeks).
 - *“Integrated BFHI and MTCT course for MCH and Community Services”*, Malawi. Basic Course, LINKAGES Malawi (12 days).
 - Other training materials developed within the country or region.
- Select appropriate training materials and make any necessary adaptations to them.
- Identify trainers with the help of appropriate government breastfeeding, nutrition, MCH, and HIV/AIDS authorities.
- Develop a training schedule, considering the need for initial training, refresher training and training of new staff, as well as for training of trainers.
- Allot the necessary budget and staff time.

STEP 2: Train all health care staff in skills necessary to implement this policy.

Common concerns and solutions

Concerns	Solutions
Little or no time for training.	<ul style="list-style-type: none"> ■ Reassess priorities. ■ Consider time saved by staff in the long run if breastfeeding problems as well as HIV transmission are prevented and health of infants improved, thus decreasing time and resources necessary for caring for sick infants and reducing the risks of mother to child transmission (MTCT). ■ Consider scheduling breastfeeding-related training, including training on infant feeding in the context of HIV, in conjunction with staff meetings or other on going training activities or integrating training into daily routines through apprenticeships or on-the-job training when appropriate. ■ Consider requiring staff to read selected materials or complete a self-guided course and then test their knowledge. Combine with clinical practice sessions and performance assessment. ■ Provide a resource collection where staff can borrow books, articles, and videos on breastfeeding, lactation management, and related topics.
Lack of faculty/trainers/resources	<ul style="list-style-type: none"> ■ Identify training resources. Contact national, regional, or international organizations such as UNICEF; WHO; IBFAN; LINKAGES, Wellstart and its Associate network; Institute of Child Health, University of London; La Leche League International, ILCA, WABA, etc., for assistance, if necessary (see list of addresses on page 5-36). ■ Consider initiating a training strategy in which key health staff members are first trained as trainers and then used to train the rest of the staff. Choose strong candidates to be the trainers, if possible including staff from the various service units and shifts. ■ Ask the training coordinator to identify good training videos already prepared or videotape training sessions and have new employees view the tapes. Supplement with clinical practice sessions.

Concerns	Solutions
<p>Staff members do not understand the importance of breastfeeding support nor the need for voluntary testing and counselling (VCT) or HIV and infant feeding counselling and support and thus see little need for training in this area.</p>	<ul style="list-style-type: none"> ■ Consider holding an orientation or advocacy session for staff before the training cycle begins. Introduce the hospital's breastfeeding policy and review evidence of the importance of breastfeeding support, linking the policies with increased breastfeeding and lowered morbidity and mortality and balance of risks for HIV-positive mothers to replacement feed in this setting. It may also be helpful to review the national (or hospital's) current rates of mother-to-child transmission of HIV. ■ Identify times when staff can gather for informal reviews of case studies of mothers with breastfeeding problems and how they were resolved. Follow by discussion on how to address similar situations in the future. ■ Identify times when staff can gather for informal reviews of case studies of mothers with replacement feeding problems and how they were resolved. Follow by discussion on how to address similar situations in the future. ■ Arrange for bulletin board displays or include items in newsletters featuring BFHI progress, new articles, letters from patients, results from surveys, etc. ■ Establish an employee HIV and infant feeding support program to increase the number of staff members with positive personal breastfeeding experiences.
<p>Stigmatisation and prejudice by health providers creates a barrier for mothers to learn their HIV status and from seeking the care they need (i.e. prevents mothers from seeking breastfeeding counselling, voluntary counselling and testing for HIV, and infant feeding counselling (BF/VCT/IF).</p>	<ul style="list-style-type: none"> ■ Training of health providers must address not only the basic facts about HIV generally and MTCT and infant feeding in particular, but it must allow the opportunity for staff to share their own fears and misunderstandings about HIV. ■ Training must include field experiences where they can visit VCT services, breastfeeding mothers, groups of people living with HIV/AIDS in order to become sensitised to the problem and to help them to become more understanding of mothers who are HIV-positive. ■ Training on HIV and infant feeding counselling must allow for experiential sessions wherein staff feel safe to air their own biases, misconceptions, prejudices, and fears. Only in this way will these not translate to care of mothers and babies.
<p>Health staff have poor knowledge and clinical skills on HIV in general, and on</p>	<ul style="list-style-type: none"> ■ Train staff on breastfeeding and the BFHI.

Concerns	Solutions
<p>prevention of mother-to-child transmission of HIV (PMTCT) and on breastfeeding and HIV, and infant feeding counselling.</p>	<ul style="list-style-type: none"> ■ Train staff on basic facts on HIV and on PMTCT. ■ Train staff on locally appropriate replacement feeding options. ■ Train staff on the balance of risks of breastfeeding versus replacement feeding in the mother's own setting.
<p>Attendance at training sessions is low or health staff members are pulled out of the training to go back to the unit.</p>	<ul style="list-style-type: none"> ■ Stress the importance of HIV and infant feeding counselling and support skills along with other areas of expertise and require attendance at training sessions. ■ Bring the training to staff on each shift. ■ Offer continuing education credits for the training or other incentives such as recognition for new skills. ■ Arrange for several hospitals to sponsor joint training in an attractive site. ■ Work with hospital management to insure that training is considered a priority.
<p>Hospital and its health staff members rely on funding from companies selling breast-milk substitutes for training activities, conference attendance, etc.</p>	<ul style="list-style-type: none"> ■ Convince staff of the hidden agenda of the formula industry and the moral issues involved in accepting its funding. In settings that are resource poor and hard hit by the HIV pandemic, families are even more financially compromised than in the past and household food security is very weak. ■ Calculate the cost to hospital and families of illnesses due to feeding breast-milk substitutes. ■ Search for alternative sources of funding.

List of training resources

Institute of Child Health
University of London
30 Guilford Street
London WCN 1EH
United Kingdom
Tel.: +44 171-242-9789
Fax: +44 171-404-2062

International Baby Food Action Network
(IBFAN)
P.O. Box 781
Mbabane
Swaziland
Tel: [268] 45006
Fax: [268] 44246

International Lactation Consultant
Association (ILCA)
1500 Sunday Drive, Suite 102
Raleigh, North Carolina, 27607, USA
Tel.: +1 919-861-5577
Fax: +1 919-787-4916
E-mail: info@ilca.org

La Leche League International
1400 N. Meacham Road
P.O. Box 4079
Schaumburg, IL 60173-4809
USA
Tel.: +1 847-592-7570
Fax: +1 847-969-0460

LINKAGES Project
Academy for Educational Development
1825 Connecticut Avenue, N.W.
Washington, DC. 20009
Website: <http://www.linkagesproject.org/>
(note: The LINKAGES Project ended
December 2006. Publications are still
available on the LINKAGES website)

Infant and Young Child Nutrition Project
PATH
1800 K Street, NW, Suite 800
Washington, DC 20006

UNICEF Headquarters
3 United Nations Plaza
44th Street Between 1st and 2nd,
New York, NY 10017
USA
Tel.: +1 212-326-7000
Fax: +1 212-887-7465
Website: <http://www.unicef.org/>

Wellstart International
E-mail: info@wellstart.org
Website: www.wellstart.org

World Alliance for Breastfeeding Action
PO Box 1200
19850 Penang, Malaysia.
Tel.: +60 4-658-4816
Fax: +60 4-657-2655
E-mail: waba@streamyx.com
Websites: <http://www.waba.org.my/>
www.waba.org.br

World Health Organization
Department of Nutrition for Health and
Development
20, Avenue. Appia
CH-1211 Geneva 27
Switzerland
Tel.: +41 22-791-3315
Fax: +41 22-791-4156
E-mail: nutrition@who.int
Website: <http://www.who.int/nutrition/en/>

World Health Organization
Department of Child and Adolescent
Health and Development
20, Avenue. Appia
CH-1211 Geneva 27
Switzerland
Tel.: +41 22-791-3281
Fax: +41 22-791-4853
E-mail: cah@who.int
Website:
http://www.who.int/child_adolescent_health/en/

The ten steps to successful breastfeeding for settings where HIV is prevalent: Summary of experiences

STEP 3: Inform all pregnant women about the benefits and management of breastfeeding.

Actions necessary to implement the step

- Insure routine scheduling of prenatal classes that cover essential topics related to breastfeeding and infant feeding in the context of HIV. Ask the staff to keep records of the classes held and their content.
- Review (or prepare) written guidelines for individual prenatal counselling to insure that key breastfeeding/infant feeding in the context of HIV topics are covered and time is allowed to address concerns of individual mothers. (*"HIV and Infant Feeding Counselling Tools"*, 2005, are available from the World Health Organization. These include a flipchart and take-home flyers that can be used as tools to help counsel HIV-positive women on feeding options).

Essential topics that are important to address during prenatal education and counselling include:

- benefits of breastfeeding;
- early initiation;
- importance of rooming-in (if new concept);
- importance of feeding on demand;
- how to assure enough milk;
- positioning and attachment;
- importance of exclusive breastfeeding;
- risks of artificial feeding and use of bottles and pacifiers;
- basic facts on HIV and prevention of mother-to-child transmission of HIV (PMTCT);
- voluntary testing and counselling (VCT) for HIV;
- locally appropriate replacement feeding options;
- balance of risks of breastfeeding versus replacement feeding in the mother's own setting.

(prenatal education should **not** include group education on formula preparation. HIV-positive mothers who have chosen replacement feeding should be given individualized instruction on preparation of the feed of their choice).

- determine if any special strategies are needed to encourage women to attend prenatal classes or counselling sessions (for example, holding late-evening classes for working mothers, providing special incentives for attendance, etc.);

- take away all literature and posters about bottle-feeding and promotion of breast-milk substitutes;
- ensure that formula companies do not provide breastfeeding promotion materials;
- discontinue distribution in prenatal clinics of samples of breast-milk substitutes or coupons.

STEP 3: Inform all pregnant women about the benefits and management of breastfeeding.

Common concerns and solutions

Concerns	Solutions
<p>Promotional materials are free from the formula industry. It's difficult to find replacement materials and the funds to purchase them.</p>	<ul style="list-style-type: none"> ■ Determine what promotional materials are available free or at low cost from the government, NGOs or other agencies. If there is a BFHI national authority, ask what materials it has available. ■ Pressure local and national health authorities to make materials available. ■ Ask the health facility staff to develop low-cost promotional materials with appropriate breastfeeding messages, adapting materials from elsewhere, when appropriate. ■ Seek other sources of support, including donations from local businesses and volunteer organizations to support the development and production of educational materials.
<p>There's no staff time in busy prenatal clinics for individual counselling or group sessions related to breastfeeding, voluntary testing and counselling and HIV and infant feeding counselling.</p>	<ul style="list-style-type: none"> ■ Convince staff of importance of such sessions. ■ Show how this will save time in the future, due to fewer breastfeeding and other infant feeding problems and reduction in levels of illness. ■ Seek volunteer help from local NGOs, mother-support groups, etc., for conducting classes or providing counselling. ■ Integrate breastfeeding and infant feeding material into other prenatal classes such as those on childbirth education, infant care, and nutrition.
<p>Promotional and educational materials are often not well adapted to different educational, cultural and language groups.</p>	<ul style="list-style-type: none"> ■ Ask the staff to produce or adapt promotional or educational materials to meet local needs, as necessary. ■ Form a network with other health facilities in the area and share materials or work together to develop them.
<p>Busy mothers are reluctant to spend time to receive information or instructions, or don't know the information is available.</p>	<ul style="list-style-type: none"> ■ Ask the staff to arrange group counselling while mothers are waiting to be seen. ■ Ask the receptionist or registrar at the health facility to encourage participation in breastfeeding classes.

Concerns	Solutions
	<ul style="list-style-type: none"> ■ Obtain support of clinical staff in assuring time allocation for counselling and stressing its importance during consultations. ■ Ask the staff to prepare written materials that mothers can take with them when they leave the health facility. Include breastfeeding guidelines, overview of the “Ten steps” and hospital breastfeeding support services, invitation/announcement of breastfeeding classes, list of mother-support groups and other community resources, etc. ■ For HIV-positive mothers, HIV and infant feeding education groups may not be appropriate. Provide mothers with a list of individual peer counsellors, including HIV-positive mothers who are trained as HIV and infant feeding counselling volunteers, and other community resources who will visit the HIV-positive mother in her home or where she wishes. ■ Hold an extra prenatal class in late evening for working women. ■ Arrange for a resource centre or area where mothers can look at or borrow breastfeeding-related books, articles, videos, or other materials, at their own convenience. ■ Hold a “breastfed baby parade” or a “beautiful breastfed baby contest” at a park, marketplace, or other public area. ■ Ask private practitioners to refer their clients to breastfeeding classes and other support services and, when appropriate, to HIV and infant feeding education support services.
<p>Pregnant mothers are afraid or unwilling to undergo voluntary testing and counselling (VCT). Therefore they are unable to made informed decisions about feeding options other than breastfeeding.</p>	<ul style="list-style-type: none"> ■ Counsel all pregnant mothers concerning the reasons why VCT will be valuable to them and their unborn babies. ■ Conduct formative research to determine the local barriers to accepting VCT. ■ If a mother knows that she is HIV-positive, arrange for a private room for infant feeding to ensure a mother can make appropriate infant feeding choice while still maintainer her confidentiality. ■ Determine staffing and time needed for counselling women on these issues. Weigh various options for addressing these needs, given resource constraints.

Concerns	Solutions
	Community volunteers may be helpful in sensitising mothers in advance of their attendance at antenatal clinic.
Health administrators say there are not enough funds to create new confidential counselling space and/or for additional staff for VCT or HIV and infant feeding counselling.	<ul style="list-style-type: none"> ■ Meetings can be held with district and national health decision makers to leverage funding for these activities ■ Creative, low cost ways can be looked at to better utilize existing space, to build inexpensive barriers to make smaller counselling rooms, and to rearranging timing of clinic services.
Health staff members have poor knowledge and clinical skills on HIV, MTCT and HIV and infant feeding counselling.	<ul style="list-style-type: none"> ■ Train staff on how to provide appropriate counselling and care related to these issues (see Step 2 above).

The ten steps to successful breastfeeding for settings where HIV is prevalent: Summary of experiences

STEP 4: Help mothers initiate breastfeeding within a half-hour of birth.

Actions necessary to implement the step

- Work with staff to reprioritise perinatal routines for infant care immediately after birth to allow time for immediate mother/baby contact.
- Institute temperature control in labour, delivery, and recovery areas to insure infant temperature regulation.
- Arrange for continuous mother/baby contact after delivery.
- Assign staff responsibility for seeing that early initiation occurs for mothers who have chosen to breastfeed and insure that staff has the skills to give mothers required support.
- Train staff in the importance of suctioning a normal newborn only if necessary (if initial assessment [APGAR] are good and baby is crying lustily it is NOT necessary). If necessary to suction, do so gently as micro trauma to the mucus membranes of the newborn's throat and upper airway (oropharynx) can interfere with breastfeeding and can potentially risk HIV transmission if the mother is breastfeeding.
- Allot staff time if necessary for breastfeeding support.
- Allow support person (family member, "doula", etc.) to stay with the mother during and immediately after delivery and participate in providing breastfeeding, as appropriate.
- When reviewing delivery-room policies, consider issues such as the mother/baby pair's need for privacy, a tranquil environment, subdued lighting, a minimal number of health personnel in room, reduced reliance on sophisticated technology for low-risk births, etc. Assuring confidentiality and privacy for an HIV-positive mother who has chosen replacement feeding may be a challenge, but can be accomplished with staff and administrative commitment.

STEP 4: Help mothers initiate breastfeeding within a half-hour of birth.

Common concerns and solutions

Concerns	Solutions
<p>It is routine to suction all babies immediately after delivery and this is what health staff learned in school.</p>	<ul style="list-style-type: none"> ■ Discuss the anatomic and physiologic reasons for why a normal, crying, newborn will clear its own airway. ■ Review with the head of the maternity, what the current protocol is for babies who do need suctioning and what equipment is used. Suggest that a mucus “bulb” (ear) syringe, may be the cheapest, most effective and least traumatic to use for this purpose.
<p>Not enough staff or personnel time to assist with breastfeeding initiation, considering number of deliveries and other procedures scheduled immediately after birth. Prescribed duration of skin-to-skin contact (at least 30 minutes) is of special concern.</p>	<ul style="list-style-type: none"> ■ Ask key staff to reassess which procedures are necessary immediately after birth. Reorganize “standing orders” to allow time for immediate contact and breastfeeding for mothers who have chosen to breastfeed. For example, review with staff the 5 Steps of the WHO “Warm Chain” recommendations for newborn care that include “immediate drying, skin-to-skin contact, breastfeeding, and postponing weighing and bathing”. ■ Reinforce the positive aspects of this change: time savings, no need to warm infant up, minimal separation of the mother and infant, etc. ■ Arrange for staff to be taught how to examine the baby right on the mother’s chest. ■ Arrange for a voluntary breastfeeding counsellor to help mothers to breastfeed right after birth, if staff is too busy. The mother and baby can be left by themselves, part of the time, to get to know each other, while the staff continues its work. A mother who has chosen not to breastfeed can still be encouraged to have skin-to-skin contact and hold and cuddle her newborn. ■ If space in labour and delivery is needed right away for another birth, determine if staff can move mother and baby to a nearby empty room and have nurse do charting and exam there, if necessary.

Concerns	Solutions
<p>Mother is too tired after delivery to feed infant.</p>	<ul style="list-style-type: none"> ■ Explain that this is often a misconception. If the mother is given her baby to hold, and encouraged, she will almost always become engaged. ■ Arrange to have a breastfeeding support person help her. ■ Ensure that breastfeeding mothers receive instruction during pregnancy about the importance of early feeds and the fact that mother and baby usually remain alert during this period.
<p>The beds in the delivery room are too narrow. If the infant is placed with the mother (who may be very tired) and there is not constant supervision, the infant may fall.</p>	<ul style="list-style-type: none"> ■ Place the infant on the mother's chest. Elevate the mother's head with pillow, blanket or even her own clothing. If there is danger of the infant falling from a narrow bed, consider wrapping the mother and baby together, lightly, with a sheet or cloth. ■ Alternatively, roll the mother on her side and tuck the newborn next to her to breastfeed.
<p>Need to monitor mothers and babies - therefore need light, personnel, equipment.</p>	<ul style="list-style-type: none"> ■ Ask that delivery room staff consider clustering procedures, for example, assessing maternal and infant condition and vital signs all at the same time and then leaving mother and infant alone.
<p>If the delivery room is cold, it is too chilly for immediate breastfeeding and the baby must be transferred either to the nursery or mother's room for the first feeding.</p>	<ul style="list-style-type: none"> ■ Review with staff the 5 Steps of the WHO "Warm Chain" recommendations (see Step 4 above). ■ Show staff, by using a thermometer under the baby's arm, that skin-to-skin contact with the mother provides enough heat to keep baby warm. ■ If the delivery room is cold, consider whether it is possible to raise the temperature.
<p>Perinatal personnel think that breastfeeding within 30 to 60 minutes after birth is a lower priority than other procedures.</p>	<ul style="list-style-type: none"> ■ Briefly review with the staff the key research on WHY the very early first breastfeeds are linked to ongoing breastfeeding success, (i.e., baby is awake, alert state in first hour, baby's keen sense of smell and crawling reflexes, mother's readiness in first hour, etc. ■ Convince delivering physicians to routinely suggest to mothers "Let's get you started with breastfeeding right now". ■ Ask the staff responsible to add "time of breastfeeding initiation" to the baby's chart.

Concerns	Solutions
	<ul style="list-style-type: none"><li data-bbox="740 304 1417 501">■ Make sure that the physiologic and psychological advantages of early breastfeeding are stressed during staff training. When labour and delivery staff are trained, emphasize their critical link to breastfeeding management and that the first hour is a very important and special time in this connection.

The ten Steps to successful breastfeeding for settings where HIV is prevalent: Summary of experiences

STEP 5: Show mothers how to breastfeed and maintain lactation even if they should be separated from their infants.

Actions necessary to implement the step

- Train staff on milk-expression techniques and safe handling and storage of breast milk.
- Designate staff time for individual or group counselling of mothers on breastfeeding management and maintenance of lactation when mother and baby are separated.
- Designate areas for mothers to breastfeed and for milk expression and milk storage. Purchase equipment (e.g. milk-storage containers, cups and spoons).
- Facilitate sleeping accommodations that allow mothers to stay with their babies if hospitalised. Likewise, allow healthy breastfed babies to stay with hospitalised breastfeeding mothers.
- Designate staff time for individual counselling of HIV-positive mothers on infant feeding options. If a mother wishes, involve a family member of the mother's choice in this counselling.
- Train staff on preparation and storage of replacement feeds so that they can confidently train the HIV-positive mothers who choose this option in preparation, storage and use of the replacement feed of her choice.
- Train staff on how to show HIV-positive mothers, who will replacement feed, how to suppress lactation and how to manage engorgement at home.
- Train staff to care for mothers who are very ill with advanced HIV/AIDS. They will need special counselling, along with a designated relative or support person (if that is the woman's choice), on replacement feeding for the baby and the need for close monitoring of the baby's growth and development.
- Train staff on how to counsel guardians of an infant-who is orphaned on replacement feeding and on the need for close monitoring of the baby's growth and development.

Help staff to understand the dangers of "spillover" to the community if all mothers see replacement feeding demonstrations and get the wrong message about breastfeeding. Here again it is also important that staff understand the dangers if donated formula is made available to "some" mothers. The spillover effect can be minimized if BFHI is strong and if ONLY mothers who are of known HIV-positive status are counselled on feeding options other than breastfeeding.

STEP 5: Show mothers how to breastfeed and maintain lactation even if they should be separated from their infants.

Common concerns and solutions

Concerns	Solutions
<p>In hospitals where the postpartum stay is very short or staffing is minimal, there's very little time for counselling.</p>	<ul style="list-style-type: none"> ■ Emphasize counselling during prenatal period. ■ Reassign nursery staff to do counselling. ■ If minimal time is available for individual counselling, arrange that most of the instruction is provided through group classes. ■ Require that hospital staff members observe at least one breastfeed before discharging each mother/baby pair. ■ Use infant feeding volunteers to make rounds and provide advice. Arrange to train volunteers and provide them with guidelines concerning their roles and any restrictions. ■ Have infant feeding (breastfeeding and the locally available and appropriate replacement feeding methods) education handouts available after delivery. ■ Have the staff arrange to show videos to reinforce proper preparation and storage of the chosen replacement feeding methods and lactation suppression techniques. Bedside instruction may or may not be the appropriate place for this counselling.
<p>Reluctance on the part of staff to provide breastfeeding counselling because of lack of competence.</p>	<ul style="list-style-type: none"> ■ Training must include basic facts on MTCT and review of the global and national infant feeding/MTCT guidelines and policies. ■ Provide short instruction sheets concerning what advice to give for common breastfeeding problems including guidelines for counselling mothers who are HIV-positive or of unknown status. ■ Post a list of staff members Encourage other health personnel that ask for their assistance to watch as these experienced staff members give mothers advice. ■ Make sure an integral part of training includes clinical experience in working with breastfeeding mothers and dealing with common problems, as well as on locally appropriate replacement feeding,

Concerns	Solutions
	lactation suppression, management of engorgement, and increased risks of MTCT if there is ANY breastfeeding.
Lack of understanding among staff of the importance of breastfeeding in the immediate postpartum period and the problems caused by inaccurate or inconsistent messages.	<ul style="list-style-type: none"> ■ In discussions with staff, emphasize the importance of patient-centred care and the role breastfeeding education plays in this connection. ■ Encourage trainers, first, to conduct focus groups with nursing staff on what they were taught and why they do what they do, and then to tailor training to address identified problems.
Fear on the part of staff and mothers of wet-nursing and use of stored breast milk for feeding other babies because of HIV transmission.	<ul style="list-style-type: none"> ■ Wet nursing and using breast milk from other mothers is acceptable in some settings and not acceptable in others. Local formative research will show whether or not mothers will choose these as alternative feeding methods. ■ Expressed breast milk from a donor will need to be heat treated per most current WHO recommendations. ■ Generally wet nursing is no longer encouraged as a feeding option, although there are exceptions to this in the case of a family member who is known to be HIV negative.
Lack of milk storage area and equipment.	<ul style="list-style-type: none"> ■ No sophisticated equipment is needed for milk storage. Only a refrigerator and clean collection containers for expressed milk are required. ■ Milk storage may not be needed if mothers have day-and-night access their hospitalised infants for breastfeeding.
Healthy infants will get sick if kept with their mothers when their mothers become sick and are admitted to the hospital.	<ul style="list-style-type: none"> ■ Offer information regarding the protective effects of breastfeeding and the health risks to newborns if <u>not</u> kept with their mothers and breastfed even if their mothers are ill and hospitalised.
Breastfeeding/replacement feeding mothers who are sick in the hospital will not be able to take care of their newborn infants who room in with them.	<ul style="list-style-type: none"> ■ Ask the staff to evaluate this problem case by case. Perhaps a relative or friend will need to room-in to care for the infant in some situations.
Counselling on replacement feeding will give a "mixed" message to all mothers and may undermine breastfeeding (spillover).	<ul style="list-style-type: none"> ■ Help staff to understand the dangers of "spillover" to the community if all mothers see replacement feeding demonstrations and get the wrong message about breastfeeding. Here again it is also important that staff understand the dangers if donated formula is made available to "some" mothers. The spillover effect can be minimized if BFHI is strong and if

Concerns	Solutions
	ONLY mothers who are of known HIV-positive status are counselled on feeding options other than breastfeeding.

The ten steps to successful breastfeeding for settings where HIV is prevalent: Summary of experiences

STEP 6: Give newborn no other food or drink other than breast milk unless medically indicated.

Actions necessary to implement the step

- Examine routine policies concerning the use of breast-milk substitutes. Make sure they conform with the WHO/UNICEF list of “**Acceptable medical reasons for use of breast-milk substitutes**“ (should be included in hospital policy, see Step #1).
- Examine current national and global policies on the mother-to child transmission of HIV and infant feeding (see WHO Summary of New Recommendations on the USE of ARV in preventing MTCT of HIV, October 2000). <http://www.who.int/hiv/pub/guidelines/pmtctguidelines3.pdf>
- Ensure that staff members caring for HIV-positive mothers are counselled so they can make informed infant feeding choices best for their own setting and circumstances and that they understand the risks of ANY mixed feeding. This applies to BOTH breastfeeding mothers who should exclusively breastfed and replacement feeding mothers who should exclusively replacement feed.
- Arrange that small amounts of breast-milk substitutes be purchased by the hospital for use if medically indicated.
- Store breast-milk substitutes and related equipment and supplies out of sight.
- Develop policies that facilitate early breastfeeding of low-birth-weight infants and infants delivered by C-section and for HIV-positive mothers who have chosen to breastfeed, when there are no medical contraindications (can be included in hospital policy, see Step # 1).
- Ensure that adequate space and equipment is available for milk expression and storage (see Step # 5).

STEP 6: Give newborn no other food or drink other than breast milk unless medically indicated.

Common concerns and solutions

Concerns	Solutions
<p>Staff members or mothers are worried or confused about what is the safest feeding option for HIV-positive mothers and may think that replacement feeding and/or mixed feeding is safer than exclusive breastfeeding.</p>	<ul style="list-style-type: none"> ■ Review with staff the current research on the relative safety of different feeding options (Coutsoudis 1999, 2001 and WHO Oct 2000). ■ Review with staff the balance of risks that an HIV-positive mother must weigh in deciding on what infant feeding method is best for her (WHO/UNICEF/UNAIDS/UNFPA (HIV and infant feeding: A guide for health-care managers and supervisors) 2003, pp. 5-7 – Session 4 HIV Handout, Overview: Infant and young child feeding in the context of HIV).
<p>HIV-positive mothers are afraid that if they are seen NOT breastfeeding they will be stigmatised and labelled as having AIDS or being promiscuous. Some are afraid of physical abuse.</p>	<ul style="list-style-type: none"> ■ Antenatal counselling for all mothers on HIV is essential. This counselling helps dispel myths about HIV and MTCT and also helps HIV-positive mothers weigh the stigma issues for themselves and their families <i>before</i> delivery. ■ Follow-up support for HIV-positive mothers, regardless of their infant feeding choice, is as important as follow-up for breastfeeding mothers.
<p>Staff members or mothers worry that mothers' milk is insufficient for babies in the first few hours or days after birth because of delay in the "true milk" coming in.</p>	<ul style="list-style-type: none"> ■ Make sure that staff and mothers are provided information about the sufficiency and benefits of colostrums and the fact that nothing else is needed (e.g. water, tea, or infant formula) in addition to breast milk. Include the fact that it is normal for a baby's weight to drop during the first 48 hours. ■ For HIV-positive mothers who have chosen to breastfeed it is essential that they understand that NO other feeds other than their own breast milk (including colostrum) should be given to their babies.
<p>Staff members or mothers fear that babies will become dehydrated or hypoglycaemic if given only breast milk.</p>	<ul style="list-style-type: none"> ■ Establish a literature review committee and present findings related to this issue at a staff meeting. ■ Make sure that staff members are reminded of the signs that babies are getting all they need from breastfeeding, and encourage them to pass on this information to mothers who are worried that their milk is insufficient. ■ Consider arranging for brief in-service training

Concerns	Solutions
	<p>sessions to demonstrate how to assess the effectiveness of a breastfeed and give nurses supervised practice in making their own assessments.</p> <ul style="list-style-type: none"> ■ Remove glucose water from the unit, so it is more difficult to use routinely.
Mothers request supplements.	<ul style="list-style-type: none"> ■ Arrange for mothers to be informed during the prenatal and early postpartum period concerning the problems that arise from supplementation. ■ Depending on the national policy and hospital there may or may not be small stocks of replacement feeds for HIV-positive mothers.
Mothers who are HIV-positive request replacement feeds.	<ul style="list-style-type: none"> ■ Counsel the mother about the risks of mixed feeding and that either exclusive breastfeeding or replacement feeding is the best way for her to reduce risks of HIV transmission. ■ For mothers who have chosen replacement feeding it is best that she begin from birth to buy her own replacement feeding supplies. She will need to sustain this feeding method for as long as the baby needs breast milk substitutes. ■ Depending on the national policy and hospital policy there may or may not be small stocks of replacement feeds for HIV-positive mothers, but the point above is important to consider.
Some mothers are too malnourished to breastfeed.	<ul style="list-style-type: none"> ■ Make sure that staff members realize that even malnourished mothers produce enough milk for their infants if their infants feed on demand. ■ In cases where the family provides food for the mother while she is in the hospital, use the opportunity to inform family members about the importance of sound nutrition for the mother and inexpensive, nutritious dietary choices.
The counselling and support necessary to achieve exclusive breastfeeding is too expensive.	<ul style="list-style-type: none"> ■ Stress that costs will be more than offset by savings to the hospital when purchase, preparation and provision of breast-milk substitutes is minimized. Emphasize that savings will also accrue from reduction in neonatal infections, diarrhoea, etc.
Medications are being given to the mother that are considered contraindications to breastfeeding.	<ul style="list-style-type: none"> ■ Ensure that staff members are familiar with the list of acceptable medical reasons for supplementation that are included in the revised Annex to the Global Criteria for the Baby-friendly Hospital Initiative and as Handout 4.5 in Session 4 of this course.

Concerns	Solutions
	<ul style="list-style-type: none"> ■ Ask the pharmaceutical department to prepare a list of drugs that are compatible and incompatible with breastfeeding.
<p>Mothers will feel they have been denied something valuable if distribution of samples or discharge packs is discontinued.</p>	<ul style="list-style-type: none"> ■ Consider replacing samples of breast-milk substitutes with a “breastfeeding pack”, which includes information on breastfeeding and where to get support and may include samples of products that don’t discourage breastfeeding.

The ten steps to successful breastfeeding for settings where HIV is prevalent: Summary of experiences

STEP 7: Practice rooming-in – allow mothers and infants to remain together – 24 hours a day.

Actions necessary to implement the step

- Make needed changes in physical facility. Discontinue nursery for normal newborns. Make adjustments to improve comfort, hygiene, and safety of mother and baby.
- Require and arrange for cross training of nursery and postpartum personnel so they all have the skills to care for both baby and mother (see Step # 2).
- Institute individual or group education sessions for mothers on mother-baby postpartum care. Sessions should include information on how to care for baby who is rooming-in.

Protect privacy and confidentiality of a mother's HIV status by providing the same routine care to ALL mothers and babies including rooming-in/bedding –in, so that no one is stigmatised or set apart as different.

STEP 7: Practice rooming-in – allow mothers and infants to remain together – 24 hours a day.

Common concerns and solutions

Concerns	Solutions
<p>It is difficult to supervise the condition of a baby who is rooming-in. In the nursery one staff member is sufficient to supervise a number of babies.</p>	<ul style="list-style-type: none"> ■ Assure staff that babies are better off close to their mothers, with the added benefits of security, warmth, and feeding on demand. “Bedding-in”, if culturally acceptable, provides the best situation for gaining all these benefits and eliminates the need to purchase bassinets or cots. Mothers can provide valuable assistance when their infants are rooming-in or bedding-in, alerting staff if problems arise. ■ Stress that 24-hour supervision is not needed. Periodic checks and availability of staff to respond to mothers’ needs are all that is necessary.
<p>Mothers need to get some rest after delivery (especially at night) and babies still need to eat. Especially after caesarean sections, mothers need time to recuperate. Babies should be fed breast-milk substitutes during this period.</p>	<ul style="list-style-type: none"> ■ Ask staff to assure mothers that by “rooming-in” they are doing the best for their babies, that not much extra work is involved, and that health workers are available in the unit to assist them if needed. ■ Ask staff to discuss with mothers the fact that the more babies are with them the more they’ll understand what is normal and abnormal and how to provide good care. It is best to practice being with their babies (even during the night) while still in the hospital, when staff is around to help if necessary. ■ Suggest to the staff that after good breastfeeds mothers may even sleep better when their babies are with them. ■ Make sure that staff knows how to help mothers who have had Caesarean sections choose breastfeeding techniques and positions that are comfortable and effective. ■ If regional or local anaesthesia is used during Caesarean sections, early breastfeeding will be less of a problem. However, a mother who has had general anaesthesia can breastfeed as soon as she is conscious if a staff member supports her.
<p>Mothers in the postnatal ward may worry if they room-in in close proximity to HIV-positive mothers because of misconception about how HIV is spread.</p>	<ul style="list-style-type: none"> ■ Staff members can be sensitive to this concern and reassure mothers that HIV is not spread through casual contact. Explain to mothers that requests that HIV-positive mothers be “isolated” may contribute to “stigmatisation” of people with HIV/AIDS and help perpetuate misconceptions about how HIV is spread

Concerns	Solutions
	(see Step # 2 above).
Infection rates will be higher when mothers and babies are together than in a nursery.	<ul style="list-style-type: none"> ■ Stress that the danger of infection is less when babies remain with their mothers than when in the nursery and exposed to more caretakers. ■ Provide staff with data that show that with rooming-in and breastfeeding, infection rates are lower, for example, from diarrhoeal disease, neonatal sepsis, otitis media, and meningitis.
If visitors are allowed in the rooming-in wards, danger of infection and contamination will increase. In situations where visitors are allowed to smoke, it is a health hazard to mother and baby. Some mothers feel they need to entertain their visitors and that they will have time for their babies after discharge.	<ul style="list-style-type: none"> ■ Emphasize that babies receive immunity to infection from colostrum, and that studies show infection is actually less in rooming-in wards than in nurseries. ■ To support mothers further in doing the best for their babies, limit visiting hours and the number of visitors, and prohibit smoking.
The rooms are too small.	<ul style="list-style-type: none"> ■ No need to have bassinets for infants. No extra space is necessary for "bedding-in".
Babies will fall off the mothers' beds.	<ul style="list-style-type: none"> ■ Emphasize that newborns don't move. If mothers are still concerned, arrange for the beds to be put next to the wall or, if culturally acceptable, for the beds to be put in pairs, with mothers keeping their babies in the centre.
Full rooming-in, without more than half hour separations, seems unfeasible because some procedures and routines need to be performed on the babies outside their mothers' rooms.	<ul style="list-style-type: none"> ■ Study these procedures well. Some are not needed. (Example: Weighing baby before and after breastfeeding) Other procedures can be performed in the mother's room. ■ Review advantages to mother and time saved by physician when he examines the infant in front of the mother.
Private patients feel they have the privilege to keep their babies in nurseries and feed them breast-milk substitutes, receive expert help from nursery staff, etc.	<ul style="list-style-type: none"> ■ Whatever is best for public patients is also best for private patients. ■ Consider pilot projects to "test" rooming-in in private as well as public wards.
Some private hospitals make money from nursery charges and thus are reluctant to disband these units.	<ul style="list-style-type: none"> ■ Explore the compensatory savings from rooming-in due to less frequent use of breast-milk substitutes, less staff time for bottle preparation and nursery care, less infant illness, etc. ■ Consider continuing to charge the same fees when the nursery is disbanded, reallocating the charges for mother/baby care on the wards.

Concerns	Solutions
<p>Babies more easily kidnapped when rooming-in than in the nursery.</p>	<ul style="list-style-type: none"> ■ Suggest to the staff that they ask mothers to request that someone (e.g., other mothers, family members, or staff members) watch their babies if they go out of the room. ■ Mothers need to know that there is <u>no</u> reason a baby should be removed without the mother's knowledge.
<p>An HIV-positive mother in the postnatal ward may be seen by others replacement feeding her infant, and confidentiality will be hard to protect.</p>	<ul style="list-style-type: none"> ■ For an HIV-positive mother who chooses replacement feeding, confidentiality WILL be an issue, but optimally a mother will have already been counselled in the antenatal period and have made an informed decision that replacement feeding is most appropriate for her and her baby. ■ For an HIV-positive mother who chooses breastfeeding, she should be supported to exclusively breastfeed, just like the other mothers, and there will be no obvious difference in her care. ■ Staff who care for mothers in HIV prevalent settings will ALL need to be trained to be sensitive to confidentiality issues at all times, including in record keeping.

The ten steps to successful breastfeeding for settings where HIV is prevalent: Summary of experiences

STEP 8: Encourage breastfeeding on demand.

Actions necessary to implement the step

- Introduce rooming-in (see Step # 7).
- Examine routine policies concerning infant procedures (e.g., blood drawing, physical examination, weighing, bathing, circumcision, cleaning of rooms, etc.) that separate mother and baby; conduct the procedures on the ward, whenever possible.
- Ensure that staff training includes the definition and benefits of on-demand feeding and key messages concerning this issue that mothers should receive during breastfeeding counselling (see Step # 2).

STEP 8: Encourage breastfeeding on demand.

Common concerns and solutions

Concerns	Solutions
<p>On-demand feeding is good, but does not provide enough milk for the baby. Colostrum is insufficient and supplementation is necessary.</p>	<ul style="list-style-type: none"> ■ Remind staff that the infant's stomach capacity is 10 - 20 ml at birth and the quantity of colostrum is physiologically matched.
<p>In situations where rooming-in is not practised, it saves on staff time and effort if babies are fed in the nursery instead of taking babies to mothers to breastfeed at unpredictable times.</p>	<ul style="list-style-type: none"> ■ Consider rooming-in, which will take less staff time than keeping babies in the nursery and feeding them breast-milk substitutes or transporting them back and forth for breastfeeding.
<p>When babies are taken out of the rooms for exams, lab tests, and measurement procedures this interferes with feeding on demand.</p>	<ul style="list-style-type: none"> ■ Encourage physicians to examine babies in mothers' rooms. Emphasize that it is a time-saver since mothers' questions can be answered and any education provided at the same time. Stress that patient satisfaction also increases as a result. ■ Arrange for staff to complete other procedures in mothers' rooms, when feasible. For example, the weighing scale might be wheeled from room to room. ■ Ask the staff to try to schedule after feedings procedures that must be performed outside the rooms, or allow mothers to accompany their babies so they can breastfeed when required. ■ Inform the staff that babies are not to be supplemented while they are away for procedures. If necessary, mothers should be called to breastfeed.
<p>Visiting hours that are too long or unrestricted interfere with breastfeeding on demand. Mothers may be embarrassed to breastfeed in front of visitors, may be too busy entertaining visitors, or may be too exhausted afterwards to feed their babies.</p>	<ul style="list-style-type: none"> ■ Shorten visiting hours or limit them (i.e. 2 visitors per patient or only immediate family and grandparents). ■ Arrange for the staff to provide mothers with signs they can place on their doors (if they have private rooms) to ask that they not be disturbed if resting or feeding their babies. ■ Ask instructors in prenatal classes to emphasize the importance of limited visiting hours to allow more time for mother/baby learning, feeding and rest.

The ten steps to successful breastfeeding for settings where HIV is prevalent: Summary of experiences

STEP 9: Give no artificial teats or pacifiers.

Actions necessary to implement the step

- Examine routine policies. Hospital policies should:
 - discourage mothers or family members from bringing pacifiers from outside for their babies' use;
 - prohibit use of bottles and teats or nipples for infant feeding within the hospital;
 - provide guidance for use of alternative feeding methods, for example, use of cups and spoons if breast-milk substitutes are used;
- Purchase supplies (e.g. cups, syringes, spoons) for use in feeding breast-milk substitutes to infants (without using teats or bottles) in cases where there are acceptable medical reasons for supplementation (see Step # 5).

STEP 9: Give no artificial teats or pacifiers.

Common concerns and solutions

Concerns	Solutions
When infants are upset, pacifiers will help quiet them. Also, infants may not be hungry, but still need to suck.	<ul style="list-style-type: none"> ■ Babies may cry for a variety of reasons. Ask staff to explore alternatives to pacifiers (e.g. encouraging mother to hold baby, offering the breast, checking for soiled diaper), possibly through a group discussion.
The nursing staff and/or mothers do not believe that pacifier use causes any problems.	<ul style="list-style-type: none"> ■ Make sure that staff and mothers are educated concerning problems with pacifier use (e.g. interferes with oral motor response involved in breastfeeding, easily contaminated). ■ Establish an ad hoc committee to review the literature and make a presentation to the administrative and medical staff on issues related to pacifier use. ■ Post a notice visible to both staff and patients -- “no more pacifiers for breastfed infants” -- and list the reasons why. ■ If the mother requests a pacifier, have staff discuss with her the problems it may cause. Consider asking her to sign a written informed consent form that discusses the risks of nipple confusion, impaired milk supply and contamination. ■ In settings where contamination of pacifiers can lead to diarrhoea and other illness, it is best to encourage calming the bay in other ways or to use a mother’s or family member’s washed finger as a pacifier.
Pacifiers are provided free of charge for mothers requesting them.	<ul style="list-style-type: none"> ■ Calculate the savings to the hospital from not buying pacifiers or artificial teats. ■ Establish a policy stating that the hospital will not supply free pacifiers and mothers, if they wish to use them, must bring their own.
Infants may aspirate if fed by cup.	<ul style="list-style-type: none"> ■ Provide the staff with examples (through video, slides, or visit) of infants being successfully fed by cup in other health facilities. ■ Emphasize the feasibility and safety of cup feeding.
Purchasing cups, syringes, and spoons may be expensive.	<ul style="list-style-type: none"> ■ Special types of cups, syringes and spoons are not necessary. They just need to be clean.

The ten steps to successful breastfeeding for settings where HIV is prevalent: Summary of experiences

STEP 10: Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic.

Actions necessary to implement the step

- Work with key hospital staff to identify hospital and community resources for mothers that are both breastfeeding and replacement feeding.
- Make sure that the hospital provides follow-up support for breastfeeding and replacement feeding, for example, through a postnatal clinic, and schedules the first visit within a week of discharge and insures that infant feeding is assessed and any problems are identified and addressed.
- Explore ways to link mothers with community-level breastfeeding support resources, such as health centres, MCH clinics, and breastfeeding support groups (NGOs such as local La Leche League groups). One means would be to send a discharge/referral slip to the community clinic where the mother can go for postnatal care and at the same time tell the mother where she can receive breastfeeding support.
- Explore ways to link HIV-positive mothers with community-level resources for people living with HIV/AIDS, including health centres, MCH clinics, NGOs, churches, and home based care groups. Optimally referrals will be done in such a way as to preserve privacy and confidentiality. In some settings support groups of HIV-positive mothers and their babies may be appropriate, in others not and support may need to be one-on-one.
- Consider arranging for mother-support groups to make contact with mothers while still in the hospital. For example, volunteers can offer refreshments to mothers on the wards and at the same time provide information on where to go for breastfeeding support. Volunteers can help conduct hospital lactation clinics, give breastfeeding advice on wards, etc. For HIV-positive women it will depend on individual circumstances as to how this initial contact is made.
- Consider asking hospital personnel to organize breastfeeding or replacement feeding support groups for which, at least initially, hospital staff serve as facilitators. Arrange training for hospital staff on organizing and facilitating mother-support groups and consider similar training for other potential mother-support group leaders.
- Make information (verbal and written) on breastfeeding support resources available to mother, family and community.
- Make information (verbal and written) on locally appropriate replacement feeding options and resources available to the HIV-positive mother, and, if she wishes, her family and community.

STEP 10: Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic.

Common concerns and solutions

Concerns	Solutions
<p>The hospital staff members are unfamiliar with good sources of breastfeeding support to which they can refer mothers.</p>	<ul style="list-style-type: none"> ■ Form an ad hoc group with a representative from the hospital, the local MCH clinics, and any mother support groups that can be identified. Ask groups to develop a resource list and make it available to hospital staff, local physicians and mothers. ■ Encourage local mother-support groups to meet occasionally at the hospital, which can provide space and publicity free of charge. ■ Arrange for community breastfeeding support groups to provide a mini-training session to the staff on the services they offer. ■ Arrange for community HIV support groups to provide a mini-training session to the staff on the services they offer related to HIV-positive mothers and their families.
<p>There is a mistaken impression that health professionals aren't supposed to be involved in organizing or facilitating mother-support groups.</p>	<ul style="list-style-type: none"> ■ If lay leaders are not available to organize and facilitate mother-support groups, explore using health staff for this purpose. If health staff members are involved, they need to be trained not to direct or dominate the groups, but to facilitate sharing and support among mothers. As lay leaders come forward, they can receive additional training and take over the group work.
<p>Lay group leaders and their members may provide incorrect information.</p>	<ul style="list-style-type: none"> ■ Make sure that potential mother-support group leaders are provided with adequate training and that the mothers themselves receive accurate prenatal and postnatal education on breastfeeding/locally appropriate replacement feeding from the hospital staff.
<p>Hospital administrators and staff already have too much to do; organizing support groups would be a serious imposition.</p>	<ul style="list-style-type: none"> ■ Explore whether knowledgeable volunteer groups or individuals can help in, or even take full responsibility for, this activity.
<p>Mother-to-mother support doesn't work in the local culture.</p>	<ul style="list-style-type: none"> ■ Explore culturally appropriate support mechanisms for breastfeeding/replacement feeding mothers. For example: <ul style="list-style-type: none"> ■ involving traditional or religious organizations for women in providing breastfeeding or more general

Concerns	Solutions
	<p data-bbox="788 264 975 297">mother support;</p> <ul style="list-style-type: none"> <li data-bbox="740 331 1378 432">■ involving existing community-based HIV support groups in providing breastfeeding, replacement feeding or more general mother support; <li data-bbox="740 465 1378 600">■ reinforcing the extended family role in supporting breastfeeding/replacement feeding by providing updated information on breastfeeding to family members most likely to provide advice.
<p data-bbox="209 633 692 797">Post-discharge hospital follow-up is too costly. Home visits are either impossible or only possible in emergencies or for very high-risk patients. Phone contact is either not possible or, at best, unreliable.</p>	<ul style="list-style-type: none"> <li data-bbox="740 633 1422 734">■ Examine what follow-up mechanisms are most feasible in the local situation, considering constraints. For example: <ul style="list-style-type: none"> <li data-bbox="788 768 1406 835">■ arranging for breastfeeding/replacement feeding assessment and support during postnatal visits; <li data-bbox="788 869 1422 969">■ arranging home visits at least for the mother at highest risk of breastfeeding/replacement feeding failure; <li data-bbox="788 1003 1422 1137">■ referring mothers to community health centres, outreach workers, and/or volunteer groups that <u>can</u> provide support (following the caveats above about preserving privacy and confidentiality).

Session 6: Costs and savings

Objectives

At the conclusion of this session, participants will be able to:

Describe the potential costs and savings related to converting to and maintaining baby-friendly health facilities.

Suggest several creative ways to minimize costs or use existing resources when implementing the Ten Steps.

Describe how they would estimate costs and savings related to breastfeeding promotion within their own health facilities.

Discuss the costs and savings related to breastfeeding promotion for the family, the larger health system, and the country (optional).

Duration

Costs and savings in health facilities (including in participants' own institutions): 50 minutes

Costs and savings for the family: 15-30 minutes (optional)

Costs and savings at the health system and national level: 15 minutes (optional)

Costs and savings related to breastfeeding promotion (discussion): 10 minutes

Total: 1 to 1¾ hours

Teaching methods

Presentation

Group work

Discussion

Preparation for session

Review the slides/transparencies provided with the session plan. They present data on costs and savings in both non-industrialized and industrialized country settings. You may want to use only a selected set of the slides/transparencies in the session, emphasizing those with most relevance to your own situation.

Prepare additional slides/transparencies presenting costs and savings data from your own country or region, if feasible. Using local and national data in this session will greatly enhance its relevance for the participants. If information is not readily available, the process of collecting it should begin several weeks before the course.

A miniature version of the slide/transparency presentation has been included as a handout for participants. If a number of slides/transparencies are omitted from the presentation and/or other slides or transparencies are included, consider adjusting the handout as well.

After reviewing the entire session, decide whether to include sections 4 and 5, which focus on costs and savings at the family, health system and national levels. Costs and savings at the health facility level (examined in sections 1-3) are especially relevant for health facility administrators. If your audience includes health care policy-makers responsible for decisions related to the larger health care system, sections 4 and 5 may be of particular interest to them. If there is a need to shorten the session, consider omitting some or all of the material in these last sections.

If you plan to include the exercise described in section 4, decide whether to use slide/transparency 6.15 or 6.16 and Handout 6.4a or 6.4b, depending on whether there are different average or minimum wages for urban and rural areas of the country, and gather the data needed for the exercise on costs of various brands of formula and average or minimum wages. Before the session begins adjust whichever handout you will use so it uses formula “tins” of a weight commonly found locally (for example 500g tins or 450g tins) and adjust the number needed so 20 Kg of formula will be provided in the first six months (for example 40 500g tins or about 44 450g tins). Then fill in the information concerning brands of formula and their costs, as well as average (or minimum) wages.

Training materials

Summaries

Available summaries of research studies presented in Session 6

Handouts

- 6.1 Presentation for session 6
- 6.2 Cost analysis of maintaining a newborn nursery at the Dr. Jose Fabella Memorial Hospital
- 6.3 Table 1: Potential costs and savings associated with breastfeeding promotion in health facilities (organized according to the Ten Steps)
- 6.4a: Exercise: The percentage of wages needed to feed formula to an infant for six months
- 6.4b: Exercise: The percentage of urban and rural wages needed to feed formula to an infant for six months.

Slides/transparencies

6.1 - 6.32

The website featuring this Course contains links to the slides and transparencies for this session in two Microsoft PowerPoint files. The slides (in colour) can be used with a laptop computer and LCD projector, if available. Alternatively, the transparencies (in black and white) can be printed out and copied on acetates and projected with an overhead projector. The transparencies are also reproduced as the first handout for this session, with 6 transparencies to a page.

References

- Aguayo VM, Ross J. The monetary value of human milk in Francophone West Africa: A PROFILES analysis for nutrition policy communication. *Food Nutr Bull*, 2002, 23(2):153-161.
- American Public Health Association. Breastfeeding promotion in Honduras: the PROALMA project. *Mothers and Children*, 1987, 6(3):103.
- Autotte PA. *A mid-term evaluation of hospital institutions for the PROALMA Project, Honduras*. INCS Report Series. Newton, MA, Educational Development Center, 1985.
- Avendona P, Matson D, Long J, Whitney S, Matson C, Pickering L. Costs associated with office visits for diarrhea in infants and toddlers. *The Pediatric Infectious Disease Journal*, 1993, 12:897-902.
- Ball TM, Bennett DM. The economic impact of breastfeeding, Breastfeeding 2001, Part I: The evidence for breastfeeding. *Pediatric Clinics of North America*, 2001, 48(1):253-262.
- *Ball TM, Wright AF. Health care costs of formula-feeding in the first year of life. *Pediatrics*, 1999, April, 103(4 Pt 2):870-876.
- Berg A. *The Nutrition Factor*. Washington D.C., The Brookings Institution, 1973.
- Bhatnagar S, Jain NP, Tiwara VK. Cost of infant feeding in exclusive and partially breastfed infants. *Indian Pediatrics*, 1996, 33:655-658.
- *Bitoun P. The Economic Value of Breastfeeding in France. *Les Dossiers de l'Obstetrique*, 1994, 216:10-13 (English-language desktop publishing provided by Wellstart International, San Diego CA).
- Bonuck K, Arno PS, Memmott MM, Freeman K, Gold M, McKee D. Breastfeeding promotion interventions: Good public health and economic sense. *Journal of Perinatology*, 2002, 22:78-81.
- Chee G, Makinen M, Sakagawa B, Franklin N, Quinn V, Schubert J, Agble R. *Cost and effectiveness analysis of LINKAGES' breastfeeding interventions in Ghana*. Bethesda, MD, Abt Associates, 2002.
- *Cohen R, Mrtek MD, Mrtek RG. Comparison of maternal absenteeism and illness rates among breastfeeding and formula-feeding women in two corporations. *American Journal of Health Promotion*, 1995, 10(2):148-153.
- Daga SR, Daga AS. Impact of breast milk on the cost-effectiveness of the special care unit for the newborn. *J Trop Pediatr*, 1985, 31:121-123.
- Department of Health. *Breastfeeding: Good practice guidance to the NHS*. London, United Kingdom of Great Britain, 1995.
- Drane D. Breastfeeding and formula feeding: a preliminary economic analysis. *Breastfeeding Review*, 1997, vol. 5(1):7-16.
- Eldridge S, and Croker A. Breastfeeding friendly workplace accreditation. Creating supportive workplaces for breastfeeding women. *Breastfeed Rev*, 2005, vol. 13, no. 2: 17-22.
- Fiedler JL. *The Cost of the Breastfeeding Promotion Program in the Guilherme Alvaro Hospital of Santos, Brazil*. Washington D.C., Latin American and Caribbean Health and Nutrition Sustainability Project, International Science and Technology Institute, 1993.
- *Fok D, Mong TG, Chua D. The economics of breastfeeding in Singapore. *Breastfeeding Review: Professional Publication of the Nursing Mothers' Association of Australia*, 1998, 6(2):5-9.

*Gonzales R. *Cost Analysis of Maintaining a Newborn Nursery at Dr. Jose Fabella Memorial Hospital, Manila*. [Transparencies presented in meeting in Manila, Philippines], 1990.

Greiner T et al. *The Economic Value of Breastfeeding* (with results from research conducted in Ghana and the Ivory Coast). Cornell International Nutrition Monograph Series 6, Ithaca, New York, Cornell University, 1979.

*Gupta A, Khanna K. Economic value of breastfeeding in India. *The National Medical Journal of India*, 1999, May-June 12(3):123-7.

Heinig MJ. Breastfeeding and the bottom line: why are the cost savings of breastfeeding such a hard sell? *Journal of Human Lactation*, 1998, 14(2):87-88.

Hoey C, Ware J. Economic advantages of breastfeeding in an HMO setting: A pilot study. *The American Journal of Managed Care*, 1997, 3:861-865.

Horton S, Sanghvi T, Phillips M, Fiedler J, Perez-Escamilla. Breastfeeding promotion and priority setting in health. *Health Policy and Planning*, 1996, 11(2):156-168.

Huffman SL. *Panama Breastfeeding Promotion Project Evaluation*. Washington D.C., Center to Prevent Childhood Malnutrition and the Academy for Educational Development, 1990.

*Huffman SL, Panagides D, Rosenbaum J, Parlato M. *Breastfeeding Promotion in Central America: High Impact at Low Cost*. Washington D.C., Nutrition Communication Project, Academy for Educational Development, 1991.

Huffman SL, Steel A, Toure KM, Middleton E. *Economic Value of Breastfeeding in Belize*. Washington D.C., Nuture/Center to Prevent Childhood Malnutrition, 1992.

Jarosz LA. Breastfeeding versus formula: Cost comparison. *Hawaii Medical Journal*, 1993, 52(1):14-18.

Levine R. *A Workbook for Policymakers, Guide to Assessing the Economic Value of Breastfeeding*. Washington D.C., Nuture/Center to Prevent Childhood Malnutrition and Social Sector Policy Analysis Project, Academy for Educational Development, 1991.

*Levine R, Huffman SL. *The Economic Value of Breastfeeding, The National, Public Sector, Hospital, and Household Levels, A Review of the Literature*. Washington D.C., Nuture/Center to Prevent Childhood Malnutrition, 1990.

Levine R, Huffman SL, Labbok M. *Changing Hospital Practices to Promote Breastfeeding: Financial Considerations*. Washington D.C., Reproductive Health, Georgetown University, Department of Obstetrics-Gynecology, 1990.

Marquez LE, Piwoz E, Wong R, Huffman SL. *Application of the "Guide to Assessing the Economic Value of Breastfeeding" in El Salvador and Suggestions for Future Modifications to the Guide*. Washington D.C., Wellstart International, 1994.

Melville BM. Can low income women in developing countries afford artificial feeding? *Journal of Tropical Pediatrics*, 1991, 37:141-142.

Montgomery D, Splett P. Economic benefit of breastfeeding infants enrolled in WIC. *Journal of the American Dietetic Association*, 1997, 97:379-385.

Mora JO. *Results of the Field Test in Guatemala of the Workbook "Guide to Assessing the Economic Value of Breastfeeding"*. Washington D.C., Latin American and Caribbean Health and Nutrition Sustainability Project, University Research Corporation and International Science and Technology Institute, 1991.

*Nuture. *The Economic Value of Breastfeeding: Four Perspectives for Policymakers. Center to Prevent Childhood Malnutrition Policy Series*, 1990, 1(1):1-16, September.

Phillips M, Sanghvi T, Fiedler J, Lutter C, Perez-Escamilla R, Rivera A, Teruya K, Segall AM. *A Comparison of the Costs, Savings and Cost-Effectiveness of Hospital-Based Breastfeeding Promotion Programs in Latin America*. Washington D.C., Latin American and Caribbean Health and Nutrition Sustainability Project, University Research Corporation and International Science and Technology Institute, 1994.

Riordan J. The cost of not breastfeeding: A commentary. *Journal of Human Lactation*, 1997, 13:93-97.

Robertson R, Sanghvi T, Brownlee A, Fiedler J. *Guidelines for Estimating the Costs, Savings, and Cost Effectiveness of Breastfeeding Promotion Through Health Facilities*. Washington D.C., Latin American and Caribbean Health and Nutrition Sustainability Project, International Science and Technology Institute, 1995.

Rohde JE. Mother milk and the Indonesian economy: A major national resource. *Journal of Tropical Pediatrics*, 1982, 28(4):166-74.

Saadeh R ed., with Labbok M, Cooney K, Koniz-Booher P. *Breastfeeding: The Technical Basis and Recommendations*. Geneva, World Health Organization, 1993.

Smith, J.P. Human milk supply in Australia. *Food Policy*, 1999, 24(1):71-91.

Smith, JP and Ellwood, M. Where does a mothers' day go? Preliminary estimates from the Australian Time Use Survey of New Mothers, paper presented at the International Association of Time Use Researchers annual conference. Copenhagen, Denmark, 2006.

* Smith, JP, Thompson, JF, and Ellwood, DA. Hospital system costs of artificial infant feeding: Estimates for the Australian Capital Territory. *Australian and New Zealand Journal of Public Health*, 2002, 26(6):543-551.

Smith, JP and Ingham, LH. Mothers milk and measures of economic output. *Feminist Economics*, 2005, 11(1):43-64.

*Soetjningsih, Suraatmaja S. The advantages of rooming-in. *Paediatrica Indonesiana*, 1986, 26(11-12):229-235.

Tuttle C and Dewey K. Potential cost savings for Medi-Cal, ADFC, food stamps and WIC programs associated with increasing breastfeeding among low-income Hmong women in California. *Journal of the American Dietetic Association*, 1996, 96:885-890.

United States Breastfeeding Committee. *Economic benefits of breastfeeding (issue paper)*. Raleigh, NC, United States Breastfeeding Committee, 2002.

*Valdes V, Perez A, Labbok M, Pugin E, Zambrano I, Catalan S. The impact of a hospital and clinic-based breastfeeding promotion programme in a middle class urban environment. *Journal of Tropical Pediatrics*. 1993, 39:142-151.

Walker M. Why aren't more mothers breastfeeding? The benefits are clear. So how do we convince mothers? *Childbirth Instructor*, 1992, (Winter):19-24.

*Weimer J. *The economic benefits of breastfeeding: A review and analysis*, *Food Assistance and Nutrition Research Report No. 13*. Washington D.C., U.S. Department of Agriculture, 2001.

*Wong R, Marquez L, Piwoz E, Melendez C, Huffman S. *An Analysis of the Economic Value of Breastfeeding in El Salvador, Policy and Technical Monographs*. Washington D.C., Wellstart International and Nuture, 1994.

Woolridge M. *UK Baby Friendly Initiative, Calculating the Benefits of Breastfeeding*. London, United Kingdom, UNICEF UK (draft), 1995.

*WHO/UNICEF. *Breastfeeding Counselling: a Training Course, Trainer's Guide*. pages 420-421, Geneva, World Health Organization, 1993.

Wright A, Holberg C, Martinez F. Breast feeding and lower respiratory tract illness in the first year of life. *British Medical Journal*, 1989, 299:945-949.

*References used in the Session Plan.

Outline

Content	Trainer's Notes
1. Costs and savings from breastfeeding promotion in health facilities	<i>Presentation and discussion: 10 minutes</i>
<ul style="list-style-type: none"> ■ Brief examples of savings from breastfeeding promotion and rooming-in in health facilities: 	<p>Mention that a mini-version of the presentation is reproduced in Handout 6.1 and included in the participants' folder.</p> <p>Show slide/transparency 6.1, which provides the heading for this part of the session focusing on costs and savings for health facilities, and then show slides/transparenties with examples of savings from breastfeeding promotion in health facilities. If possible, use slides/transparenties showing data from your own country or region. If desired, use some or all of the slides/transparenties below which provide additional examples from a variety of countries:</p>
<ul style="list-style-type: none"> ■ A reduced need for infant formula, bottles, glucose and oxytocin in the Maternal and Child Hospital in Tegucigalpa, Honduras (<i>Huffman et al.</i>). 	Slide/transparency 6.2
<ul style="list-style-type: none"> ■ Reduced formula purchases and intravenous fluids used at Sanglah Hospital in Indonesia (<i>Soetjiningssih and Suraatmaja S.</i>). 	Slide/transparency 6.3
<ul style="list-style-type: none"> ■ Reduced length of newborn hospitalization at Sanglah Hospital in Indonesia (<i>Soetjiningssih and Suraatmaja S.</i>). 	Slide/transparency 6.4
<ul style="list-style-type: none"> ■ Decreased use of bottles in the newborn nursery in Hospital Santo Tomas in Panama City (<i>Levine et al.</i>). 	Slide/transparency 6.5
<ul style="list-style-type: none"> ■ Decreased need for staff in the Clinical Hospital of the Catholic University in Chile (<i>Valdes et al.</i>). 	Slide/transparency 6.6 Emphasize, if appropriate, that staff don't have to be laid off but can be reassigned to other important tasks.
<ul style="list-style-type: none"> ■ Cost analysis of maintaining a newborn nursery at the Dr. Jose Fabella Memorial Hospital. ■ Calculation of recurrent costs for maintenance of a nursery for normal newborns with formula feeding 	Show slides/transparenties 6.7 - 6.11 and refer participants to Handout 6.2. Inform the participants that the Medical Director of Fabella Hospital made this estimation of savings resulting from conversion to rooming-in at the hospital by calculating what extra costs in current prices would be involved in maintaining a full

Content	Trainer's Notes
<p>compared to the current system of rooming-in and intensified breastfeeding promotion (<i>Gonzales</i>).</p>	<p>system of nursery care and formula feeding as compared to rooming-in. Review the summary of costs for maintaining the nursery presented in the slides/transparencies and suggest that the participants look later at Handout 6.2 if they are interested in additional details on how the calculations were made. Mention that costs for converting to rooming-in (such as for training and physical changes) need to be calculated as well. Ask for questions or comments from the participants.</p>
<p>2. Creative ways to minimize costs or use existing resources when implementing the Ten Steps</p>	<p><i>Presentation and discussion: 10 minutes</i></p>
<ul style="list-style-type: none"> ■ Presentation of examples from a variety of countries of ways to minimize costs or use existing resources: <ul style="list-style-type: none"> ■ Reassign staff from the normal newborn nursery and/or formula room to provide mother/baby care and education on the rooming-in wards. ■ Organize a group of volunteers to provide breastfeeding counselling on the wards or ask a local mother-support organization to provide this service.(provide training and written guidelines for the volunteers to insure quality). ■ “Bed-in” babies with their mothers, if culturally acceptable, rather than providing them with cribs or bassinets. ■ Use a simple refrigerator for breast milk storage and low-cost containers for cup-feeding. ■ Counsel mothers, who are staying in the hospital so they can breastfeed their premature or sick babies, and, if possible, assist them in providing care. 	<p>Show slides/transparencies 6.12 and 6.13 and describe the examples of creative ways to minimize costs or use existing resources when implementing the Ten Steps. Stress the fact that what is appropriate and feasible will vary from country to country and that these examples are presented simply to provide ideas on ways health facilities might cut costs as they implement the Ten Steps.</p>
<ul style="list-style-type: none"> ■ Examples or suggestions from participants on other creative ways to cut costs or use existing resources more 	<p>After the examples have been given, ask the participants for their own suggestions concerning creative ways to cut costs or use existing resources (if participants do not have many</p>

Content	Trainer's Notes
efficiently and economically.	examples to contribute, ask the trainers for ideas and/or contribute some further suggestions yourself). List the suggestions on a blackboard or flip chart.
3. Estimating costs and saving in the participants' own institutions:	<i>Brief presentation, group work, and discussion: 30 minutes</i>
<ul style="list-style-type: none"> ■ Review of the Table that lists the potential costs and savings associated with breastfeeding promotion related to each of the “10 steps” in health facilities. 	<p>Refer participants to Handout 6.3. Describe how the Table can be used to help identify the items to consider when calculating costs and savings.</p> <p>Ask participants sitting next to each other to work in groups of two or three to examine the Table for 10 minutes or so and circle items in the various categories that are likely to result in both substantial costs and substantial savings in health facilities like their own as changes are made to better promote breastfeeding and become baby-friendly.</p> <p>Ask each group to report briefly on the costs and savings they have identified. List the items in a flipchart under two columns.</p> <p>Emphasize that it can be very useful to estimate the costs and savings at each of the participant's own health facilities. If the savings outweigh the costs, this is an added incentive for becoming baby-friendly. If some health facilities will need to give up acceptance of free or low-cost supplies of breast-milk substitutes in order to be designated baby-friendly, emphasize again that this is definitely required under the International Code and is better for mothers and babies.</p>
<ul style="list-style-type: none"> ■ Discussion of strategies participants can use to calculate the actual costs and savings associated with breastfeeding promotion in their own health facilities. <ul style="list-style-type: none"> ■ Participants can consider whether it would be useful and feasible to calculate the costs and savings related to implementing the Ten steps to successful breastfeeding in their own facilities and, if so, how they would go about it. 	<p>Ask participants for ideas concerning how they might calculate costs and savings in their own institutions. Issues could include:</p> <ul style="list-style-type: none"> ■ Whether costs and savings data are important at their institution for making decisions concerning BFHI and breastfeeding and, if so, who would use the data. ■ Whether they would rather choose to do simple estimates of key costs and savings or plan more detailed, complete studies. ■ Whether the study would be retrospective (like the study at Fabella Hospital, which estimated added costs if a nursery were reinstated) or prospective (measuring

Content	Trainer's Notes
	<p>costs and savings realized as BFHI is being implemented).</p> <ul style="list-style-type: none"> ■ Depending on the type and complexity of the study, whether an economist would need to be involved.
<p>4. Estimating costs and savings for the family (optional)</p>	<ul style="list-style-type: none"> ■ Presentations, group work, and discussion: 15-30 minutes
	<ul style="list-style-type: none"> ■ Decide whether to include these next two sections in the session, depending both on time available and whether family, health care system and national costs and savings are important to address, considering the types of participants in the course. If desired, an abbreviated version of this section can be presented using only selected slides/transparencies.
<ul style="list-style-type: none"> ■ It is important to look briefly at costs and savings of breastfeeding promotion for the family, both because the effects of the Baby-friendly Hospital Initiative don't stop at the hospital door, and because it is useful to consider the impact of breastfeeding promotion from a broader perspective. 	<p>Show slide/transparency 6.14, which provides the heading for the part of the session that focuses on costs and savings for the family.</p>
<ul style="list-style-type: none"> ■ Examples of lower costs for the family that can result from optimal breastfeeding: 	

Content	Trainer's Notes
<ul style="list-style-type: none"> ■ Breastfeeding can greatly reduce family expenses, especially in situations where the cost of formula consumes a good portion of an average worker's wage (<i>WHO</i>). 	<p>Ask the participants to calculate and compare the cost for infant formula for six months with the average (or minimum) wage for that same period. Before the session starts, decide whether to use slide/transparency 6.15 or 6.16 and Handout 6.4a or 6.4b, depending on whether there is one average (or minimum) wage for the country, or different wages for urban and rural areas. As mentioned under "Preparation for Session", before the session begins adjust whichever handout you will use so it uses formula "tins" of a weight commonly found locally (for example 500g tins or 450g tins) and adjust the number needed so 20 Kg of formula will be provided in the first six months (for example 40 500g tins or about 44 450g tins). Then fill in the information concerning brands of formula and their costs, as well as average (or minimum) wages.</p> <p>The exercise can be completed by the participants as a group for one brand of formula, with the trainer filling in the answers on the transparency. Alternatively, it can be done in several small groups, with each group making the calculations for a different brand of formula and reporting on their results.</p> <p>Discuss the results briefly, emphasizing the unnecessary financial burden formula feeding places on the family, since feeding a baby on formula costs a large part of an average (or minimum) wage, which many families cannot afford. Mention that there are other costs related to formula feeding, in addition to the costs for formula, such as costs for fuel and water, time spent in washing or sterilizing bottles and teats, etc. Stress the fact that promotion of formula to the public is not permitted under the International Code and that it is the responsibility of health services to ensure that they do not in any way promote or endorse the use of breast-milk substitutes.</p>
<ul style="list-style-type: none"> ■ Here are a few country examples of costs for one month of breast-milk substitutes for a 3 month old baby, the minimum wage, and percentage of this wage that it would cost to purchase the formula (<i>Gupta and Khanna</i>). 	<p>Show slide/transparency 6.17. Point out that these estimates don't include the time it takes to purchase, prepare, and administer the artificial feeds.</p>

Content	Trainer's Notes
<ul style="list-style-type: none"> ■ Costs for supplementing breastfeeding mothers' diets are much lower than for purchasing breast-milk substitutes. (examples from Côte d'Ivoire and France) (<i>Nurture and Bitoun</i>). 	<p>Show slides/transparencies 6.18 and/or 6.19. Emphasize the fact that the percentage of the average or minimum wage needed to supplement the breastfeeding mother's diet is much less than that needed for purchasing breast-milk substitutes.</p>
<ul style="list-style-type: none"> ■ (alternative to slides/transparencies 6.18 and/or 6.19:) The cost of breastfeeding to the household is substantially lower than the cost of artificial feeding, as shown by this example from Singapore (<i>Fok et al.</i>). 	<p>Show slides/transparencies 6.20 and 6.21. Discuss the fact that costs for the family for breastfeeding include both the cost of additional food for the lactating mother and the value of the mother's time in nursing her infant. For artificial feeding the costs include the costs for goods needed to feed artificially and the value of the time of each person participating in feeding.</p> <p>Numerous studies show that costs for infant formula and other supplies are higher than costs for feeding a lactating mother and that more time is needed for artificial feeding than breastfeeding, because of the preparation and clean up needed. Thus in Singapore and other settings around the world, breastfeeding is less expensive than feeding breast-milk substitutes.</p>
<p>5. Estimating costs and savings within the health care system and at the national level (optional)</p>	<p><i>Presentations and discussion: 15 minutes</i></p> <p>Show slide/transparency 6.22 which provides the heading for this part of the session focusing on costs and savings within the health care system and at national levels.</p>
<ul style="list-style-type: none"> ■ Breastfeeding helps minimize health care costs within health care systems and commercial enterprises: 	

Content	Trainer's Notes
<ul style="list-style-type: none"> ■ Costs for health care in the first year of life are much less for breastfed babies (example from Health Maintenance Organization) (<i>Ball and Wright</i>). 	<p>Show slides/transparencies 6.23 and 6.24. This study compared the frequency of health care utilization for 3 illnesses (lower respiratory tract illnesses, otitis media, and gastrointestinal illness) in relation to duration of exclusive breastfeeding in studies in Tucson, Arizona, and Dundee, Scotland. Children were classified as never breastfed, partially breastfed, or exclusively breastfed for at least 3 months. Cost estimates were based on direct medical costs for office visits, hospitalization, and prescriptions in a large HMO in Tucson, Arizona. The additional health care needed for never breastfed babies cost the system between \$331 and \$475 per child during the first year. These costs are conservative, as they only include some of the costs for 3 illnesses.</p>
<ul style="list-style-type: none"> ■ Breastfeeding support helps save employers money through reduction in infant illness rates and maternal absenteeism (example from two companies, USA) (<i>Cohen et al.</i>). 	<p>Show slide/transparency 6.25. The comparison of formula-fed and breastfed infants was made in two companies in California with lactation programmes (a utilities company and an aeronautics corporation). Results indicate that more illness was experienced among formula-fed infants (90% versus 58%).</p> <p>Show slide/transparency 6.26. In addition, the breastfeeding infants had fewer illness episodes resulting in maternal absence from work. The results indicate, for example, that in the breastfeeding group, only 11% of the illness episodes of babies resulted in their mothers being absent from work one day, while among the formula-fed group, 26% of the illnesses resulted in one-day absences ($p < .5$). The percentages of infant illnesses that led to 2 to 4 days absence and more than 4 days absence among the two groups (mothers breastfeeding and mothers formula-feeding) were just slightly higher for the formula-feeding group. Looking at all the illness episodes that resulted on one or <i>more</i> days of absences, the results show that:</p> <ul style="list-style-type: none"> ■ 43% of the illness episodes of formula-fed babies resulted in their mothers being absent one or more days from work. ■ Only 25% of the illness episodes of breastfed babies resulted in one or more days of maternal absence. ■ Fewer absences among mothers of breastfed babies can mean substantial savings for employers (<i>Cohen et al.</i>).

Content	Trainer's Notes
<ul style="list-style-type: none"> ■ At the national level, breast milk can be considered an important “national resource”. 	
<ul style="list-style-type: none"> ■ The value of breast milk to the national economy has been calculated for many different countries. The case of India can be examined as one interesting example (<i>Gupta and Khanna</i>). 	<p>Show slide/transparency 6.27.</p> <p>Review the value of the national “production of breast milk” in India. Emphasize the fact that if breastfeeding declines, additional costly and unnecessary expenditures for breast-milk substitutes (BMS) will result.</p>
<ul style="list-style-type: none"> ■ Breastfeeding promotion can result in substantial savings at the national level, not only due to the lowered need to purchase BMS, but also to lower costs for medical treatment and less lost time at work. 	
<ul style="list-style-type: none"> ■ One recent study in the US, for example, estimated that if exclusive breastfeeding were increased from the current levels (64% after delivery in the hospital, 29% at 6 months) to those recommended by the US Surgeon General (75% and 50%) the savings due to lowered costs for 3 childhood diseases would be a minimum of \$3.6 billion (<i>Weimer</i>). 	<p>Show slide/transparency 6.28.</p> <p>Explain that the estimates of costs due to breastfeeding at current rates compared to recommended rates are for otitis media, gastroenteritis, and necrotizing enterocolitis (NEC). Costs calculated include those for surgical treatment, physician visits, lost wages, and, in the case of NEC, for premature death. These estimates are on the conservative side, as they only include estimates for 3 conditions and not all costs for each of the conditions are included.</p>

Content	Trainer's Notes
<ul style="list-style-type: none"> ■ Savings from a reduction in a number of illnesses episodes can increase quickly with small (achievable) increases in exclusive breastfeeding, as shown by a study in England and Wales (<i>Department of Health</i>). ■ The hospital costs attributable to early weaning for five illnesses in just one territory in Australia have been estimated to be about \$1-2 million a year (<i>Smith et al.</i>). 	<p>Show slide/transparency 6.29. Point out that even very realistic increases in levels of breastfeeding can generate substantial savings. The National Health Service in the United Kingdom, for example, reports that just a 1% increase in the breastfeeding rate at 13 weeks would result in a savings of £500,000 in the treatment of gastro-enteritis.</p> <p>The study in Australia estimated the costs attributable to early weaning for five illnesses – gastrointestinal illness, respiratory illness and otitis media, eczema and necrotizing enterocolitis. The researchers point out that estimates would be higher if they included other chronic or common illnesses and out-of-hospital costs.</p>
<ul style="list-style-type: none"> ■ Increased investment in breastfeeding promotion would lead to substantial savings on health care costs, far outweighing the cost of promotion (example from El Salvador) (<i>Wong et al.</i>). 	<p>Show slides/transparencies 6.30 through 6.32.</p> <p>Describe the example of El Salvador, where a thorough study was made of the benefits to the public sector from the current levels of breastfeeding, the costs for current breastfeeding promotion activities, and the additional savings that could be realized through an intensified programme of breastfeeding promotion:</p> <ul style="list-style-type: none"> ■ Annual benefits from current levels of breastfeeding are over 2,800,000 USD. (slide/transparency 6.30). ■ The cost of current breastfeeding promotion activities is 32,000 USD. If an additional 90,000 USD were spent for intensified promotional activities, it is estimated that exclusive breastfeeding for infants under 6 months would increase from 15% to 30%. (slide/transparency 6.31). ■ The net benefit from the current level of breastfeeding promotion is over 2,775,000 USD. The intensified activities would yield an additional 624,000 USD in savings. (slide/transparency 6.32). <p>Mention the fact that the study in El Salvador (and several other countries) was made using a <i>Workbook for Policymakers: Guide to Assessing</i></p>

Content	Trainer's Notes
	<p><i>the Economic Value of Breastfeeding</i>. This workbook, which is available from The LINKAGES Project (1825 Connecticut Ave. NW, Washington D.C. 20009), can be used to calculate the costs and savings of breastfeeding at a national level.</p>
<p>6. Costs and savings related to breastfeeding promotion (discussion)</p> <ul style="list-style-type: none"> ■ Discussion of issues related to costs and savings of breastfeeding promotion in the participants' own institutions and country. 	<p>Discussion: 10 minutes</p> <p>Ask the participants to raise any issues that come to mind related to the costs and savings of breastfeeding promotion.</p> <p>Issues that could be explored include:</p> <ul style="list-style-type: none"> ■ How important the cost and savings issue is (both within health facilities and the larger health system). ■ How government and health facility officials and staff can be sensitized to the savings that can be realized through intensified breastfeeding promotion.

Summaries of research studies presented during Session 6

Slide/transparency: Study:

- 6.6 Valdes V, Perez A, Labbok M, Pugin E, Zambrano I, Catalan S. The impact of a hospital and clinic-based breastfeeding promotion programme in a middle class urban environment. *J Trop Pediatr.* 1993 Jun; 39(3):142-51.
- 6.20-6.21 Fok D, Mong TG, Chua D. The economics of breastfeeding in Singapore. *Breastfeed Rev.* 1998 Aug; 6(2):5-9.
- 6.23-6.24 Ball TM, Wright AL. Health care costs of formula-feeding in the first year of life. *Pediatrics.* 1999 Apr; 103(4 Pt 2):870-876.
- 6.25-6.26 Cohen R, Mrtek MB, Mrtek RG. Comparison of maternal absenteeism and infant illness rates among breastfeeding and formula-feeding women in two corporations. *Am J Health Promot.* 1995 Nov-Dec, 10(2):148-153.

The impact of a hospital and clinic-based breastfeeding promotion programme in a middle class urban environment

Refers to slide/transparency 6.6

Reference: Valdes V, Perez A, Labbok M, Pugin E, Zambrano I, Catalan S. The impact of a hospital and clinic-based breastfeeding promotion programme in a middle class urban environment. *J Trop Pediatr.* 1993 Jun; 39(3):142-151.

Background. Hospital interventions in support of breastfeeding have been highly successful in areas where the indigenous population has a well-established environment of breastfeeding. However, programmes designed to improve breastfeeding patterns in urban populations have met with mixed success.

Methods. This paper presents a prospective intervention study with a control group in which a health system-based breastfeeding promotion programme was initiated to support optimal breastfeeding for both child health and child spacing. Following collection of control data, a four-step intervention programme (Breastfeeding Promotion Program) was instituted.

Findings. This paper reports the process of the development of the intervention programme as well as the comparison of the control and study populations. Major findings include significant increases in duration of full breastfeeding from 31.6 per cent at 6 months in the control group to 66.8 per cent in the intervention group. The duration of lactational amenorrhea was similarly increased: 22 per cent of the control mothers and 56 per cent of the intervention group women were in amenorrhoea at 180 days.

Conclusions. The cost-effectiveness of the hospital changes is illustrated.

The economics of breastfeeding in Singapore

Refers to slides/transparencies 6.20 and 6.21

Reference: Fok D, Mong TG, Chua D. The economics of breastfeeding in Singapore. *Breastfeed Rev.* 1998 Aug;6(2):5-9.

Background. A study of 340 mothers was conducted in Kandang Kerbau Hospital on September 1992 to determine if it were more economical for households to breastfeed or bottle-feed an infant for the first three months.

Methods. Two economic models, a low cost model and a high cost model, were adopted incorporating a mathematical expression from Almroth's work in 1979.

Findings. The savings in a mother's gross income for the period ranged from 3% to 9% for the low cost model and from 8% to 21% for the high cost model.

Conclusions. From the household perspective, two components contributed to the economic savings of breastfeeding over artificial feeding: the cost of goods consumed and the time taken to feed the baby. It was noted that the time taken to artificially feed is longer than the time taken to breastfeed an infant. The results of this study provided more concrete basis for policy makers and advocates of breastfeeding to promote breastfeeding in Singapore. The amount of savings from breastfeeding could be considered for the health care system from the public perspective.

Health care costs of formula-feeding in the first year of life

Refers to slides/transparencies 6.23 and 6.24

Reference: Ball TM, Wright AL. Health care costs of formula-feeding in the first year of life. *Pediatrics*. 1999 Apr; 103(4 Pt 2):870-876.

Objective: To determine the excess cost of health care services for three illnesses in formula-fed infants in the first year of life, after adjusting for potential confounders.

Methods: Frequency of health service utilization for three illnesses (lower respiratory tract illnesses, otitis media, and gastrointestinal illness) in the first year of life was assessed in relation to duration of exclusive breastfeeding in the Tucson Children's Respiratory Study (n = 944) and the Dundee Community Study (Scottish study, n = 644). Infants in both studies were healthy at birth and represented non-selected, population-based samples. Children were classified as never breastfed, partially breastfed, or exclusively breastfed, based on their feeding status during the first 3 months of life. Frequency of office visits and hospitalizations for the three illnesses was adjusted for maternal education and maternal smoking, using analysis of variance. Cost estimates, from the perspective of the health care provider/payer, were based on the direct medical costs during 1995 within a large managed care health care system.

Results: In the first year of life, after adjusting for confounders, there were 2033 excess office visits, 212 excess days of hospitalization, and 609 excess prescriptions for these three illnesses per 1000 never-breastfed infants compared with 1000 infants exclusively breastfed for at least 3 months. These additional health care services cost the managed care health system between \$331 and \$475 per never-breastfed infant during the first year of life.

Conclusions: In addition to having more illnesses, formula-fed infants cost the health care system money. Health care plans will likely realize substantial savings, as well as providing improved care, by supporting and promoting exclusive breastfeeding.

Comparison of maternal absenteeism and infant illness rates among breastfeeding and formula-feeding women in two corporations

Refers to slides/transparencies 6.25 and 6.26

Reference: Cohen R, Mrtek MB, Mrtek RG. Comparison of maternal absenteeism and infant illness rates among breastfeeding and formula-feeding women in two corporations. *Am J Health Promot.* 1995 Nov-Dec, 10(2):148-53.

Purpose: A comparison was made between breastfeeding and formula-feeding among employed mothers. Absenteeism directly related to childcare was examined. DESIGN: This quasi-experimental study followed convenience samples of breastfeeding and formula-feeding mothers until their infants were weaned or reached 1 year of age.

Setting: Two corporations with established lactation programs were used. One had approximately 100 births annually among 2400 female employees, and the other had approximately 30 births annually among 1200 female employees.

Subjects: A sample of 101 participants, 59 feeding breast milk and 42 using commercial formula, was composed of employees returning from maternity leave for a medically uncomplicated birth.

Intervention: The programs provided counselling by a lactation professional for all participants and facilities to collect and store breast milk.

Measures: Confidential participant diaries provided descriptive data on infant illnesses and related absenteeism that the lactation consultant verified with health care providers and through employer attendance records.

Analysis: Attribute counts of illnesses and absenteeism were reported as percentages. Single degree of freedom chi square tests were used to compare rates between nutrition groups.

Findings: Approximately 28% of the infants in the study had no illnesses; 86% of these were breastfed and 14% were formula-fed. When illnesses occurred, 25% of all 1-day maternal absences were among breastfed babies and 75% were among the formula-fed group.

Conclusions: In this study fewer and less severe infant illnesses and less maternal absenteeism was found in the breastfeeding group. This was not an experimental study. Participants were self-selected, and a comparison group was used rather than a true control group. Corroboration of these findings from larger experimental studies is needed to generalize beyond these groups.

Handout 6.1

Presentation for session 6: Costs and savings

Breastfeeding promotion:

Costs and savings for health facilities

Transparency 6.1

The Maternal and Child Hospital in Tegucigalpa, Honduras, with approximately 12,000 deliveries a year, instituted an intensive breastfeeding promotion and rooming-in programme which resulted in major savings for:

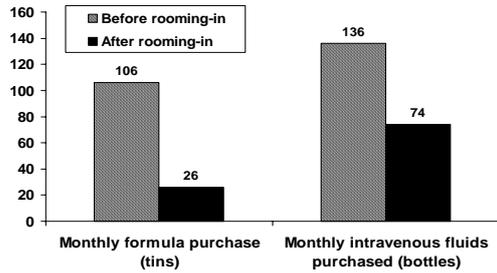
- Formula: \$8,500
- Bottles: \$7,500
- Glucose Solution: \$1,500
- Oxytocin (Methergine): \$1,000

The change saved the hospital \$16,500 annually

Adapted from: Huffman SL et al. *Breastfeeding Promotion in Central America: High Impact at Low Cost*. Washington D.C., Nutrition Communication Project, AED, 1991.

Transparency 6.2

Cost savings realized through intensified rooming-in programme at Sanglah Hospital, Indonesia*

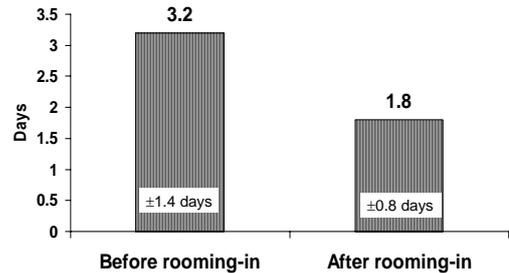


*Annual deliveries 3,000-3,500

Adapted from: Soetjningsih and Sudaryat Suraatmaja. The advantages of rooming-in. *Paediatrica Indonesiana*, 1986, 26:229-35.

Transparency 6.3

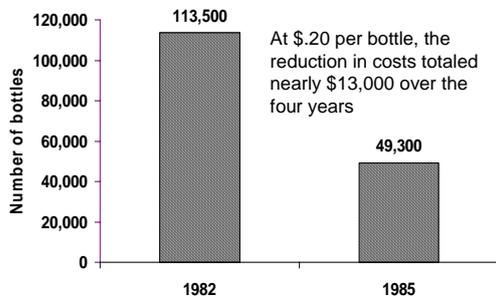
Average length of newborn hospitalization Sanglah Hospital, Indonesia



Adapted from: Soetjningsih and Sudaryat Suraatmaja. The advantages of rooming-in. *Paediatrica Indonesiana*, 1986, 26:229-35.

Transparency 6.4

Cost savings due to breastfeeding promotion activities at Hospital Santo Tomas in Panama City

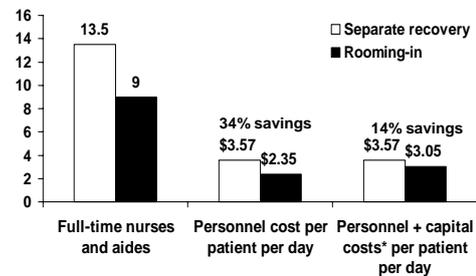


At \$.20 per bottle, the reduction in costs totaled nearly \$13,000 over the four years

Adapted from: Levine & Huffman. *The Economic Value of Breastfeeding, The National, Public Sector, Hospital, and Household Levels, A Review of the Literature*. Washington D.C., Nuture/Center to Prevent Childhood Malnutrition, 1990.

Transparency 6.5

Cost savings of rooming-in compared to separate recovery rooms at the Clinical Hospital of the Catholic University of Chile



Adapted from: Valdes et al. The impact of a hospital and clinic-based breastfeeding promotion programme in a middle class urban environment. *Journal of Tropical Pediatrics*. 1993, 39:142-151.

Transparency 6.6

Cost analysis of maintaining a newborn nursery at the Dr. Jose Fabella Memorial Hospital

Hospital Statistics:

Average daily deliveries: 100 babies

Daily newborn census: 320 babies

Adapted from: Gonzales R. Cost Analysis of Maintaining a Newborn Nursery at Dr. Jose Fabella Memorial Hospital, Manila. (Transparencies presented in meeting in Manila, Philippines), 1990.

Transparency 6.7

Summary of costs for maintaining a newborn nursery

Feeding bottle sets/year	
124,800 x 20 P =	2,496,000 P
Milk formula cans/year	
17,521 x 36 P =	630,720 P
Salary of nursing staff/year	
900 x 3,000 P x 12 =	3,240,000 P
Salary of formula room staff/year	
6 x 2,000 P x 12 =	144,000 P
<hr/>	
Total	6,510,720 P (310,037 USD)

Transparency 6.8

Not included:

- Cost of electricity
- Cost of water
- Cost of detergents
- Cost of diapers
- Cost of bassinets
- Cost of cleaning utensils

Transparency 6.9

How much is this of the hospital budget?

$$\begin{aligned} \text{Cost} &= && 6,510,720 \text{ P} \\ \text{Budget} &= && \frac{6,510,720 \text{ P}}{73,000,000 \text{ P}} = 8\% \end{aligned}$$

Transparency 6.10

The savings of 8% of the hospital budget is now converted into:

- Availability of drugs and medicines at all times
- Improved food and nourishment for patients
- Availability of blood in times of emergency
- Fresh linens and gowns for patients
- Additional nursing staff to attend to patients.

Transparency 6.11

Creative ways to minimize costs or use existing resources
Part 1

- Reassign staff from the normal newborn nursery and formula room to provide mother/baby care and education on the rooming-in wards.
- Organize a group of volunteers to provide breastfeeding counselling on the rooming-in wards or ask a local mother support organization to provide this service. (Provide training and written guidelines for the volunteers to insure quality.)

Transparency 6.12

Creative ways to minimize costs or use existing resources
Part 2

- “Bed-in” babies with their mothers rather than providing them with cribs or bassinets if culturally acceptable.
- Use a simple refrigerator for breast milk storage and free or low cost containers for cup-feeding.
- Teach mothers, who are staying in the hospital so they can breastfeed their premature or sick babies, also how to help provide care for their babies.

Transparency 6.13

Breastfeeding promotion:

Costs and savings for families

Transparency 6.14

Exercise: The percentage of wages needed to feed formula to an infant for six months

Calculation
 Brand of formula:
 Cost of one 500g tin of formula:
 Cost of 40 x 500g tins of formula (amount needed for 6 months):
 Average (or minimum) wage
 1 month:
 6 months:
 Cost of 40 x 500g tins of formula X 100 =%
 Average (or minimum) wage for 6 months
 X 100 =%

Answer: To feed a baby on formula costs:% of the average (or minimum) wage

Adapted from: WHO/UNICEF. *Breastfeeding Counselling: A Training Course, Trainer's Guide*, pages 420-421, Geneva, World Health Organization, 1993. Transparency 6.15

Exercise: The percentage of urban and rural wages needed to feed formula to an infant for six months

Calculation
 Brand of formula:
 Cost of one 500g tin of formula: x 40 tins =
 Average (or minimum) wage Agricultural Urban
 1 month:
 6 months:
 Cost of 40 x 500g tins of formula X 100 =%
 Agricultural wage for 6 months
 Cost of 40 x 500g tins of formula X 100 =%
 Urban wage for 6 months
 X 100 =%

Answers: To feed a baby on formula costs:% of the agricultural wage
 To feed a baby on formula costs:% of the urban wage

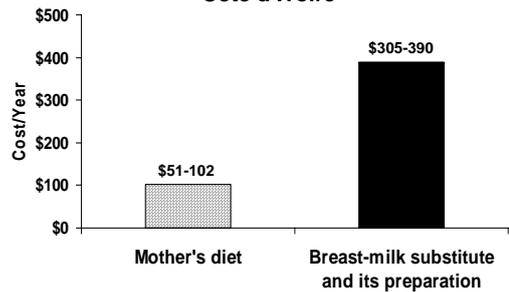
Adapted from: WHO/UNICEF. *Breastfeeding Counselling: A Training Course, Trainer's Guide*, pages 420-421, Geneva, World Health Organization, 1993. Transparency 6.16

Costs of breast-milk substitutes and comparisons with minimum wages

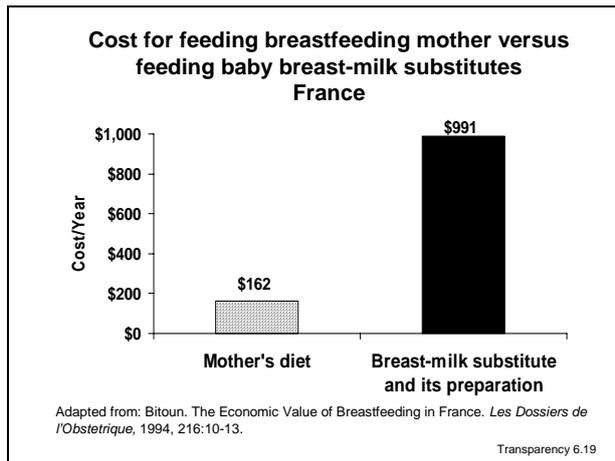
Country	Cost per kg (in US\$)	Cost per month (in US\$)	Minimum wage per month (in US\$)	% of wage per month
New Zealand	8.78	36.00	764	5
Germany	16.40	67.24	1149	6
Malaysia	7.42	30.42	143	21
Poland	24.51	100.49	394	26
Slovakia	8.33	34.15	79	43
Indonesia	6.73	27.60	55	50

Adapted from: Gupta and Khanna. Economic value of breastfeeding in India. *The National Medical Journal of India*, 1999, May-June 12(3):123-7. Transparency 6.17

Cost for feeding breastfeeding mother versus feeding baby breast-milk substitutes Côte d'Ivoire



Adapted from: Nurture, The Economic Value of Breastfeeding: Four Perspectives for Policymakers. *Center to Prevent Childhood Malnutrition Policy Series*, 1990, 1(1):1-16, September. Transparency 6.18



- ### Household savings from breastfeeding in Singapore
- Cost of breastfeeding =
 - Costs of additional food for lactating mother *plus*
 - Value of mother's time for breastfeeding
 - Cost of artificial feeding =
 - Cost of goods needed to feed artificially (milk, bottles, fuel, utensils) *plus*
 - Value of time of each person participating in feeding
- Adapted from: Fok et al. The economics of breastfeeding in Singapore. *Breastfeeding Review: Professional Publication of the Nursing Mothers' Association of Australia*, 1998, 6(2):5-9.
- Transparency 6.20

- ### Household savings for the first 3 months of life if breastfeeding, for 15,410 babies born in Kendang Kerbau Hospital in Singapore:
- Low cost model*: \$4,078,102 (\$264 per infant)
 - High cost model*: \$7,453,817 (\$483 per infant)
- * The low cost model used low or average costs for formula, feeding supplies, sterilization, and wages. The high cost model used higher costs for the same items.
- Adapted from: Fok et al. The economics of breastfeeding in Singapore. *Breastfeeding Review: Professional Publication of the Nursing Mothers' Association of Australia*, 1998, 6(2):5-9.
- Transparency 6.21

Breastfeeding promotion:

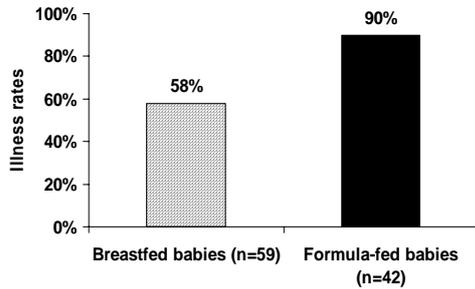
Costs and savings at the health care system and the national level

Transparency 6.22

- ### Comparative health care costs of treating breastfed and formula-fed babies in the first year of life in a health maintenance organization (HMO)
- When comparing health statistics for 1000 never breastfed infants with 1000 infants exclusively breastfed for at least 3 months, the never breastfed infants had:
- 60 more lower respiratory tract illnesses
 - 580 more episodes of otitis media, and
 - 1053 more episodes of gastrointestinal illnesses
- Adapted from: Ball & Wright. Health care costs of formula-feeding in the first year of life. *Pediatrics*, 1999, April, 103(4 Pt 2):870-6.
- Transparency 6.23

- ### In addition, the 1000 never-breastfed infants had:
- 2033 excess office visits
 - 212 excess hospitalizations
 - 609 excess prescriptions
- These additional health care services cost the managed care system between \$331 and \$475 per never-breastfed infant during the first year of life.
- Adapted from: Ball & Wright. Health care costs of formula-feeding in the first year of life. *Pediatrics*, 1999, April, 103(4 Pt 2):870-6.
- Transparency 6.24

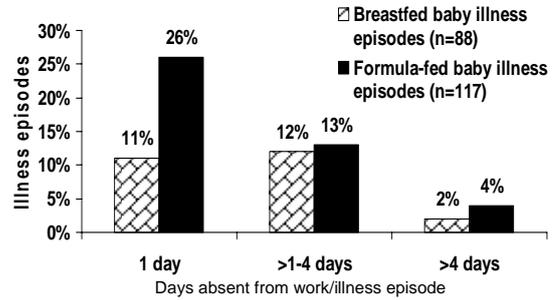
Illness rates among breastfeeding & formula-feeding infants of mothers working in two corporations in the U.S.



Adapted from: Cohen et al. Comparison of maternal absenteeism and illness rates among breastfeeding and formula-feeding women in two corporations. *AJHP*, 1995, 10(2):148-153.

Transparency 6.25

Distribution of illness episodes and maternal absenteeism by nutritional groups



Adapted from: Cohen et al. Comparison of maternal absenteeism and illness rates among breastfeeding and formula-feeding women in two corporations. *AJHP*, 1995, 10(2):148-153.

Transparency 6.26

The value of breast milk to the national economy in India

- National production of breast milk by all mothers in India for the children they were breastfeeding at the time of the estimate was about 3944 million liters over 2 yrs.
- If the breast milk produced were replaced by tinned milk, it would cost 118 billion Rupees.
- If imported, the breast-milk substitutes would cost 4.7 million USD.
- If breastfeeding practices were optimal, breast milk production would be twice the current amount, doubling the savings by fully utilizing this “national resource”.

Adapted from: Gupta and Khanna. Economic value of breastfeeding in India. *The National Medical Journal of India*, 1999, May-June 12(3):123-7.

Transparency 6.27

Savings from 3 childhood illnesses if exclusive breastfeeding rates were increased to levels recommended by the Surgeon General in the U.S.*

Condition	Costs included	Savings in \$
Otitis media	Surgical & nonsurgical treatment and lost time and wages.	\$ 365,077,440
Gastroenteritis	Physician visits, lost wages, childcare, and hospitalization	\$ 9,941,253
Necrotizing Enterocolitis (NEC)	Surgical treatment, lost wages, and value of premature death	\$3,279,146,528
TOTAL:		Over \$3.6 billion

* Current levels of EBF were 64% after delivery and 29% at 6 months. Recommended levels are 75% after delivery and 50% at six months.

Adapted from: Weimer. *The economic benefits of breastfeeding: A review and analysis*, Food Assistance & Nutrition Research Report No. 13. Wash.D.C., USDA, 2001.

Transparency 6.28

Savings from potential increases in exclusive breastfeeding in England and Australia

- In England and Wales it has been estimated that the National Health Service spends £35 million per year in treating gastroenteritis in bottle-fed infants.
- For each 1% increase in breastfeeding at 13 weeks, a savings of £500,000 in treatment of gastroenteritis would be achieved.
- In Australia, in just one territory, hospital costs attributable to early weaning for five illnesses have been estimated to be about \$1-2 million a year.

Adapted from: Dept. of Health. *Breastfeeding: Good practice guidance to the NHS*. London, United Kingdom of Great Britain, 1995, and Smith et al., Hospital system costs of artificial feeding: Estimates for the Australian Capital Territory, *Aust N Z J Public Health*, 2002 26(6):543-51.

Transparency 6.29

A full case study of costs and savings from breastfeeding and promotional activities in El Salvador: Total annual benefits to the public sector from current levels of breastfeeding

Source of benefit	Total annual amount
Infant diarrhoea cases prevented	\$456,130
Infant ARI cases prevented	\$839,583
Births averted (delivery costs)	\$1,224,328
Breastmilk substitutes use averted	\$288,337
TOTAL	\$2,808,378

Adapted from: Wong et al. *An Analysis of the Economic Value of Breastfeeding in El Salvador*, Policy & Technical Monographs. Washington D.C., Wellstart Intl. and Nuture, 1994.

Transparency 6.30

Annual costs and benefits for current and intensified activities to promote breastfeeding (El Salvador)

Current activities:

- Advocacy/monitoring
- Hospital-based promotion
- PHC facility & community promotion
- Information, education & communication

Current cost: \$32,000

Additional cost for intensified activities: \$90,188

Estimated benefit of intensified activities:

- Increase in exclusive breastfeeding among infants under 6 months from **15% to 30%**

Adapted from: Wong et al. *An Analysis of the Economic Value of Breastfeeding in El Salvador, Policy & Technical Monographs*. Washington D.C., Wellstart Intl. and Nuture, 1994
Transparency 6.31

Net benefits from breastfeeding promotion: Comparison of the current and an intensified programme (El Salvador)

	Current	Additional under alternative
Benefits	\$2,808,378	\$714,328
Costs	\$32,830	\$90,188
Net benefits	\$2,775,558	\$624,140

Adapted from: Wong et al. *An Analysis of the Economic Value of Breastfeeding in El Salvador, Policy & Technical Monographs*. Washington D.C., Wellstart International and Nuture, 1994
Transparency 6.32

Handout 6.2

Cost analysis of maintaining a newborn nursery at the Dr. Jose Fabella Memorial Hospital¹

Hospital statistics

Average daily deliveries - 100 babies

Daily newborn census - 320 babies

Physical facilities

Nursery space for 300 bassinets

Formula room for 2400 formulas a day

Manpower needs

Coverage: 24-hour basis

Ratio: 1 nursing staff to 10 newborns (1:10)

Total nursing staff: 90 in 24 hours (30 in three shifts)

Formula room staff: 6 in 24 hours (2 in three shifts)

Materials and supplies

Feeding bottles sets: 124,800 sets/year

$$\begin{array}{r}
 300 \text{ babies} \\
 \underline{\times 8} \text{ feeds/day (every three hours in 24 hours)} \\
 2,400 \text{ feeding bottle sets/day} \\
 \underline{\times 52} \text{ weeks/year (one set lasts for one week of re-use)} \\
 124,800 \text{ feeding bottle sets/year}
 \end{array}$$

Milk formula: 17,520 one-pound cans/year

$$\begin{array}{r}
 2,400 \text{ scoops of formula/feed} \\
 \underline{\div 50} \text{ scoops for every one-pound can} \\
 48 \text{ cans per day} \\
 \underline{\times 365} \text{ days} \\
 17,520 \text{ cans/year}
 \end{array}$$

¹ Developed by Dr. Ricardo Gonzales, Medical Director, Dr. Jose Fabella Memorial Hospital, Manila, Philippines, 1990.

Other costs

Electricity	■	Cleaning brushes
Water	■	Babies diapers
Detergents	■	Bassinets

Summary of costs for maintaining a newborn nursery

Feeding bottle sets/year (124,800 x 20 P) =	2,496,000 P
Milk formula cans/year (17,521 x 36 P) =	630,720 P
Salary of nursing staff/year (90 x 3,000 P x 12) =	3,240,000 P
Salary of formula room staff/year (6 x 2,000 P) =	144,000 P
Total	6,510,720 P*
	(310,034 USD)

* Costs not included: electricity, cleaning utensils, water, diapers, detergents, and bassinets.

How much of the national budget is this?

Cost: $\frac{6,510,720 \text{ P}}{73,000,000 \text{ P}}$

Budget: 73,000,000 P

The savings of 8% of the hospital budget is now converted into:

Availability of drugs and medicines at all times.

Improved food and nourishment for patients.

Availability of blood in times of emergency.

Fresh linens and gowns for patients.

Additional nursing staff to attend to patients.

Table 1:
Potential costs and savings associated with breastfeeding promotion in health facilities
 (organized according to the BFHI “Ten steps to successful breastfeeding”)

	Costs or use of existing resources	Savings
Step 1: Have a written breastfeeding policy	Lobbying or promotional activities <i>[staff time, materials]</i> Selecting coordinator and BF committee, developing policy <i>[staff time]</i>	More mothers choose facility due to improved image as “baby-friendly” <i>[higher patient census and thus more patient fees]</i>
Step 2: Train all health care staff	Initial training of staff <i>[educational materials, supplies, trainer fees, if any, staff time off]</i> Refresher training and training of new staff <i>[educational materials, supplies, trainer fees, if any, staff time off]</i>	
Step 3: Inform all pregnant women about the benefits and management of breastfeeding	Education and counselling on breastfeeding during antenatal care <i>[staff time, educational materials]</i> Loss of donations of promotional materials from companies promoting breast-milk substitutes <i>[any promotional materials that were provided free of charge]</i>	No group education and counselling on feeding breast-milk substitutes (BMS) <i>[less staff time and educational material. Individual counselling on BMS may still be needed for HIV+ mothers who decide to replacement feed]</i>
Step 4: Help mothers initiate breastfeeding within a half-hour of birth	Staff assistance with breastfeeding after delivery <i>[change of tasks, no extra staff needed]</i>	Less anesthesia and shift to local rather than general anesthesia during delivery (so mother/baby pair will be awake for breastfeeding) <i>[less anesthesia, cotton, and syringes, less costly anesthesia]</i>

	Costs or use of existing resources	Savings
Step 4: Help mothers initiate breastfeeding within a half-hour of birth (continued)		<p>Less oxytocic drugs (since with breastfeeding the body's natural release of oxytocin helps to contract the uterus) <i>[less oxytocic drugs, supplies (syringes, cotton), and staff time]</i></p> <p>Less hypothermia with skin-to-skin whole body contact and thus less use of warmers or incubators <i>[less staff time]</i></p>
Step 5: Show mothers how to breastfeed and how to maintain lactation even if separated	<p>Education and counselling on breastfeeding on wards <i>[nursery staff redeployed for mother/baby support on wards X no extra cost]</i></p> <p>Breast milk expression and storage <i>[breast milk expression supplies and equipment, refrigerator space – don't need breast pumps or milk bank]</i></p>	<p>Use of volunteer breastfeeding counsellors, if allowed <i>[less staff time for counselling and care]</i></p> <p>No group education and counselling on feeding breast-milk substitutes <i>[less staff time and educational materials. Individual counselling on BMS may still be needed for HIV+ mothers who decide to replacement feed.]</i></p> <p>Use of expressed breast milk rather than breast-milk substitutes whenever possible <i>[less purchase and preparation of breast-milk substitutes]</i></p>
Step 6: Give newborn infants no food or drink other than breast milk, unless medically indicated	<p>No free or low-cost supplies of breast-milk substitutes <i>[purchase of any supplies of BMS for at least 80% of fair market value]</i></p> <p>Loss of general benefits provided by companies selling breast-milk substitutes <i>[equipment, supplies, educational benefits, etc., that had been provided free of charge]</i></p>	<p>Less or no breast-milk substitutes</p> <p>No glucose water preparation and use for normal newborns <i>[no staff time for preparation and feeding of breast-milk substitutes. Less or no expenditure on bottles and teats, breast-milk substitutes and glucose water, electricity, water, equipment and supplies for washing and sterilizing bottles, mixing breast-milk substitutes, etc. Some equipment and supplies may be necessary to</i></p>

	Costs or use of existing resources	Savings
		<i>counsel HIV+ mothers who decide to replacement feed]</i>
Step 7: Practice rooming-in	<p>On the wards:</p> <p>One-time alteration of physical facilities, if necessary, to allow rooming-in <i>[any costs for physical alterations]</i></p>	<p>On the wards:</p> <p>Nursery space available for other purposes <i>[space available for alternative use; expenses for nursery equipment, supplies, upkeep reduced or eliminated]</i></p> <p>Less or no care of infants in nursery and transporting of newborns from nursery to postpartum wards <i>[less staff time]</i></p> <p>Fewer or no bassinets or baby cots <i>[expense for bassinets reduced or eliminated]</i></p> <p>More mother-to-baby care and feeding and fewer fussy babies <i>[less staff time for baby care and feeding- staff freed for other duties]</i></p> <p>More mother-to-mother care and assistance <i>[less staff time for mother care - staff freed for other duties]</i></p> <p>Reduced morbidity and mortality due to diarrhoeal disease, respiratory illness, sepsis, meningitis, jaundice <i>[less staff time and other costs for longer hospitalization such as medical equipment, bed occupancy, feeding and care of sick infants, intravenous fluids, etc.]</i></p>

	Costs or use of existing resources	Savings
Step 7: Practice rooming-in (breastfeeding mothers of babies in newborn special care unit encouraged to remain in hospital)	<p>In the neonatal intensive care unit:</p> <p>Breastfeeding mothers of babies in newborn special care unit stay in hospital <i>[space for mothers=beds, food]</i></p>	<p>In the neonatal intensive care unit:</p> <p>Mothers of babies in special care unit taught to care for own infants <i>[less staff time required for infant care in Special Care Unit]</i></p> <p>Shorter stay of babies in special care unit due to breastfeeding, more care of infants by mothers, with mothers learning how to care for infants at home as well <i>[less staff time, space, use of equipment and supplies]</i></p> <p>Reduced morbidity and mortality due to neonatal infection <i>[less staff time and other costs for longer hospitalization]</i></p> <p>Lower abandoned babies <i>[less feeding costs, less staff time for care and placement of babies]</i></p>
Step 8: Encourage breastfeeding on demand		Fewer fussy babies <i>[less staff time]</i>
Step 9: Give no artificial teats or pacifiers to breastfeeding infants	Cup-feeding of expressed breast milk <i>[cups and spoons]</i>	No pacifiers or bottles and teats (nipples) for breastfeeding infants <i>[no pacifiers or bottles and teats supplied by hospital]</i>
Step 10: Foster the establishment of breastfeeding support groups and refer mothers to them on discharge	Follow-up support for breastfeeding mothers, such as breastfeeding support during postnatal visits, lactation clinics, home visits, telephone calls and/or through mother support groups <i>[costs depend on types of support provided]</i>	Less illness and fewer visits to outpatient department and paediatric unit due to less breast milk substitutes and bottle-feeding, less diarrhoeal disease, respiratory illness, allergy, malnutrition due to diluted breast milk substitutes, etc. <i>[less staff time, less medicine, and fewer other costs for patient care]</i>

Handout 6.4a

Exercise

The percentage of wages needed to feed formula to an infant for six months

Calculation:

Brand of formula:

Cost of one 500g tin* of formula:

Cost of 40 x 500g tins* of formula (amount needed for 6 months):

Average (or minimum) wage

1 month:

6 months:

Cost of 40 x 500g tins formula
 _____ x 100 = %

Average (or minimum) wage
 for 6 months

Answer:

To feed a baby on formula costs:

..... % of the average (or minimum) wage

*A mother/family needs about 20 Kg of formula to feed her baby for six months. Adapt the calculations, if necessary. For example, if locally formula is sold in 450 g tins, 44 tins would be needed for six months.

**Adapted from: Breastfeeding Counselling: a Training Course, Trainer's Guide,
 WHO/UNICEF, 1993, pp. 420-421.**

Handout 6.4b

Exercise

The percentage of urban and rural wages needed to feed formula to an infant for six months

Calculation:

Brand of formula:

Cost of one 500g tin* of formula:

Cost of 40 x 500g tins* of formula (amount needed for 6 months):

Average (or minimum) wage	Agricultural	Urban
1 month:
6 months:

Cost of 40 x 500g tins formula		
		x 100 = %
Agricultural wage for 6 months		

Cost of 40 x 500g tins formula		
		x 100 = %
Urban wage for 6 months		

Answers:

To feed a baby on formula costs % of the agricultural wage

To feed a baby on formula costs % of the urban wage

* A mother/family needs about 20 Kg of formula to feed her baby for six months. Adapt the calculations, if necessary. For example, if locally formula is sold in 450 g tins, 44 tins would be needed for six months.

Adapted from: *Breastfeeding Counselling: a Training Course, Trainer's Guide*, WHO/UNICEF, 1993, pp. 420-421.

Session 7

Appraising policies and practices

Objectives

At the conclusion of this session, participants will be able to:

- Use the *WHO/UNICEF BFHI hospital self-appraisal tool* to appraise how well their health facilities are following the “Ten steps to successful breastfeeding” and on which steps improvement is needed.

Duration

Introduction: 5 minutes

Completion of *Self-appraisal tool* (during session or evening before): 15 -25 minutes

Group or individual work to summarize results: 15 minutes

Total: 20-45 minutes during session

Teaching methods

Group or individual work

Preparation for session

- Course planners and facilitators should decide when this session should be scheduled during the course. Two options include:
 - Scheduling the session between *Session 6: Costs and savings* and *Session 8: Developing action plans* on the second day of the course.
 - Scheduling this session right after *Session 3: The Baby-friendly Hospital Initiative* on the first day of the course.
- Option one has two advantages. If the session is scheduled for the second day course facilitators can ask the participants to get together the evening before and fill out the *Self-appraisal tool*, thus saving 10-15 minutes in the course schedule and allowing each team to complete the task at its own pace. In addition, the participants can be asked to develop their Action plans (Session 8) right after identifying areas needing improvement in their health facilities through this analysis.

- Option two has the advantage that participants will have analyzed their own hospital policies and practices through the use of the *Self-appraisal tool* before they get introduced to the *Scientific basis of the Ten Steps* (Session 4) and then work on general strategies for *Becoming baby-friendly* (Session 5). Knowing where they “fall short” in implementing the *Ten Steps* in their own institutions may motivate them to pay special attention to information that will assist them in justifying and making the improvements needed.
- If option one is selected, decide whether participants will be asked to fill out the *Self-appraisal* the previous evening or during the session itself.

Training materials

The *BFHI Hospital self-appraisal tool* (copy distributed to participants as a handout during Session 3).

References

UNICEF/WHO. *Baby-friendly Hospital Initiative, revised, updated and expanded for integrated care: Section 4: Hospital Self-Appraisal and Monitoring*. Geneva, World Health Organization, 2009.

Outline

Content	Trainer's Notes
<p>1. Review the purpose of the WHO/UNICEF BFHI hospital self-appraisal tool</p> <p>Review of the use of the <i>Hospital self-appraisal tool</i> to assess where each health facility is in the process of implementing the <i>Ten Steps</i>, what further work is needed to support breastfeeding, and whether to apply for external assessment.</p>	<p><i>Review: 5 minutes</i></p> <p>Briefly review the use of the <i>Hospital self-appraisal tool</i>, reminding the participants of the points made during the BFHI presentation in Session 3 and stressing that the results from the self-appraisal will be helpful to consider when developing action plans for the participants' health facilities during Session 8.</p>
<p>2. Completion of the Hospital self-appraisal Tool</p> <p>Completion of the <i>Hospital self-appraisal tool</i> by team or individual from each health facility.</p>	<p><i>Individual or group work (during session or evening before): 15 -25 minutes</i></p> <p>Ask the team or individual from each health facility to complete the <i>Hospital self-appraisal tool</i> either during the session or the evening before.</p>
<p>3. Summary of Results</p> <p>Preparation of summary of accomplishments and areas where the health facility needs to improve.</p>	<p><i>Individual or group work: 15 minutes</i></p> <p>After the <i>Hospital self-appraisal tool</i> is completed each group (or individual) should summarize both its accomplishments and key areas in which further work is needed to implement the <i>Ten Steps</i> and fully implement the <i>International Code</i>. This summary should be recorded either on transparencies or on flip chart paper, so that it can be presented during Session 8, just before the presentation of the <i>Action plan</i>.</p> <p>Participants should be encouraged to be as frank as possible, as the results will help them identify particular problem areas on which they should focus, as they develop their own Action plans during Session 8. If facilitators sense that participants will worry about divulging their facilities' shortcomings, arrangements can be made to make sure that self-appraisal results remain confidential, and teams can be asked only to report "in general" on areas needing improvement.</p>

Session 8: Developing action plans

Objectives

At the conclusion of this session, participants will be able to:

- Identify specific changes necessary to ensure that their health facilities are baby-friendly.
- Prepare brief action plans for making necessary changes in their health facilities' policies and procedures.

Duration

Group or individual work on *Action Plans*: 1 to 1½ hours.

Presentations and discussion of results from self appraisals and action planning: 1 hour.

Discussion and recommendations for regional coordination: 30-60 minutes (optional).

Total: 2 to 3 hours

(time for presentations and discussion will vary, depending on the number of teams and/or individuals that will be reporting).

Teaching methods

Group or individual work

Presentations and discussion

Preparation for session

- Prior to the session, trainers should decide how participants should be grouped for the preparation of their *Action Plans*. In general, one plan should be prepared for each health facility represented at the course. If there are several participants from non-care-giving settings, such as the Ministry of Health, trainers should work with them to decide whether it would be useful for them to work with hospital teams or to develop plans focused on their own responsibilities related to BFHI.
- Make sure adequate working space is available for the various teams and/or individuals and that flipcharts and markers are ready for them to use in preparing summaries of their plans.

- It is important, before the session, to determine what type of follow-up support will be available to the teams as they implement their *Action Plans* after the course and whether progress reports will be requested and how often. The individual responsible for follow-up (e.g., the national breastfeeding coordinator or BFHI coordinator) should help lead the discussion following the presentation of the *Action Plans*.
- In some courses, it may be useful to add some time after the presentation and discussion of *Action Plans* for discussing possibilities for regional coordination among the health facilities and other organizations represented at the course (see item 4 in the session plan.). If this discussion will be included, adjust the programme schedule to provide the extra time needed.

Training materials

Handouts

- 8.1: Slide presentation handout for Session 8 (slides 8.2-3)
- 8.2: Action Plan

Slides/transparencies

- 8.1: Action plan
- 8.2-3: Example of a section of an *Action Plan*

The website featuring this Course contains links to the slides and transparencies for this session in two Microsoft PowerPoint files. The slides (in colour) can be used with a laptop computer and LCD projector, if available. Alternatively, the transparencies (in black and white) can be printed out and copied on acetates and projected with an overhead projector. The transparencies are also reproduced as the first handout for this session.

References

WHO. *Protecting, promoting and supporting breastfeeding: The special role of maternity services*. A Joint WHO/UNICEF Statement. Geneva, World Health Organization, 1989.

Outline

Content	Trainer's Notes
<p>1. Development of an Action Plan for making necessary changes</p> <ul style="list-style-type: none"> ■ Developing an <i>Action Plan</i> for making the necessary changes in each health facility is the next step in the planning process. The process may include: <ul style="list-style-type: none"> ■ Reviewing the results of the <i>Self-appraisal</i>, problem areas identified during the last session, and ideas concerning changes identified by the team that are needed to make its facility baby-friendly. ■ Developing the first draft of a brief <i>Action Plan</i> while still at the course. ■ Discussing the results and potential strategies on return to the team's health care facility, bringing other important decision-makers into the planning process, and reaching a consensus on actions to be taken. ■ The <i>Action Plan</i> table provides a quick way to summarize the main activities that are part of the plan, as well as their timing and who is responsible. Participants from the various health facilities may want to use this table to prepare the broad outlines of their plans, or use some other format, if it is more appropriate for their own setting. ■ An example of a section of a completed <i>Action Plan</i> may give participants who have not had much experience with planning a better idea of what to put in the plans. 	<p>Group or individual work: 60 minutes</p> <p>Mention that a mini-version of the presentation is reproduced in Handout 8.1 and included in the participants' folder.</p> <p>Briefly review the <i>Action Plan</i> table (slide 8.1). Pass out two copies of the action plan table (Handout 8.2) to the individual or group from each health facility. Ask each team to meet and develop a first draft of its plan, focusing on actions that will improve its facility's support of breastfeeding and solve key problems identified during the <i>Self-appraisal</i>.</p> <p>Mention that the plans can be organized however most useful, given the types of "actions" being considered. If a facility is just becoming involved in BFHI, it would be useful to consider using the "20-hour Course" to train clinical staff on implementation of the "Ten Steps" and a shorter course for non-clinical staff. In other cases only "refresher" training or training for new staff may be needed. In addition, changes in policies and procedures may need to be considered (The Policy Checklist found in Session 3, Handout 3.5, Annex 1, may be helpful when considering what is needed).</p> <p>It may be useful for teams to organize the actions or activities by "Steps" or by types of activities, such as training, planning sessions, changes in policies, changes in procedures, monitoring or auditing and evaluation, etc.</p> <p>If the participants work in facilities with high HIV prevalence they should take special care to develop plans that adequately address the challenges of providing support to HIV positive pregnant women, mothers, and their infants. The handouts provided in Session 5 – HIV may be quite helpful in providing ideas as they develop their action plans.</p> <p>The plans should be written on the blank handout sheets and then summarized on flipchart paper or transparencies for presentation during plenary. The presentation in the plenary should include both a brief summary of the results from the <i>Self-appraisal</i> (achievements and steps needing improvement) and an overview of the proposed <i>Action Plan</i>. Each team should designate one representative to present the <i>Self-appraisal</i></p>

Content	Trainer's Notes
	<p>results and another to present their plans. Mention how long each group will have for its presentation.</p> <p>If it would be helpful, present an example of a portion of an <i>Action Plan</i> focused on “Step 1”, using Slides 8.2-3, to give participants a sense of what their <i>Action Plans</i> might look like.</p> <p>Remind the participants that these are only the first drafts of their plans. The plans can be more fully developed in collaboration with other important decision-makers once participants return to their institutions.</p> <p>In some courses there may be participants who do not work in health facilities, for example, policy-makers from the Ministry of Health or managers from institutions that finance health care. Ask these participants to prepare plans as well, focusing on actions that will support the BFHI.</p>
<p>2. Self-appraisal and Action Plan presentations</p> <ul style="list-style-type: none"> ■ Presentation of overviews of results from the <i>Self-appraisal</i> and the main points in the <i>Action Plans</i> the teams have developed to address improvements needed. 	<p><i>Presentations: 50 minutes</i></p> <p>Ask each team to present both a brief overview of the results from its <i>Self-appraisal</i> and a summary of the main aspects of the <i>Action Plan</i> it has developed to address improvements needed. Mention again how much time is scheduled for each presentation and discussion and manage the session so that the last groups presenting are not short changed.</p> <p>Collect the <i>Self-appraisal</i> and <i>Action Plan</i> summaries prepared by the teams after their presentations, make copies and give originals back to the teams (if flipcharts are prepared, these sheets can be collected instead). These summaries can be used to prepare the course report and to guide those responsible for providing follow-up support.</p>
<p>3. Discussion of follow-up support</p> <ul style="list-style-type: none"> ■ Discussion of any plans for follow-up and supervision, as well as any support available, as teams implements their plans. 	<p><i>Discussion: 10 minutes</i></p> <p>Discuss plans for follow-up and supervision as well as any support that will be available and how it will be coordinated. In addition, discuss whether progress reports will be requested and, if so, how often and what format should be used.</p>

Content	Trainer's Notes
<p>4. Discussion of regional coordination (optional)</p> <ul style="list-style-type: none"> ■ Discussion of the possibilities for regional coordination within the Initiative and development of recommendations or agreements concerning collaborative activities. 	<p><i>Discussion: 30-60 minutes</i></p> <p>If considered useful, spend some time before the course ends discussing possibilities for regional coordination among the health facilities and other organizations represented at the course. The BFHI may be strengthened, for example, if all health facilities agree to follow the <i>Ten Steps</i> and fully adhere to the <i>International Code</i>. Some facilities that are farther along in the process may be able to provide assistance to those just starting to make changes. Recommendations or agreements concerning collaborative activities can be developed.</p>

Handout 8.1:

Presentation for session 8: Developing action plans

Action Plan

Action	Timing	Responsibility

Transparency 8.1

Action Plan

Action	Timing	Responsibility
Step 1: Policy Appoint a committee with reps from prenatal care, L&D, post-partum wards and neo-natal intensive care to improve hospital BF/IF policy. (Include HIV guidelines.)	2 months after return from course	Hospital administrator to appoint committee
Hold annual sessions for all maternity staff to orient them to new BF/IF policy	Each January	Chief nursing officer from maternity services
Include review of BF/IF policy in orientation for all new staff	As needed	Staff providing orientation

Transparency 8.2

Action Plan (continued)

Action	Timing	Responsibility
Post new policy in all relevant units	After policy finalized	Chief nursing officer
Prepare policy summary for mothers, including pictorial version for non-literate clients	Same	TBD
Distribute policy to all women during first counselling session	On-going	Staff counsellors

Transparency 8.3

Handout 8.2

Action Plan		
Action	Timing	Responsibility

This course is an adaptation from WHO course "Promoting breast-feeding in health facilities: A short course for administrators and policy-makers". It can be used to orient hospital decisions-makers (directors, administrators, key managers, etc.) and policy-makers to the Baby-friendly Hospital Initiative and the positive impacts it can have and to gain their commitment to promoting and sustaining "Baby-friendly".

The course material includes a Course Guide and eight Session Plans with handouts and PowerPoint slides. Two alternative session plans and materials for use in settings with high HIV prevalence have been included.

For further information please contact:

Department of Nutrition for Health and Development (NHD)

World Health Organization

20 Avenue Appia

1211 Geneva 27

Switzerland

Fax: +41 22 791 41 56

e-mail: nutrition@who.int

website: www.who.int/nutrition

Nutrition Section - Programme Division

UNICEF

3 United Nations Plaza

New York, New York 10017, United States of America

Tel: +1 212 326 7765

e-mail: nutrition@unicef.org

website: www.unicef.org

ISBN 978 92 4 159497 4

